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THE EMERGENCE OF THE PRINCIPLE OF NEUTRALITY AND THE GUARANTEE OF THE FREE ORGANISATION OF LOCAL PUBLIC SERVICES

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INTRODUCTION

German local authorities use the Stadtwerke[2]. Spanish local authorities have long favoured a mixed-economy societies model. Italian local authorities often use publicly owned companies. These organisational forms of the local public sector may seem neutral with regard to EU competition and procurement law. This is not the case: for more than twenty years, EU law on public procurement and concession contratcs has challenged the freedom of Member States to organise their own Public sector. Many relationships between Public Authorities are likely to be classified as public procurement contracts or concessions contracts under EU law. This is the case for certain forms of inter-municipal cooperation, collaboration contracts between public authorities or the technical support provided by the State to local authorities.

EU law is, however, imbued with a principle of neutrality with regard to the methods of managing services of general interest, the concrete expression of which has only appeared very recently [3]. The latest directives on contracts and concessions were intended to guarantee this principle of neutrality. In its communication to the European Parliament, the Commission presents the reform of EU public procurement directives as a way of ensuring the neutrality of the choice of organisation of public services : « The new rules will ensure

[2] This article is a reviewed version of a chapter: « The principles of public-public cooperation » in S. DE LA ROSA, P. VALCARCEL FERNANDEZ (eds. by), *Principles of public contracts in Europe*, Bruylant, (coll. « Droit administratif / Administrative law », n° 30), Bruxelles, 2022, pp. 535-554.

[3] Commission of the European Communities, *Green Paper on Servoices of General Interest*, Bruxelles, 21 May 2003, COM(2003) 270 final, pts. 79 s. ; Communication from the Commission, *Services of General Interest in Europe*, 20 September 2000, COM 2000(580) final and Conclusions of the Presidency – Nice European Council 7, 8 and 9 December 2000. Commission of the European Communities, *Report to the Laeken European Council: Services of General Interest*, Bruxelles, 17 October 2001, COM (2001) 598 final.

that the application of public procurement rules will not interfere with the freedom of public authorities to decide how to organise and carry out their public service tasks » [4].
The only principle of neutrality enshrined in the primary EU law concerns the "system of ownership" of undertakings, enshrined in Article 295 (ex 222) of the EC Treaty. Thus, "the Community shall in no way call into question the public or private status of undertakings entrusted with missions of general interest, and shall not therefore impose any privatisation"[5]. For the Commission, such respect "for national choices of economic and social organisation is nothing other than an expression of the principle of subsidiarity" [6].

The combined reading of Articles 86 and 295 of the EC Treaty would guarantee the free determination of management methods [7] : the State is free to determine the level of public service obligations it imposes on an activity and to determine the form that the service operator will adopt.

However, this principle of neutrality under Article 295 does not in itself guarantee that the State is free to directly operate the public activities it has defined, once it creates a legally separate entity.

[4] Communication from the Commission, 20 December 2011, « A Quality Framework for Services of General Interest in Europe », COM(2011) 900 final, 1.2.

[5] Commission of the European Communities, *Communication* of 11 September 1996, *Services of general interest in Europe*, COM (96) 443 final, pt. 16. Translated by the author from the french version.

[6] *Ibid*, pt. 17. Translated by the author from the french version.

[7] « Il résulte… de la lecture des articles 86 et 295 du traité qu'il appartient aux seuls États membres de définir le périmètre de leur secteur public et de choisir le mode d'exercice approprié des missions de service public, qu'ils considèrent essentielles pour la conduite de leur action ». Conseil d'État, Rapport public 2002, *Collectivités publiques et concurrence*, Paris, La Documentation française, *EDCE* n° 53, pp. 215-457, p. 341.

The neutrality principle enshrined in Article 295 is an *a minima* principle that has been interpreted broadly. A literal reading of Article 295 only implies that public authorities are free to intervene in the management of SGEIs through public law entities, without these entities benefiting from a privilege in the award of the contract. This is the sense in which the principle is set out by the Commission in 2000: "neutrality as regards the ownership, public or private, of companies is guaranteed by Article 295 of the EC Treaty. ... the Commission is not concerned with whether the undertakings responsible for providing services of general interest should be public or private. There is therefore no need to privatise public undertakings... " [8].

According to the broad interpretation subsequently adopted by the Commission, the principle of neutrality also means that a public law entity can manage an SGEI without having to compete for the management: the entity will have benefited from an award privilege. Thus, three years after its 2000 Communication on services of general interest, the Commission gives a new interpretation of the principle of neutrality: "As far as the participation of the State in the provision of services of general interest is concerned, it is for the public authorities to decide whether they provide these services directly through their own administration or whether they entrust the service to a third party (public or private entity)"[9]. For the French Council of State, the principle of neutrality now constitutes "a principle of freedom for the public entity to choose the mode of organisation, whether internalised or not, of the public service" [10]. According to some authors, the choice of management method is an

[8] Communication de la Commission, 20 septembre 2000, précitée.

[9] Commission of the European Communities, *Green Paper on Servoices of General Interest*, Bruxelles, 21 May 2003, COM(2003) 270 final, pt. 79.

[10] Conseil d'État, Rapport public 2002, *Collectivités publiques et concurrence*, Paris, La Documentation française, *EDCE* n° 53, pp. 215-457, p. 341 : « a principle of freedom for the public entity to choose the mode of organisation, whether internalised or not, of the public service » (un principe de liberté de la personne publique pour choisir le mode d'organisation, internalisé ou non, du service public).

act of public authority [11] which must remain outside the sphere of application of competition law [12].

This principle of free determination of management methods had no textual basis until the entry into force of Directives 2014/23 [13] and 2014/24 [14]. It was the result of a free interpretation by the Commission, which was obviously received very favourably by the national authorities. But the Commission's interpretations were in no way binding on the European Court of Justice, and the principle of neutrality, in its broad interpretation, was never enshrined in case law. Some authors [15] have highlighted the enigmatic developments of Advocate General La Pergola, who considers, in his conclusions on the BFI Holding judgment, that "the aspect relating to the freedom of a public authority to organise its structure in such a way that it better meets the needs of the community does not seem to us to be a question worth considering. The choice of an organisational model by a public authority cannot, in any case, allow the application of provisions intended to govern another well-defined situation, consisting of the provision of a service by an individual to a public authority

[11] According to Jean-Marie Auby, the acts by which an administrative person determines the mode of organisation of a public service under its authority "are linked to an essential competence of the administrative person. They are based on what Bonnard calls 'the inalienable and discretionary right of the Administration to decide on the mode of organisation of public services'. J.M. AUBY, *La notion de concession et les rapports des collectivités locales et des établissements publics de l'électricité et du gaz dans la loi du 8 avril 1946*, CJEG, 1949, pp. 2 f., p. 8.

[12] A. RACLET, *Droit communautaire des affaires et prérogatives de puissance publique nationales*, Paris, Dalloz (Coll. « Nouvelle bibliothèque de thèses »), 2002, p. 315.

[13] Directive 2014/23/Eu of the European Parliament and of the Council of 26 February 2014 *on the award of concession contracts*.

[14] Directive 2014/24/Eu Of The European Parliament And Of The Council of 26 February 2014 *on public procurement and repealing Directive 2004/18/EC*.

[15] See amonf others A.L. DURVIAUX, N. THIRION, *Les modes de gestion des services publics locaux, la réglementation relative au marchés publics et le droit communautaire*, *J.T.* 10 janvier 2004, n° 6122, pp. 17-27.

in return for remuneration. (...)" [16]. While the principle seems to be established, no indication is given as to the concrete modalities of its application.

But contrary to what Advocate General La Pergola suggests, the principle of neutrality is challenged by "the rules of the Treaty, and in particular those relating to competition and the internal market" referred to by the Commission in its 2000 Communication on services of general interest in Europe. These principles are, more specifically, the free movement of goods, the freedom of establishment and the freedom to provide services, as well as the principles that flow from them, such as equal treatment, non-discrimination, mutual recognition, proportionality and transparency, which form the basis of the rules on competition [17].

The principle of neutrality disappears as soon as the service is entrusted to a third party to the administration[18]. And EU law, attached to an "atomistic" vision of the administration, apprehends the notion of third party with particular acuity, and introduces competition into any organised relationship between two distinct legal persons[19]. This particular insensitivity to the diversity of "institutional arrangements", as economists call them, increases the impact

[16] Opinion La Pergola, CJCE, 10 novembre 1998, *BFI Holding c. Communes d'Arnhem et de Rheden*, aff. C-360/96, rec. p. I-6821 ; *BJCP*, n° 2, p. 155, concl., note Gazin.

[17] Directive 2004/18/EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contracts, pt. 2.

[18] Commission of the European Communities, *Services of general interest*. Report to the Laeken European Council. COM (2001) 598 final, 17 October 2001, pt. 33 ; Commission of the European Communities, *Green Paper on Servoices of General Interest* , Bruxelles, 21 May 2003, COM(2003) 270 final, pt. 81.

[19] « … procurement law becomes applicable, in principle, upon the conclusion of an agreement between two *separate persons*, in other words upon the coming into being of a *contract* ». Opinion Juliane Kokott 1st March 2005, CJCE, *Parking Brixen GmbH c/ Gemeinde Brixen et Stadtwerke Brixen AG*, C-458/03, pt. 43.

See also CJEC, 18 November 1999, *Teckal*, C-107/98, pt. 50.

of competition well beyond the limits set by the Commission. It is worth noting the notable difference in the wording between the Commission's Communication to the Laeken European Council of 17 October 2001 and the *Green Paper* of 21 May 2003.

In its Communication of 17 October 2001, the Commission notes that "as a general rule, Community legislation leaves Member States free to decide whether they wish to provide public services themselves, directly or indirectly (via other public entities), or whether they prefer to entrust this task to third parties". In the Green Paper, as we have seen (pt. 79), the Commission merely states that "it is for the public authorities to decide whether they provide these services directly through their own administration or whether they entrust the service to a third party (public or private entity)". In the latter case, there is no longer any reference to "indirect" management as opposed to delegation to "third parties". The two situations seem to be confused; there is here, if not a lack of clarity, at least an implicit desire to give the notion of third parties a maximum extension.

In the opposition between the notions of direct management (or "own administration") and management by third parties lies the misunderstanding of the principle of neutrality: a third party is any entity with a distinct legal personality. A public institution is therefore a "third party to the administration" and does not benefit from the principle of neutrality. Only unincorporated bodies are covered by the principle of neutrality in its "broad" sense. If this were not the case, the concept of an inter-organisational relationship (in house) would be useless. Advocate General Kokott in his opinion in Parking Brixen is explicit: " If the intention of the contracting authority … is to use an organisationally independent public undertaking, in particular one of its subsidiaries, the answer appears initially to be readily apparent. In accordance with the principle of the equal treatment of public and private undertakings, as defined in particular in Article 86(1) EC, public undertakings must not, subject to the exceptions contained in Article 86(2) EC, be treated any more favourably than private competitors. A contracting authority cannot therefore simply entrust the provision of services to an undertaking which it itself controls without first giving any consideration to

other possible tenderers or conducting a transparent selection procedure in order to do so "[20]. This principle of equal treatment only ceases to apply in cases of inter-organic relations or when the public authorities intervene " by using exclusively its own resources, that is to say by performing them in-house, without calling on legally independent – public or private – undertakings at all "[21].

But there are many different forms of contractual cooperation between public bodies[22]. The French Conseil d'Etat occasionally attempts to give substance to a theoretical analysis of the situation. In its annual report for 2002, after noting the great diversity of cooperation agreements between public entities, it attempts to give a general definition. For the Council, partnerships between public entities are agreements by which 'public partners are jointly involved in the implementation of the same public policy, on a strictly equal footing, and most often without financial exchanges'[23]. The Conseil d'Etat notes that in these cases there is no performance relationship, nor is there any remuneration of one authority for the services provided by the other. And the Conseil wonders "whether there are indeed reciprocal commitments and therefore contracts".
But identifying these contracts between public bodies, which are merely a means of performing a public service, is not easy, and Spain for instance has been condemned for exempting from competitive tendering all collaboration agreements (*convenios de*

[20] Opinion of Advocate General Kokott delivered on 1st march 2005; CJCE, *Parking Brixen GmbH c/ Gemeinde Brixen et Stadtwerke Brixen AG*, aff. C-458/03, pt. 41.

[21] *Ibid*., pt. 42.

[22] « Les virtualités d'application de pareille approche sont vertigineuses et même, d'une certaine manière, sans limite ». A.L. DURVIAUX, N. THIRION, *Les modes de gestion des services publics locaux, la réglementation relative au marchés publics et le droit communautaire*, cit., p. 21.

[23] Conseil d'État, Rapport public 2002, *Collectivités publiques et concurrence*, Paris, La Documentation française, *EDCE* n° 53, pp. 215-457, p. 326.

colaboración) whereby several public bodies make use of common resources without exchanging reciprocal services[24]. Another kind of relationship is subject to the principles of non-discrimination, equal treatment and transparency. This is the relationship of assistance between public authorities. This form of technical assistance is a way of pooling public resources by providing aid in exchange for a fee that is usually symbolic. It is no longer a case of 'egalitarian' collaboration as identified by the Conseil d'Etat, but of assistance. This particular form of 'inter-institutional cooperation' [25] is nowadays a fundamental mechanism for structuring local public authorities in most Member States.

Yet, the development of EU law on public procurement has taken place at the same time as a profound movement of administrative reform in Europe and all over the world. The expressions of this administrative reform are too numerous to mention. The three main aspects of public administration reform have been, firstly the reduction of the State's involvment in economy through a fairly rapid withdrawal from the industrial sector and a massive privatisation policy. Secondly, a modernisation of structures was carried out through formal privatisation, the creation of agencies, the contractualisation of internal relations

[24] CJEC, 13 January 2005, *Commission c/ Royaume d'Espagne*, aff. C-84/03, concl. Kokott ; *Contrats Marchés publ.*, mars 2005, n° 3, comm. n° 69 Zimmer (Willy).

[25] See for a more complete theoretical account of this concept P. COSSALTER, *Les délégations d'activités publiques dans l'Union européenne*, Thèse, Paris II, 2005, tome 1, pp. 484 s.

within the administration [26] and the reform of the labour relations law [27] [28]. Thirdly a reform of its relations with citizens is embodied in a renewed definition of the relationship between the provider of public services and the user becoming a consumer [29].

The formal privatisation process, for exemple in Germany or in Italy, has made it very difficult to distinguish between the public and the private, between what is solely a matter of organisation of public authorities and what is a matter of diversification of the administration and its gradual incursion into the competitive sector.

If EU Directives n° 2014/23 and n° 2014/24 have, for the first time, provided a systematic response to the issue of contractual relations within the public sector, it is not certain that all situations are really considered and that real neutrality has been achieved.

[26] See among many others: Y. FORTIN, *La contractualisation dans le secteur public des pays industrialisés depuis 1980 : hors du contrat point de salut ?*, in : Y. FORTIN, *La contractualisation dans le secteur public des pays industrialisés depuis 1980* , Paris, L'Harmattan (coll. « Logiques juridiques »), 1999, pp. 5-26. *Revue européenne de droit public*, numéro spécial hors série, 1994, *Privatisations et droit public*.

[27] This is notably the case in Italy, where a series of laws, initiated in 1993 with Law No. 29 of 3 February 1993, brings labour relations in the civil service under civil law. See in particular G. D'AURIA, H. ROCCHIO, chronique « *Italie* » in, *Annuaire européen d'administration publique*, 1998, n° XXI, p. 552.

[28] Many of these changes explain the recent developments in French administrative law. See for a broad overview : J.B. AUBY, *La bataille de San Romano. Réflexions sur les évolutions récentes du droit administratif*, *AJDA* 2001, n° 114, pp. 912-926.

[29] For an analysis from the perspective of consumer law: J. AMAR, *De l'usager au consommateur de service public*, Aix-en-Provence, PUAM, 2001. The transformation of the relationship with the user cannot be reduced to this purely 'legal' aspect, and more generally concerns all the programmes intended to establish a relationship with the citizen-consumer based on the display of rights to the service and a guarantee of quality, in particular through the adoption of 'charters' (*Citizen's Charters*).

The distinction between the public and the private sector could be based neither on the excercise of public authority, nor on economic aspects (1). Therefore, the initial construction of the in-house theory was doomed to failure and had to be adapted to the different national realities. Thus, the Court was forced to accept, albeit incompletely, the principle of free organisation of local public services (2).

1. DISTINGUISH BETWEEN PUBLIC AND PRIVATE

1.1 The failure of criteria based on the nature of the activity

1.1.1 The failure of the public authority test

EU law was built on the fundamental distinction between economic and non-economic activities. This distinction only imperfectly covers the distinction between the public and private sectors. It does, however, provide the essential conceptual tools for placing properly regalian activities outside the market.

The distinction between the regalian and the market activities is obviously not unrelated to the laws of the various EU Member States. The Spanish law on public contracts (*Ley de Contratos del Sector Público* - LSCP), for example, distinguishes between activities that can only be directly exploited by the administration and those that can be entrusted to the private sector because they have "an economic content that makes them suitable for exploitation by private entrepreneurs" [30]. In the same way, Italian academic literature has

[30] Ley 9/2017, de 8 de noviembre, *de Contratos del Sector Público*, transposant la directive 2014/24/UE, art. 284 § 1 : « 1. La Administración podrá gestionar indirectamente, mediante contrato de concesión de servicios, los servicios de su titularidad o competencia siempre que sean susceptibles de explotación económica por particulares. En ningún caso podrán prestarse mediante concesión de servicios los que impliquen ejercicio de la autoridad inherente a los

developed the distinction between public functions (*funzione pubbliche*) and public services (*servizi pubblici*) on the basis of the provisions of the Italian Criminal Code, which distinguish between persons entrusted with a "legislative, administrative or judicial public function" and those in charge of a public service [31]. According to the Italian Criminal Code, a public function is "the administrative function subject to the rules of public law and acts of authority and characterised by the formation and manifestation of the will of the public administration by means of powers of authority and certification". The public function always represents the exercise of public power understood as the sphere of the State's own legal capacity, its sovereignty [32] and implies the use of authority [33]. Public services, on the other hand, represent material, technical activities, including those of industrial production, made available to individuals to help them accomplish their ends [34].

poderes públicos ». Cet article remplace l'article 155 al. 2 LCAP (Real Decreto Legislativo 2/2000, de 16 de junio, por el que se aprueba el texto refundido de la Ley de Contratos de las Administraciones Públicas). La disposition trouve son origine dans l'article 25 de la loi générale sur les ouvrages publics (Ley General de Obras Públicas) du 13 avril 1877 : « … *siempre que las obras pudieran ser objeto de explotación retribuida, salvo excepción expresa y formalmente justificada* ».

[31] See currently Articles 357 and 358 of the Penal Code, amended by the Law of 26 April 1990, No. 86, modifying the offences of public officials against the public administration (Modifiche in tema di delitti dei pubblici ufficiali contro la pubblica amministrazione), GURI No. 97 of 27 April 1990.

[32] V. sur la notion de fonction publique B.G. MATTARELLA,voce « *L'attività* », in S. CASSESE, *Trattato di diritto amministrativo*, Milan, Giuffrè Editore, 2003, pp. 707-804.

[33] M.S. GIANNINI, *Diritto amministrativo*, Milan, Giuffrè, 1993, 3rd ed. , vol 2, p. 16. See V. CERULLI IRELLI, *Corso di diritto amministrativo*, nuova ed., Turin, Giappichelli, 1997, p. 48pp. 56 s.

[34] See U. POTOTSCHNIG, *I pubblici servizi*, Padoue, CEDAM, 1964, p. 169 et note 77.

Spanish law retains this notion of 'public functions'. Thus, the Law on the Basis of the Local Regime (RBRL[35]), in its article 92, paragraph 2, restricts the exercise of public functions to career civil servants: "public functions, the exercise of which is reserved exclusively for personnel subject to the status of civil servant, are those which involve the exercise of authority, public acts and compulsory legal advice (*asesoramiento legal preceptivo*), the functions of internal control of economic-financial and budgetary management, accounting and treasury, and in general those functions which, pursuant to this law, are reserved for civil servants for the best guarantee of objectivity, impartiality and independence in the exercise of the function"[36].

The majority of academic doctrine considers that the exercise of authority involves: the safety of public places, the good order of traffic and people on public roads, the protection and extinction of fires, and the discipline of town planning [37]. The Supreme Court (*Tribunal Supremo*), in several decisions[38] has confirmed the prohibition of outsourcing to the private sector the tax collection service, considered as a public function involving the exercise of authority.

The distinction between authority and service could have been used as a basis for dividing up what is outside the market in terms of public procurement law and what is subject

[35] Ley n° 7/1985, del 2 abril 1985, *Reguladora de las bases del régimen local*, « RBRL », *BOE*, nº 80 of 3 April 1985.

[36] Art. 92, al. 2 : « *Son funciones públicas, cuyo cumplimiento queda reservado exclusivamente a personal sujeto al estatuto funcionarial, las que impliquen ejercicio de autoridad, las de fe pública y asesoramiento legal preceptivo, las de control y fiscalización interna de la gestión económico-financiera y presupuestaria, las de contabilidad y tesorería y, en general, aquellas que, en desarrollo de la presente Ley, se reserven a los funcionarios para la mejor garantía de la objetividad, imparcialidad e independencia en el ejercicio de la función* ».

[37] A. KONINCKX FRASQUET, *La necessaria concreciòn del contrato de gestiòn de servicios públicos. Espacial referencia al ámbito municipal*, *REALA*, n° 279, janvier-avril 1999, pp. 177-211.

[38] TS, 29 janvier 1990, *RJ*, n° 561; TS 5 mars 1993, *RJ*, n° 1555; TS 31 octobre 1997, *RJ*, n° 7242.

to the principles of competitive tendering. But this key is not effective for at least three reasons.

Firstly, state intervention in the field of authority does not exclude services. Public procurement in the field of defence is the most striking example of this. Secondly, the boundary presented as watertight between authority and service has probably never been so impermeable. The development of public-private partnerships in all their forms now illustrates the fact that regalian activities are frequently subject to private sector intervention. Thirdly, and apart from the intervention of the private sector, the distinction between authority and service is itself debatable. While French administrative law doctrine, for instance, has long distinguished between police and public service, it is now undeniable for most authors that the police are a service to the population. The use of authority can therefore only be seen as a means, and not the definition of a particular end of the administration.

This is why the preservation of a 'protected space' allowing the public administration to abstract from the rules of public order has never been seriously undertaken by the member states.

1.1.2 The failure of the non-market activity criterion

Another way of distinguishing non-market administrative activity from market activities is the market character, as opposed to the regal or social functions [39]. As we have seen, Spanish law for instance distinguishes between activities that must remain in the hands of the administration and those that can be entrusted to the private sector because they are susceptible to economic exploitation. This distinction does not structure the scope of

[39] CJEC, 17 février 1993, *Poucet et Pistre c/ AGF et Cancava*, aff. C-159/91 et C-160/91, rec. p. I-637. CJCE, 26 mars 1996, *Garcia*, aff. C-238/94, rec. p. I-1673 ; Laigre (Philippe), « Régimes de sécurité sociale et entreprise d'assurance », *Droit social* 1996, n° 7-8, pp. 705-718.

application of public procurement law but merely the (very theoretical) definition of activities that cannot be outsourced to the private sector.

In France, the Conseil d'Etat has attempted to draw a distinction between market and non-market activities. It attempted this theoretical elaboration in two decisions, *Fondation Jean Moulin* [40] and *Commune d'Aix-en-Provence* [41] both of which were not followed up. In an attempt to systematise the cases in which the administration would not have to submit the award of a public contract to advertising and competition, the Conseil d'Etat identified three hypotheses, one of which is that the co-contractor is not "an operator in a competitive market", having regard to the nature of the activity in question and the particular conditions in which it is carried out. It is not appropriate here to analyse in depth the theoretical weakness of the reference to the "nature of the activity". The Conseil d'Etat often resorts to it to grant itself a margin of appreciation. However, the use of this indeterminate legal concept shows a notable inability to draw the boundaries of non-market activities. While it may be agreed that the social services at issue in the Jean Moulin case could perhaps justify the non-application of competition rules, by analogy with EU competition law, the opera services at issue in the Aix-en-Provence case can in no way justify a derogation from the application of EU law.

Apart from the very rare cases involving government or social activities, the intervention of a third party to the administration in the performance of a service cannot in principle be exempted from the rules on advertising and competition. The reference to the "nature of the activity" is not sufficient. This is why the French Conseil d'Etat tried to add a reference to the economic exchange: services provided free of charge or at a lower value than

[40] CE Ass., 23 octobre 2003, avis n° 369.315 « Fondation Jean Moulin », EDCE n° 55, pp. 209 s. E. FATÔME – L. RICHER, *La découverte, par le Conseil d'État, du contrat de « simple organisation » du service public*, ACCP n° 34, juin 2004, pp. 74-76. A. MÉNÉMÉNIS, *L'avis Fondation Jean Moulin et la commande publique : poursuite de la réflexion*, ACCP septembre 2004, p. 65.

[41] CE, Sect., 6 avril 2007, *Commune d'Aix-en-Provence*, n° 284736, rec.

those of the market could have made it possible to derogate from the application of EU law on public procurement.

Italian law does, in contrast, make a distinction between economic and non-economic activities. Cultural and leisure activities, considered "exempt from an economic nature" (*prive di rilevanza economica*), can be outsourced directly to associations and foundations set up and in which local authorities participate[42]. However, it does not seem possible to entrust such activities without advertising and competition to structures other than associations or foundations controlled by public authorities. If Italian foundations can be entrusted with their tasks without advertising or competition, this is not only because of the nature of the activities in question, which cannot be determined a priori, as the Italian administrative courts point out [43], but because of the specific nature of the foundations themselves, which are subject to a legal regime that differs from that of commercial companies [44]. It is therefore the legal form of the managing bodies and not the activity in

[42] Testo unico delle leggi sull'ordinamento degli enti locali approvato con Decreto legislativo 18 agosto 2000, n. 267, art. 30, art. 113-bis : « Gli enti locali possono procedere all'affidamento diretto dei servizi culturali e del tempo libero anche ad associazioni e fondazioni da loro costituite o partecipate » (Local authorities may also directly entrust cultural and leisure services to associations and foundations they have set up or in which they have an interest).

[43] See for instance : CS, Sez. V., n° 6529, 10 September 2010. Tar Puglia-Bari, Sez. I, n° 24, 5 January 2012.

[44] See Corte dei Conti, Sezione Regionale di Controllo per il Lazio, parere 151, 26 june 2013 : « il ricorrere di determinati elementi, e cioè la costituzione/partecipazione, da parte di uno o più enti pubblici, di una persona giuridica privata, finalizzata alla realizzazione di un fine pubblico con l'impiego di finanziamenti pubblici e con modalità di gestione e controllo direttamente collegabili alla volontà degli enti soci, rende, di fatto, la persona giuridica privata un semplice modulo organizzativo dell'ente pubblico socio, al pari di altre formule organizzative aventi parimenti natura pubblicistica (aziende speciali e istituzioni) » (*the existence of certain elements, namely the establishment/participation, by one or more public bodies, of a private legal person, the purpose of which is to achieve a public aim with the use of public funds and with management and control methods directly linked to the will of the member bodies, effectively makes the private legal person a simple organisational module of the public member body, like other organisational formulas having an equally public nature (special companies and institutions*).

question that justifies a derogation from the principles of advertising and competitive tendering.

1.2. Weaknesses of the organic criterion

The contract-based approach of EU Law is imperfect. While it leaves administrative relationships completely out of account, it blindly subjects contractual relationships which are often no more than organisational arrangements for the local public sector.

1.2.1. Organisations based on administrative hierarchy

One of the fundamental characteristics of European public procurement law is that it only regulates contractual relations, without addressing unilateral relations. This limitation is surprising. The question has sometimes been raised, by the European Commission itself. The inclusion of unilateral acts in the definition of concessions was announced in the interpretative communication of 12 April 2000 [45]. This inclusion would have opened up a considerable scope of application, subjecting to a competitive procedure and, consequently, to control of certain elements of the implementation regime (such as duration or modification) all unilateral procedures by which the State regulates private activities of general interest by imposing public service constraints on them and all relations between public authorities or between public authorities and their public institutions.

[45] Commission des communautés européennes, *Communication interprétative sur les concessions en droit communautaire*, Bruxelles, 12 April 2000, *OJEC* 2000, serie C, n° 121. The Communication covered « … acts attributable to the State whereby a public authority entrusts to a third party - by means of a contractual act or a unilateral act with the prior consent of the third party - the total or partial management of services for which that authority would normally be responsible and for which the third party assumes the risk.» (pt. 2.4).

The Commission's desire in 2000 contrasts greatly with the fate reserved for the question in Directive 2014/23, of which only point 48 mentions, in a very summary manner, this fundamental question[46] in order to resolutely exclude all 'administrative relationships' from the scope of the directive. It is likely that this exclusion was made necessary by the desire to spare the bulk of public-public relations. Community law generally distinguishes between administrative relationships such as licensing, which are not subject to advertising and competitive tendering, and concessions involving a public service obligation, which are subject to an advertising and competitive tendering procedure. This is the case for air transport[47], maritime cabotage[48] or public passenger transport services by rail and by road [49].

However, the exclusion of unilateral relations, which may seem logical, focuses attention on the legal procedure, without grasping its content. The Teckal judgment was handed down, it should be remembered, on the basis of a reference from an Italian court questioning the possibility for a municipality to entrust missions to a public establishment by

[46] Directive 2014/23/Eu of the European Parliament and of the Council of 26 February 2014 *on the award of concession contracts*, pt. 48 : « Certain cases exist where a legal entity acts, under the relevant provisions of national law, as an instrument or technical service to determined contracting authorities or contracting entities, and is obliged to carry out orders given to it by those contracting authorities or contracting entities and has no influence on the remuneration for its performance. In view of its non-contractual nature, such a purely administrative relationship should not fall within the scope of concession award procedures ».

[47] See in air transport the coexistence of licences and concessions : Regulation (EC) n° 1008/2008 of the European Parliament and of the Council of 24 September 2008 *on common rules for the operation of air services in the Community*, especially art. 17.

[48] Council Regulation (EEC) No 3577/92 of 7 December 1992 applying the principle of freedom to provide sevices to maritime transport within Member States (maritime cabotage), art. 4 about « public services contracts ».

[49] Regulation (EC) n°1370/2007 of the European Parliament and of the Council of 23 October 2007 *on public passenger transport services by rail and by road and repealing Council Regulations* (EEC) n° 1191/69 and 1107/70, pt. 34.

unilateral means[50]. The Commune d'Aix-en-Provence decision of the French Conseil d'Etat [51], concerns the legality of a subsidy to a body managing a public service, even though no competitive procedure had been followed in awarding its tasks. Generally speaking, it is easy for a contracting authority to subsidise the activity of a company in which it has a majority stake without signing a contract. The unilateral act can be a substitute for the contract.

The exclusion of unilateral relationships thus allows the free organisation of the local public sector when there is no contract. This is how the creation of local public bodies (établissements publics) in France escapes all publicity and competition.

1.2.2 Organisations based on contractual cooperation

During the 1990s, many European Union states reorganised their local public sector around structures, under public or private law, subject to private law and maintaining contractual relationships with each other or with public authorities. These transformations have made it urgent for the concept of in-house [52].

Italy has developed public forms of management of public services that have borrowed heavily from the model of joint stock companies, allowing the participation of several communities and marked by the disappearance of limits to territorial competence. The classic forms of azienda ne municipalizzata could not intervene outside the territorial competence of the municipalities that created them, as their territory 'impassably circumscribed the interests

[50] CJEC, 18 November 1999, *Teckal*, aff. C-107/98, rec. p. I-8121, Opinion Georges Cosmas.

[51] CE, Sect., 06 avril 2007, *Commune d'Aix-en-Provence*, n° 284736, rec.

[52] See on this phenomenon: Cossalter (Philippe), « La société publique locale : un outil répandu en Europe », *Revue du droit public*, 2011 n° 3, pp. 757 s.

for which the public entities could provide' [53]. The *aziende municipalizzate* have been replaced by the more modern form of *aziende speciali*, which are no longer bound by a strict principle of territorial speciality.
In addition, the law allowed municipalities to enter into agreements with each other in order to manage "functions and services in a coordinated manner" and for the *aziende* to intervene on the territory of other local entities [54]. It should be noted that, like the agreements in Article L. 5111-1 of the French Code général des collectivités territoriales [55], the agreements in question allowed the aziende to intervene without competition.

Apart from these two specific cases, Italian administrative case law allowed *aziende speciali* to take part in competitive tendering procedures for the award of a public service outside their initial area of competence on the twofold condition that the intervention was strictly complementary to their initial statutory purpose and that it did not prejudice the

[53] « … il ricorso all'attrezzatura e all'attività di un'azienda municipalizzata già operante in un Comune vicino non è consentita ... in quanto trova un ostacolo insormontabile nel rilievo che il territorio circoscrive gli interessi ai quali possono provvedere gli enti pubblici, e quindi i loro organi, interessi che devono essere quelli propri della comunità amministrata ». CS, 1ère section, 18 décembre 1968, n° 3587/68, cited in G. CAIA, *L'attività imprenditoriale delle società a prevalente capitale pubblico locale al di fuori del territorio degli enti soci*, TAR Emilia Romagna, Parme, 2 may 2002, n° 240, *Foro amm.*, 2002 p. 1565, cit.

[54] See originally Legge 8 june 1990, n° 142, *Ordinamento delle autonomie locali*, *GURI* du 12 juin 1990, n° 135, Suppl. ord., art. 24 al. 1. V. currently Testo unico delle leggi sull'ordinamento degli enti locali approvato con Decreto legislativo 18 agosto 2000, n. 267, art. 30 : « In order to carry out specific functions and services in a coordinated manner, municipalities and provinces may enter into agreements with each other in this respect » (Al fine di svolgere in modo coordinato funzioni e servizi determinati, i comuni e le province possono stipulare tra loro apposite convenzioni).

[55] Article L. 5111-1 of the General Code of Territorial Authorities, in its current wording, stipulates in its first paragraph that "Territorial authorities may associate themselves for the exercise of their competences by creating public cooperation bodies in the forms and conditions provided for by the legislation in force" (Les collectivités territoriales peuvent s'associer pour l'exercice de leurs compétences en créant des organismes publics de coopération dans les formes et conditions prévues par la législation en vigueur).

material and financial conditions for the execution of the service or services for which they were responsible[56]. The complementarity was in particular territorial[57] : in the absence of territorial continuity of the networks, an *azienda* could not manage a public service of drinking water distribution [58].

Similarly, local public services in Germany have been subject to extensive formal privatisation ((*Organisationsprivatisierung* [59] or *Formelle Privatisierung* [60]) , which is currently being followed by a rather obvious remunicipalisation (*Rekommunalisierung*). The preferred form of this formal privatisation has been the Eigengesellschaft, a company with exclusive public capital held by a single shareholder, either in the form of a partnership (GmbH) or a corporation (AG). In addition, there are multi-shareholder companies (*Beteiligungsgesellschaft*), which are either wholly publicly owned (*Gemischöffentliche Beteiligungsgesellschaft*) or publicly and privately owned and may include a private majority partner (*Gemischwirtschaftliche Beteiligungsgesellschaften*).[61].

[56] CS, 5e section, 18 octobre 2001, *Azienda Speciale Servizi Pubblici di Cesano Maderno c/ la Acqua potabile Bovisio s.r.l.*, n° 5515.

[57] CS, 5e section, 11 juin 1999, n° 631 ; CS, 5e section, 4 avril 2002, *ASM Pavia s.p.a. c/ Metano Pavese s.p.a.. e Comuni di Pavia e Marcignago*, n° 1875.

[58] *Ibid*.

[59] On this concept in German law : J.A. KÄMMERER, *Privatisierung : Typologie - Determinanten - Rechtspraxis – Folgen*, Tübingen : Mohr Siebeck, 2001, pp. 41 s.

[60] See the presentation in J. ZIEKOW, *Öffentliches Wirtschaftsrecht : ein Studienbuch*, Beck, 2020, 5th edition, pp. 154 s.

[61] On these various forms see P. COSSALTER, *Les délégations d'activités publiques dans l'Union européenne*, Paris, LGDJ (coll. "Bibliothèque de droit public", tome 249), 2007, n° 932-934.

2. THE NEED TO ADAPT COMMUNITY LAW TO NATIONAL REALITIES

States such as France are organised around a dual system : the award of contracts to private sector companies or the management of public services by local public bodies. In the first case, contracts are subject to advertising and competition. In the second case, there are no contracts because public institutions are assigned their tasks by unilateral administrative acts.

On the contrary, the formal privatisation that has taken place in Italy, Germany and Austria, for example, has created a local public sector based on equity participation and sometimes complex contractual arrangements. Submission to the rules of public procurement thus, in a short time, threatened to fracture local organisations.

The history of the internal market is one of slow adaptation of Community law and EU law to national realities. By seeking to cover all contractual relations, without taking into account either activities or financial conditions, EU law has created major inequalities in treatment between Member States (2.1), inequalities which have had to be gradually corrected (2.2). French law, for its part, has not made much use of the concept of in-house, which is of little use. The French Conseil d'Etat has developed a 'backyard management' theory rather than the in-house theory: it encourages a lighter supervision of private activities of general interest in order to bring them out of the orbit of public sector and avoid their submission to the rules of public procurement (2.3).

2.1 The theories involved: the confrontation of the contractual approach and the organic approach

The concept of in-house has been built by the European Court of Justice on a contractual approach that can be considered simplistic. For a contract to be subject to advertising and competitive tendering, it must constitute a genuine contract. A contract can

only exist if there is an exchange of consents. If one of the two parties is subject to the control of the other, it has no autonomy of will and there is therefore no contract. [62]. This simplistic but 'pure' view of the contractual relationship could explain why the Court has always refused to recognise an in-house relationship in the case of even a symbolic share of private capital.

National doctrines, on the other hand, are not contractual but organic. They are mainly based on the idea that a company, when it is created by a public person and even if its capital is not entirely held by this person, is an organ of the administration. In the early 2000s, Italian law recognised a privileged relationship by ruling out the qualification of a concession in any relationship with a company in which the contracting authority participates[63]. The creation of the company and the holding of part of its equity marked the administration's desire to maintain a privileged relationship with this company. Equality of treatment was respected in a second stage, by putting the private capital share out to tender. Similarly, Spanish law classifies the mixed economy among the modes of indirect management of public services, alongside concessions, which means that the administration

[62] CJEC, 18 November 1999, *Teckal*, C-107/98, rec. p. I-8121. S. opinion of Advocate General Cosmas, pt. 52 and 53 : "[…] a contract must be drawn up and, in particular, must be concluded in writing. The contract is synallagmatic and for pecuniary interest. This means that the directive is applicable where, first, there is a concordance of wills between two different persons, the contracting authority and the supplier, and, second, the commercial relationship that is created consists in the supply of a product for pecuniary remuneration. In other words, there are mutual acts of performance, the creation of rights and obligations for the parties to the contract and interdependence of their respective acts of performance. 53. Third - an element directly linked to the preceding one - the party entering into the contract with the contracting authority, namely the supplier, must have real third-party status vis-à-vis that authority, that is to say the supplier must be a separate person from the contracting authority. This element, likewise, is an essential characteristic for the conclusion of supply contracts falling within the scope of Directive 93/36". See opinion of Advocate General Juliane Kokott, 1st March 2005, CJCE, *Parking Brixen GmbH c/ Gemeinde Brixen et Stadtwerke Brixen AG*, aff. C-458/03, pt. 43.

[63] See the combined reading of articles 113 to 116 of Legislative Decree no. 267 of 18 August 2000* on the Single Text of the laws on the organisation of local entities (Testo unico delle leggi sull'ordinamento degli enti locali), known as "TUEL", GURI no. 227 of 28 September 2000, suppl. ord. no. 162.

must have the free choice to resort to it without being hindered by the principle of advertising and competition [64]. If French law has diverged from that of its neighbours concerning the status of the mixed economy, it is because the Constitutional Council has declared the exemption rule provided for by the law to be contrary to the constitutional principle of equality. According to the Constitutional Council, the exemption for semi-public companies "could not be justified either by the specific characteristics of the status of the companies in question, or by the nature of their activities, or by any difficulties in applying the law that might run counter to the general interest objectives that the legislator intended to pursue" [65].

Once again, French law has suffered little from the application of Community law. On the other hand, there has been a violent confrontation between the contractual approach of Community law and the organic approach of German, Italian or Spanish law.

2 2 The gradual reconciliation of views

The Court of Justice of the European Communities has never yielded on the presence of private persons in the structures awarded public procurement contracts: the

[64] TS, 27 janvier 1992, quoted in F. GONZÁLEZ PALMA, *La explotación de las plazas de toros de titularidad municipal o provincial, gestión de un servicio público*, Málaga, ISEL, *Cuadernos de Gestión Pública Local* n°1, 2e semestre 2000 : « en el ámbito del Derecho Administrativo no existe …un contrato específico de gestión de servicios públicos, sino que es necesario hablar de una pluralidad contractual diferenciada a través de la que es posible dar cabida a todo tipo de gestión indirecta de un determinado servicio público ».

[65] Conseil constitutionnel, décision n° 92-316 DC du 20 janvier 1993.

slightest parcel of private capital or the participation of private persons, even non-profit ones, in an association[66], prevents the recognition of an in-house relationship [67].

For the rest, the Court has progressively abandoned and perverted its contractual approach in favour of an ad hoc approach, built up as and when cases were submitted to it and without any solid legal logic being discovered.

As we know, the Court initially only accepted an in-house relationship in the case of absolute control by a contracting authority over a third party[68]. The major innovation was to accept joint controls, exercised jointly by several public bodies over the same structure [69].

However, the recognition of joint control created a risk of circumvention of the rules, which was identified very early on in Italian law. The practice developed in the early 2000s of contracting authorities acquiring even a symbolic share in a public company in order to avoid the advertising and competition procedures. In the face of this phenomenon, the regional administrative courts (TAR) adopted a restrictive position [70], while the Italian Council of State was much more favourable to the organisational formula of multi-communal companies intended for "the joint exercise of services by public entities with homogeneous

[66] CJEU, 19 June 2014, aff. C-574/12, *Centro Hospitalar de Setúbal EPE (CHS), Serviço de Utilização Comum dos Hospitais (SUCH) c/ Eurest (Portugal) - Sociedade Europeia de Restaurantes Lda* : JCP A 2014, act. 559

[67] V. sur ces aspects notamment : S. DE LA ROSA, *Droit européen de la commande publique*, Larcier, 2020, 2nd edition, pp. 317 s.

[68] CJEC, 18 November 1999, *Teckal*, aff. C-107/98, rec. p. I-8121.

[69] CJEC, 13 November 2008, Coditel Brabant, C-324/07.

[70] L. MUSELLI, *Affidamento diretto di servizi a società a prevalente capitale pubblico locale e principi comunitari di concorrenza*, TAR Lombardia, Brescia, 13 may 2003, n° 681, in *Foro amm.* 2003, n° 7-8, juillet-août, pp. 2175-2187 ; G. CAIA, *L'attività imprenditoriale delle società a prevalente capitale pubblico locale al di fuori del territorio degli enti soci*, TAR Emilia Romagna, Parma, 2 may 2002, n° 240, *Foro amm.*, 2002 p. 1565.

interests" [71]. The difference in approach was crystallised in the requirement, on the part of the TARs, of "effective control" by the shareholder over the company, not only through the holding of a minimum share of the capital but also through the possibility of having effective powers of control over the company's management [72]. It is this approach that was finally adopted by the Court of Justice of the European Union which, in its Econor decision, imposed the need for each of the authorities wishing to benefit from the in-house exemption to participate in both the capital and the management bodies of the said entity [73].

In addition, the Court recognised the possibility of contractual relations between public bodies in its decision City of Hamburg[74]. This case concerned the provision by the City of Hamburg of its road services to neighbouring authorities. The Court accepts that relations between public authorities may be established on a contractual basis as long as the contractual agreement concerns only contracting authorities without the participation of private parties, and the contract concerns the management of a public service for which all parties are competent. This is what is known as horizontal cooperation, to differentiate it from the vertical cooperation characteristic of in-house contracts.

2.3 Another way to escape the rules of EU public procurement law : the « Backyard Management »

[71] CS, 5e section, 30 avril 2002, *TEA c/ L'Aprica spa*, n° 2297, *Cons. St.* 2002.809

[72] M. DUGATO, TAR Lombardie, Brescia, 4 avril 2001, n° 222, *Giorn. Dir. Amm.* 2001, p. 1127.

[73] CJEU, 29 November 2012, Econord Spa c/ Comune di Cagno et Comune di Varese, C-182/11.

[74] CJEC, 9 June 2009, Commission v. Allemagne, C-480/06.

We have coined the term 'Backyard Management' as opposed to the 'In-House' theory. This method consists of a contracting authority 'hiding' a public procurement contract behind a banal relationship with an association or company that it controls.

In fact, in our view, there is a form of equivalence in the means of control: the more important the statutory control is, the less important the contractual control needs to be. Thus, the in-house theory is in our view only a way of validating this approach: when statutory control is too important, contractual control becomes unnecessary. We can, by retaining the statement, change the point of view completely: when a contracting authority has statutory control over a company or association, there is no need to assign its tasks to it by contract. It is thus possible, simply by unilateral action (see the hypothesis above), to dispense with any advertising and competitive tendering procedure.

Community law is not totally circumvented, since such bodies are also qualified as bodies governed by public law and are themselves subject to advertising and competitive tendering procedures[75] provided of course that their activity is recognised as not being of an industrial or commercial nature [76].

The fictitious nature of concession contracts awarded to public companies is a classic issue in France. The concessionary status of the Société nationale des chemins de fer français (SNCF), for example, has been criticised in French academic literature [77]. For Gaston Jèze, the SNCF, although constituted at the time in the form of a semi-public company, was

[75] About the « bodies governed by public law » : Directive 2014/24/Eu Of The European Parliament And Of The Council of 26 February 2014 *on public procurement and repealing Directive 2004/18/EC*, art. 2.

[76] V. CJCE, 10 mai 2001, Agorà s.r.l. et Excelsior s.n.c. c/ Ente Autonomo Fiera Internazionale di Milano, aff. C-223/99 et C-260/99.

[77] A. DE LAUBADÈRE, *Traité élémentaire de droit administratif*, Paris, LGDJ, tome 3, volume 2 « L'administration de l'économie », second edition, 1971, p. 693.

not a concessionary of the State but a disguised régie because the operation of the national company was "carried out at the State's risk" [78]. For René Rodière, the fictitious nature of the SNCF concession stems from the power to modify the specifications by which the State binds itself [79]. The same analysis could be made of the motorway companies, semi-public companies of the State 'concessionaires' of motorways and of local SEMs, because of the majority holding of the capital by the concessionary authority [80]. Although they are set up as private companies, SEMs remain the 'creatures' of the public authority [81]. Generally speaking, it is doubtful that the delegation can have any real substance when a power of domination makes it possible to modify the conditions of exercise of the delegated activity [82].

Take the example of the StadtWerke of the City of Cologne in Germany in the 1990s. A contract "GEW-Werke Köln AG" was signed in 1996: fourteen articles and six

[78] G. JÈZE, *La réorganisation des chemins de fer d'intérêt général*, *RDP* 1937, p. 536.

[79] R. RODIÈRE, *Droit des transports; : transports ferroviaires, routiers, aériens et par batellerie*, Paris, Sirey, tome 1, 1953, p. 74 : « qu'est-ce que ce cahier des charges par lequel l'État se lie à lui-même ou plus exactement par lequel il ne se lie pas car il dépend de lui d'en modifier les termes au gré de sa politique économique ? » (What are these specifications by which the state binds itself or, more precisely, by which it does not bind itself because it depends on it to modify the terms according to its economic policy?).

[80] See P. COSSALTER, *SEM et mise en concurrence : perspectives comparées*, *RFDA* 2002, n° 5, pp. 938-951.

[81] In the words of C. BOITEAU, *La société d'économie mixte, délégataire de service public*, *AJDA* 2002, n° 21, pp. 1318-1326, p. 1318.

[82] M. PÉBEREAU, *La politique économique de la France*, Paris, Armand Colin, 1988, tome 2, pp. 23-26 notes that "[...] the public authorities affirm the autonomy of management and decision-making of public enterprises. The fact remains that belonging to the public sector can have significant effects on their management [...] Because they belong to the public sector and the State has absolute powers to appoint their managers, national companies are subject to an essential hazard: the public authorities can change the rules of the game and call into question, in practice, the management autonomy asserted in principle...". See also M. BAZEX, *Vers de nouveaux modèles normatifs pour le secteur public?*, *AJDA* 1990, pp. 659 s.

pages give the rights to operate the three services to the company wholly owned by the city. Even though a special act (the Konzessionsvertrag;) is formally required to assign the service to the company, it can be considered to have been entrusted with its public tasks from the outset, as indicated by its very name, GEW being the acronym for Gas, Elecktriztäts and Wasser (water). The second conceptual 'moment', the definition of the conditions for carrying out the activity, cannot withstand the control exercised over the company's statutory bodies. The summary nature of such a 'management contract' suggests the existence of a broad supervisory power.

The fact that Stadwerke is 100% controlled means that it is an in-house situation.

But another example will illustrate the alternative hypothesis, that of Backyad Management. The example is taken from a judgment of the French Council of State, UGC Ciné-Cité of 2007 [83].

At issue in this case was the activity of a semi-public company operating the only art house cinema in the town of Epinal. The cinema, owned by the town, was rented at a favourable price to the SEM, which also received balancing subsidies. The town had an overwhelming presence in the structures of the SEM: the president of the company was the mayor of the town, the board of directors was mostly composed of elected officials, etc...

However, the company's activity was not qualified as a public service because the municipality of Épinal had neither set the company's objectives, nor put in place procedures to control the objectives. In order for an activity operated by a private person to be classified as a public service in France, the public authority must exercise close control over the activity in question[84].

It can hardly be disputed that the Palace cinema in Epinal is an emanation of the commune. The latter maintains an indisputable public-public relationship with its company. However, this relationship escapes the rules of advertising and competition.

[83] CE SSR., 5 octobre 2007, Soc. UGC-Ciné-Cité, req. n° 298773, *Rec. CE*.

[84] CE Sect., 22 février 2007, Association du personnel relevant des établissements pour inadaptés (A.P.R.E.I.), n° 264541.

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Abstract. *The legal regime of public-public cooperation within EU law is the result of an eventful history.*
Community law on public contracts was designed according to a simple scheme, intended to ensure the useful effect of competition law: it covered all contractual relationships regardless of the legal status of the contracting parties. As a result, EU procurement law covered relations between the public and private sectors and relations within the public sector equally, provided that these were established on a contractual basis.
However, the contractual instrument is now an everyday management tool within and between administrative bodies.
The case law of the Court of Justice and the public procurement directives have had to adapt to this reality, in order to allow Member States to exercise a legitimate free choice within different models of administrative organisation.

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THE CONCEPT "CIRCULAR ECONOMY": TOWARDS A MORE UNIVERSAL DEFINITION

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1. INTRODUCTION

The transition to a circular economy is gaining traction. Both on the international[2], European[3] and the national level (e.g. Germany and China)[4] initiatives are being taken globally to leave the current linear economic model (take – make – waste) behind in favour of a circular economy where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised.[5] Although there is a great amount of enthusiasm around the concept of a circular economy, (scientific) research on the topic is still in its infancy.

This article is focused on the definition of the concept "circular economy". This contribution first addresses the definition of circular economy and the qualification of the concept as an umbrella term. In fact, the importance of a good definition for (legal) practice is undeniable. If a legislator, by way of illustration, were to choose to reduce the selling rights or to grant subsidies in the event of circular demolition and reconstruction, both the consumer, contractor and notary need to know what the legislator understands by a 'circular' demolition and construction process. [6] The question rises if a good definition is feasible. Is

[2] UNITED NATIONS, "The 17 goals", https://sdgs.un.org/goals.

[3] Communication from the Commission to the European parliament, the council, the European economic and social committee and the committee of the regions concerning *'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality*, COM(2021) 550; Communication from the Commission to the European parliament, the council, the European economic and social committee and the committee of the regions concerning a *new Circular Economy Action Plan for a cleaner and more competitive Europe*, COM(2020) 98.

[4] Germany: Gesetz zur Neuordnung des Kreislaufwirtschafts- und Abfallrechts, 24 februari 2012. China: The Circular Economy Promotion Law, 29 augustus 2008;

[5] Communication from the Commission to the European parliament, the council, the European economic and social committee and the committee of the regions concerning *an EU action plan for the Circular Economy (Closing the loop)*, COM(2015) 614, 2.

[6] The current Flemish legislation on selling and registration rights isn't really clear at the moment on the subject of circular ambitions: K. ZEE, J. VOORTER, *Verlaagd tarief in het verkooprecht bij sloop en herbouw. Een uitbreiding op losse schroeven*, *NjW* 2021, afl. 441, 330 – 337.

circular economy not to be considered as an essentially contested concept? This is discussed in the second part of this article. After a brief presentation of the general conditions of application, the theory is applied to the concept of the circular economy in order to establish whether providing a definition is possible at all. In a third part, after explaining why there is any need, a more universal description or definition is put forward. Within this analysis the authors have examined legislation in France, the Netherlands, Belgium and Romania.

2. THE CIRCULAR ECONOMY AS AN UMBRELLA TERM

2.1 *An umbrella term*

The Ellen Macarthur Foundation characterizes the circular economy as "*an industrial system that is restorative or regenerative by intention and design […]. It replaces the 'end-of-life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems, and, within this, business models*"[7]

This definition albeit a popular one[8] lacks certain key elements of the circular economy concept, such as the paradigm shift the transition to a circular economy entails or

[7] Ellen Macarthur Foundation, "Towards the circular economy: Economic and business rationale for an accelerated transition", 2013, www.ellenmacarthurfoundation.org/assets/downloads/publications/Ellen-MacArthur-Foundation-Towards-the-Circular-Economy-vol.1.pdf, 7.

[8] For example: D. PETOSA, *Bouwen in een circulaire economie. Een benadering vanuit het privaat aannemingsrecht*, in E. MEES, Y. MUSSCHEBROECK (eds.), *Overheidsopdrachten voor werken en private aannemingsovereenkomsten: capita selecta*, Limal, Anthemis, 2021, 262; B. VERHEYE, *Toekomst van de circulaire vastgoedeconomie*, *TPR* 2019, 111 -113; A. VAN VAERENBERGH, F. LEYMAN, *"Product als dienst"-overeenkomsten, een stap in de richting van een circulaire economie*, *MER* 2019, afl. 1, 21; V. MAK, *Consumentenbescherming bij servitisation*, *TPR* 2019, afl

the consumer perspective (*infra*). In fact, the term 'circular economy' appears to be a collection of different ideas and concepts and therefore an umbrella concept. [9] After all, the circular economy is influenced by ideas such as Cradle to Cradle, Industrial Ecology, Biomimicry, Performance Economy, Blue Economy[10], Natural Capitalism, Industrial Capitalism, etc. [11] For example, the Cradle to Cradle idea uses the 'biological metabolism' as a model to also develop a 'technical metabolism'. Within these 'metabolisms', product components can be designed for continuous recovery and reuse as biological or technical nutrients.[12] The cyclical course of the circular economy follows from this. The 'Performance Economy', a notion developed by Stahel, wants to shift the focus from the purchase of products to their use by consumers (in which the company is encouraged to market

3-4, 783 en B. KEIRSBILCK, E. TERRYN, E. VAN GOOL, *Consumentenbescherming bij servitisation en product-dienst-systemen (PDS)*, *TPR* 2019, afl. 3-4, 826; J. HART, K. ADAMS, J. GIESEKAM, D. DENSLEY TINGLEY, F. POMPONI, *Barriers and drivers in a circular economy: the case of the built environment*, *Science Direct – 26th CIRP Life Cycle Engineering (LCE) Conference*, Amsterdam, Elsevier 2019, 619; M. GEISSDOERFER, P. SAVAGET, N. M.P. BOCKEN, E.J. HULTINK, *The circular economy – A new sustainability paradigm*, in *Journal of Cleaner Production* 2017, afl. 143, 759. Some of these articles also refer to the definition of the European Commission in: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on *Closing the loop – An EU action plan for the Circular Economy*, COM(2015) 614, 2.

[9] F. BLOMSMA, G. BRENNAN, *The emergence of circular economy. A new framing around prolonging resource productivity*, in *Journal of industrial ecology* 2017, vol. 21, afl. 3, 604. Also in: M. BORRELLO, S. PASCUCCI, L. CEMBALO, *Three propositions to unify circular economy research: a review*, *Sustainability* 2020, afl. 12, 5; Ciraig, "Circular Economy: A critical literature review of concepts", 2015, http://www.ciraig.org/pdf/CIRAIG_Circular_Economy_Literature_Review_Oct2015.pdf, 64;

[10] G. PAULI, *Blauwe economie: versie 2.0*, Amsterdam, Nieuw Amsterdam, 2017, 384p.

[11] A. SACCHI HOMRICH, G. GALVAO, L. GAMBOA ABADIA, M. M. CARVALHO, *The circular economy umbrella: Trends and gaps on integrating pathways*, in *Journal of Cleaner Production* 2018, afl. 175, 527; M. GEISSDOERFER, P. SAVAGET, N. M.P. BOCKEN, E.J. HULTINK, *The circular economy – A new sustainability paradigm*, in *Journal of Cleaner Production* 2017, afl. 143, 759; J. KORHONEN, A. HONKASALO EN J. SEPPÄLÄ, *Circular Economy: the concept and its limations*", in *Ecological Economics* 2018, afl. 143, 39; Ellen Macarthur Foundation, "Schools of Thought", https://www.ellenmacarthurfoundation.org/circular-economy/concept/schools-of-thought.

[12] M. BRAUNGART EN W. MCDONOUGH, *Cradle to Cradle. Afval = voedsel*, Heeswijk, Search Knowledge, 2010, 129; Ellen Macarthur Foundation, "Schools of Thought", https://www.ellenmacarthurfoundation.org/circular-economy/concept/schools-of-thought.

sustainable and resistant products as a service).[13] The fact that the circular economy focuses on the ecological aspect as well as the economic component is reflected in the theory of 'Natural Capitalism'. According to this theory, protecting the biosphere can go hand in hand with making profits and increasing competitiveness, e.g. by making the use of raw materials more efficient and productive.[14]

2.2 *The consequences of the qualification*

The fact that the concept "circular economy" is an umbrella term has two consequences: 1) umbrella concepts can serve as a catalyst for further knowledge acquisition and research to fill an existing knowledge gap and 2) umbrella concepts all develop in a similar way.[15] In the context of this paper, it is mainly the second element that is interesting.

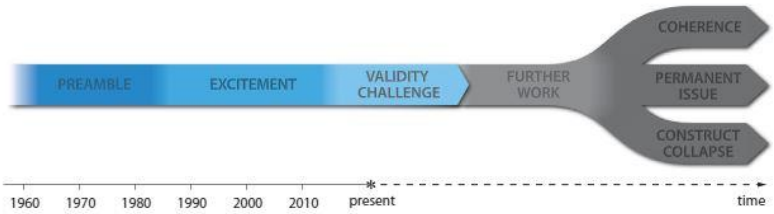
The development of an umbrella concept normally goes through four different phases: 1) a period of enthusiasm in which everyone welcomes the emergence of the new umbrella term - that connects recently unrelated ideas and concepts - with great interest; 2) the period in which the validity of the umbrella concept is challenged. In this second period, there are a lot of possible definitions and there is no real framework available in which the new concept can function; 3) further work tries to give the concept further (theoretical)

[13] Product Life Institute, http://www.product-life.org/en/node.

[14] A. SACCHI HOMRICH, G. GALVAO, L. GAMBOA ABADIA, M. M. CARVALHO, *The circular economy umbrella: Trends and gaps on integrating pathways*, in *Journal of Cleaner Production* 2018, afl. 175, 527.

[15] P.M. HIRSCH, D. Z. LEVIN, *Umbrella advocates versus validity police: A life-cycle model*, in *Organization Science* 1999, vol. 10 , afl. 2, 204 -205.

support after which the concept 4) collapses, develops as a coherent concept or remains a contested concept (permanent issue).[16]



Picture 1: Development trajectory of the umbrella term "circular economy"[17]

Scholars conclude that the circular economy is currently in the second phase ('validity challenge period'). [18] This period would imply, among other things, that there is currently still a great deal of uncertainty about the concept of "circular economy". This does appear to be the case.[19] However, this raises the question whether the concept of "circular economy" is not an "essentially contested concept" and therefore, by definition, cannot be defined. Considering the similar course of development of umbrella concepts, this would mean that the future of the circular economy does not necessarily look very bright,[20] and legal uncertainty will remain.

[16] HIRSCH and LEVIN argue that this development trajectory is similar to the life cycle of products, technologies and industries: P.M. HIRSCH, D. Z. LEVIN, *Umbrella advocates versus validity police: A life-cycle model*, cit., 204.

[17] F. BLOMSMA, G. BRENNAN, *The emergence of circular economy. A new framing around prolonging resource productivity*, in *Journal of industrial ecology* 2017, vol. 21, afl. 3, 607.

[18] *Id*., 610.

[19] JULIAN KIRCHHERR ET AL., *Conceptualizing the Circular Economy: An Analysis of 114 Definitions 221*, (2017).

[20] Bear in mind that the lack of an adequate definition is merely one of the elements which can influence the development trajectory of an umbrella term.

3. CIRCULAR ECONOMY AS AN ESSENTIALLY CONTESTED CONCEPT?

3.1 Theory

1° Definition of an essentially contested concept

W.B. Gallie established the theory of "essentially contested concepts". In his 1956 contribution, Gallie explicitly states that, for him, essentially contested concepts are concepts that give rise to endless disputes between users about the "correct" use of these concepts.[21] Academic literature points out that, according to Gallie, a concept is essentially contested if there is an agreement between the various stakeholders about the goals of the concept but disagreement about 1) how the concept should be defined, 2) the analysis methods to be used in order to grasp the dynamics of the concept, 3) what the conceptual cornerstones of the concept are and 4) what research methodology is desirable or useful.[22] By introducing the term, Gallie intends to provide a strict and systematic framework for the analysis of such contested concepts.[23]

[21] W.B. GALLIE, *Essentially contested concepts*, in *Proceedings of the Aristotelian Society* 1956, afl. 56, 169.

[22] J. KORHONEN, C. NUUR, A. FELDMANN, S. ESHETU BIRKIE, *Circular economy as an essentially contested concept*, in *Journal of Cleaner Production* 2018, afl. 175, 545.

[23] D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies* 2006, vol. 11, afl. 3, 236.

Concepts such as “democracy” and “the rule of law” are pre-eminent examples of “essentially contested concepts”. [24] Gallie first of all uses a hypothetical example to further introduce the term “essentially contested concepts”. He proposes a (football) championship with the following characteristics: 1) In the championship, each team specialises in a specific style of play, strategy or method. 2) The 'champion' is not determined by the highest number of successes but by the level of the performance(s) delivered. "Being champion" means: having played the match in the best possible way; 3) "Champion" is not a title that is awarded at a certain point and that one can wear for a certain period of time, but it can change after each match; 4) As there is no real points system (there is no jury and there are no strict rules to determine the winner), the title of champion takes the form of a "claim" by the team with the biggest or "loudest" supporters. Each team has its loyal core of supporters, but there is also an ever-fluctuating group that can switch teams based on the play delivered; 5) Each supporters' group considers its team to be the 'champions' (e.g. the deserved champions, the moral champions, etc.). Gallie indicates that the supporters' groups will accept that a team is - at a certain point in time - the effective champion, but this does not imply universal recognition. Indeed, supporter groups will continue to try to prove that their favourite team is the true champion because they believe that their team represents the best way to play. As a result, there is a constant battle/competition between the rival teams. This battle is not only about the recognition as 'champions', but also about the definition of the correct criteria to designate the champion.[25]

2° The attributes of an “essentially contested concept”

[24] W.B. GALLIE, *Essentially contested concepts*, in *Proceedings of the Aristotelian Society* 1956, afl. 56, 180. Also: D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies* 2006, vol. 11, afl. 3, 222.

[25] W.B. GALLIE, *Essentially contested concepts*, in *Proceedings of the Aristotelian Society* 1956, afl. 56, 170 -171.

Gallie ultimately identified seven (7) characteristics of an 'essentially contested concept': 1) appraisiveness; 2) internal complexity; 3) diverse describability; 4) openness; 5) reciprocal recognition; 6) original exemplar and 7) progressive competition.[26]

The first characteristic (appraisiveness) implies that the concept carries a valued (normative) accomplishment or achievement. [27] Thus, Gallie states that democracy has a positive normative value[28] and can, from a normative perspective, even be considered to be the political concept *par excellence*. After all, one of the main questions in any major policy decision today is: "is it democratic?" [29]

The second (internal complexity) and the third (diverse describability) property are often treated together as they are related.[30] Other authors consider that, internal complexity means that the concept consists of various, often overlapping, criteria.[31]

[26] J. KORHONEN, C. NUUR, A. FELDMANN, S. ESHETU BIRKIE, *Circular economy as an essentially contested concept*, *Journal of Cleaner Production* 2018, afl. 175, 548. Also: D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 216 -222; J. PENNANEN, *After essentially contested concepts*, onuitg. Masterthesis filosofie Universiteit van Jyväskylä, 2012, 16 -50.

[27] D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 216.

[28] A negative normative appraisal is also possible D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 216 en J. PENNANEN, *After essentially contested concepts*, onuitg. Masterthesis filosofie Universiteit van Jyväskylä, 2012, 17.

[29] W.B. GALLIE, *Essentially contested concepts*, in *Proceedings of the Aristotelian Society* 1956, afl. 56, 184.

[30] D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 216.

[31] J. PENNANEN, *After essentially contested concepts*, onuitg. Masterthesis filosofie Universiteit van Jyväskylä, 2012, 18 – 19.

The example of democracy can clarify matters. After all, the concept of 'democracy' contains various internal components. These may include, for example, the right of the majority to make decisions, the equality of all citizens to achieve positions of political leadership and/or responsibility, or the continuous and active participation of citizens in political life at all levels.[32] It is this internal complexity (second characteristic) that ultimately also leads to the fact that the concept can be described in different ways (third characteristic).[33]

The fourth characteristic focuses on the openness of the concept. This means that changing circumstances could lead to a revision of the content of the concept. Such changing circumstances may/cannot have been foreseen beforehand.[34] As an example GALLIE presents another fictitious situation. He refers to a bowling championship where a certain team focuses on a particular technique. This team will always have to be aware of the circumstances in which the match is played or the events that occur during the match and will have to adapt its way of performing this technique in the best possible way in order to be able to claim the championship title.[35]

Reciprocal recognition is the fifth characteristic of an "essentially contested concept". This means that the different parties - who have a different opinion about the correct content or use of the concept - also recognise that the use they advocate is contested by the

[32] D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 217.

[33] W.B. GALLIE, *Essentially contested concepts*, in *Proceedings of the Aristotelian Society* 1956, afl. 56, 172; D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 217.

[34] W.B. GALLIE, *Essentially contested concepts*, in *Proceedings of the Aristotelian Society* 1956, afl. 56, 172;

[35] *Id.*, 173 – 174. In the same line: J. Pennanen, *After essentially contested concepts*, unpublished, Masterthesis philosophy University of Jyväskylä, 2012, 23.

other party/parties.[36] For Gallie it is mainly about each party being able to see on the basis of which criteria the other parties support the (correct) content of the concept.[37]

Gallie defines the sixth characteristic (original exemplar) as the derivation of any concept from an original appearance whose authority is recognised by all users of the concept.[38] There is much discussion about this sixth property since Gallie uses the term appearance both *sensu lato* and *sensu stricto*.[39] The interpretation *sensu lato* means - in short - that the exemplar also consists of various features to which different parties attribute different values. So, the original exemplar itself can also take on different forms.[40] The interpretation *sensu stricto*, in turn, assumes that the essentially contested concept is anchored in some kind of original, transcending, uncontested and fully delimited manifestation of the concept.[41] It is important to point out that, in the context of an "essentially contested concept", different parties discuss the correct use or interpretation of a concept. This is different in the case of "confused concepts", in which two ideas or elements of the same concept are emphasised without a form of contestation.[42]

[36] D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 219.

[37] W.B. GALLIE, *Essentially contested concepts*, in *Proceedings of the Aristotelian Society* 1956, afl. 56, 172.

[38] W.B. GALLIE, *Essentially contested concepts*, in *Proceedings of the Aristotelian Society* 1956, afl. 56, 180: "*the derivation of any such concept from an original exemplar whose authority is acknowledged by all the contestant users of the concept"*

[39] D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 219 -220.

[40] *Id.*; J. PENNANEN, *After essentially contested concepts*, unpublished, Masterthesis philosophy University of Jyväskylä, 2012, 33.

[41] D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 219 -220.

[42] *Id.*; J. PENNANEN, *After essentially contested concepts*, unpublished, Masterthesis philosophy University of Jyväskylä, 2012, 33.

The "Progressive competition" is the final characteristic of an 'essentially contested concept'. Gallie believes that, by continuing to discuss the use of the concept, the quality of the arguments put forward will also increase.[43] Again, there is an interpretation *sensu lato* and *sensu stricto*. In the interpretation *sensu stricto*, progressive competition leads the parties to reach more agreement on the original appearance.[44] In the *sensu lato* interpretation, Gallie argues that since there will be no general principle to determine who is right about the interpretation of the concept, progressive struggles can enhance the rationality of the arguments surrounding the interpretation of a particular use of the concept.

3.2 Application and consequences

1° Application to the concept of "circular economy"

Now that Gallie's theory around "essentially contested concepts" has been explained, it is possible to examine whether the concept of "circular economy" also falls within the contours of this concept. Scholars already tried to perform this thought exercise once in 2018.[45] This ultimately led to the conclusion that the circular economy is indeed an 'essentially contested concept'.[46] We do not share this opinion.

[43] W.B. GALLIE, *Essentially contested concepts*, in *Proceedings of the Aristotelian Society* 1956, afl. 56, 193.

[44] D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006 vol. 11, afl. 3, 220.

[45] J. KORHONEN, C. NUUR, A. FELDMANN, S. ESHETU BIRKIE, *Circular economy as an essentially contested concept*, in *Journal of Cleaner Production* 2018, afl. 175, 548 -549.

[46] *Id.*, 549.

The first characteristic relates to the appreciation (positive/negative) of the concept of the circular economy under discussion. As authors state, we do agree, that stakeholders today attach enormous value to the transition to a circular economy and that the circular economy holds enormous potential.[47] This first condition is therefore perfectly fulfilled.

The second property (internal complexity) and third property (diverse describability) will be discussed together here. It is certain that the circular economy consists of several internal components, e.g. reuse, greater focus on services, product design, cradle to cradle, etc..[48] By focusing on one or more of these components, the concept can therefore also be described in different ways. This also happens in practice.[49] The concept of "circular economy" therefore also meets the second and third characteristic of an "essentially contested concept".

The circular economy satisfies the fourth characteristic (openness of the concept) by stating that our interpretation of a circular economy will still change since our knowledge about our impact on nature is not yet complete and is still evolving.[50] The concept of the circular economy therefore seems to satisfy this characteristic as well. After all, there is an idea today about what the circular economy should look like, but insights and/or events in the future - which cannot be predicted at present - may cause the circular economy to have to adapt.

[47] J. KORHONEN, C. NUUR, A. FELDMANN, S. ESHETU BIRKIE, *Circular economy as an essentially contested concept*, in *Journal of Cleaner Production* 2018, afl. 175, 548.

[48] This is similar to the exemple concerning democracy: D. COLLIER, F.D. HIDALGO, A.O. MACIUCEANU, *Essentially contested concepts: Debates and applications*, in *Journal of Political Ideologies*, 2006, vol. 11, afl. 3, 219 -220, vol. 11, afl. 3, 217.

[49] J. KIRCHHERR, D. REIKE, M. HEKKERT, *Conceptualizing the circular economy: An analysis of 114 definitions*, in *Resources, Conservation & Recycling* 2017, afl. 127, 221 – 232.

[50] J. KORHONEN, C. NUUR, A. FELDMANN, S. ESHETU BIRKIE, *Circular economy as an essentially contested concept*, *Journal of Cleaner Production* 2018, afl. 175, 549.

It is the fifth characteristic (reciprocal recognition) which, in our view, poses a problem. Gallie explicitly states concerning this fifth characteristic that the use of an essentially contested concept must be aimed at using it both defensively and offensively.[51] The aforementioned authors are of the opinion that the concept "circular economy" also meets this characteristic. For this, they refer to the strong promotion of the concept by the Ellen Macarthur Foundation, among others. However, the concept of "circular economy", in our opinion, stumbles over this particular property. After all, one cannot deny that the current discussion about the concept "circular economy" (focus on recycling, link with sustainability, need for new business models, etc.) cannot be compared with discussions about concepts such as "art" and "democracy". In "art" and "democracy" it is very clear that one can emphasise a certain merit, e.g. equality of all citizens in a democracy, or a certain preference, e.g. Cubism as a favourite art form. Other people will argue, with any valid reasons, that the works of Jan Van Eyck constitute art rather than Cubism or that democracy is more about the will of the majority. There is no general principle that can and will ultimately determine which view is preferable.[52]

This is different for the circular economy. Current definitions emphasise different elements/ideas of the same concept. Stakeholders do not recognise that they are using visions of the circular economy that are diametrically opposed to the visions of other stakeholders.[53] Someone who says that the circular economy is about reuse, while another person says that for them it means focusing on product-service systems, are simply describing two sides of the same coin - both are interesting, valid and possible pathways to achieve a fully circular economy. In addition, in the context of the circular economy there are general principles that,

[51] W.B. GALLIE, *Essentially contested concepts, Proceedings of the Aristotelian Society* 1956, afl. 56, 172.

[52] W.B. GALLIE, *Essentially contested concepts,* in *Proceedings of the Aristotelian Society* 1956, afl. 56, 178.

[53] This is not in line with the fictional "championship used by GALLIE (*Supra* n. 10).

in a certain sense, determine which view or method is preferable (e.g. based on the ladder of Lansink, reuse is a better solution than recycling).

The arguments presented above seem to demonstrate that the concept of "circular economy" is not an "essentially contested concept" but a "confused concept". This distinction was the reason for the assumption of the sixth characteristic. As already indicated above, stakeholders discussing the concept of "circular economy" today tend to emphasise different ideas within this concept (two sides of the same coin), whereas in the context of an "essentially contested concept", it is precisely the concept itself that is being discussed (what is art?). The seventh characteristic (progressive competition) does not in our opinion detract from this conclusion.

2° Consequences

The fact that the concept "circular economy" is not an "essentially contested concept" can be positively associated with the development trajectory of an umbrella concept.[54] After all, the concept "circular economy" is as submitted currently in the "validity challenge period", as a result of which in subsequent phases more clarity will have to emerge on, for example, the content of the concept, possible tools, etc. Building on this line of reasoning the next paragraph wants to contribute to the debate providing elements why a clear definition is needed and what elements should be included.

4. TOWARDS A CLEAR AND (MORE) UNIVERSAL DEFINITION

[54] *Supra* n. 4 – 5.

4.1 *Is a (universal) definition necessary and useful?*

Despite its possible impact on the development of an umbrella concept and its importance for practice, one may wonder whether the current lack of unanimously accepted definition in our legislation will actually be a major problem. Does it matter so much, then, that companies, knowledge institutions and governments colour the circular economy according to their own place in the circular story? In other words, is it necessary to work towards a strictly defined universal definition? This is indeed considered to be a problem. Today, the circular economy is used and studied by many different stakeholders. Without a generally accepted (universal) definition, the concept may blur. A concept that is interpreted and used in this way may eventually collapse or become bogged down in good intentions.[55] There is a need for a well-thought-out definition.[56]

Furthermore, from a legal point of view, a clear definition offers great added value. It allows for policy making and enforcement, but also, more generally, for greater clarity and legal certainty for other policy makers (e.g. the local level), businesses and consumers.[57] This can be illustrated. The principle of legal certainty implies for example that the law must be foreseeable and accessible, so that the person seeking justice can reasonably foresee the consequences of a certain act at the time when the act is performed and that the government

[55] *Supra* numbers 7 – 8. Also in: J. KIRCHHERR, D. REIKE, M. HEKKERT, *Conceptualizing the circular economy: An analysis of 114 definitions*, in *Resources, Conservation & Recycling* 2017, afl. 127, 221; J. KIRCHHERR, M. HEKKERT, R. BOUR, A. HUIBRECHTSE-TRUIJENS, E. KOSTENSE-SMIT, J. MULLER, *Breaking the barriers to the circular economy*, 2017, https://www2.deloitte.com/nl/nl/pages/risk/articles/breaking-the-barriers-to-the-circular-economy.html, 4.

[56] A. MURRAY, K. SKENE, K. HAYNES, *The circular economy: an interdisciplinary exploration of the concept and application in a global context*, *Journal of Business Ethics* 2015, afl. 140, 377.

[57] *Supra* number 3.

may not deviate from it without objective and reasonable justification.[58] A clear definition of the term 'circular economy' can help achieve this ambition for legal certainty and more clarity.

In Flemish environmental law, only the Materials Decree[59] currently refers to the concept of the circular economy. Article 4 indicates that the objective of the Materials Decree is to establish measures to promote a circular economy.[60] However, the term is not defined in the Decree creating legal uncertainty. The same is true for Italian and French legislation. It mentions the notion of circular economy both at state and regional level, yet never defines it[61]. Meanwhile, Romanian waste legislation has only recently been updated to the EU standards.[62]

This may come as a surprise. Hence, the Italian legislation brings up the circular economy as raison d'être or even as purpose of enactment of a new law. The concept emerges above all in the Italian Environment Code (hereafter, IEC) in particular in Part IV of the code, which deals with waste management, a sector identified as one of the key elements in the transition

[58] For example: I. OPDEBEEK, S. DE SOMER, *Algemeen bestuursrecht*, Antwerpen, Intersentia, 2019, 411; RvS (Council of State) 21 februari 2011, nr. 211.392, *vzw vlaamse dierenartsenvereniging et al.*

[59] Decree of 23rd December 2011 on the sustainable management of material cycles and waste, *Belgian Official Gazette* 28 February 2012, 12.943

[60] Chapter 6 (article 67) explicitly deals with the transition to a circular economy.

[61] A generic and non-binding description of the concept of Circular economy can be found in annex 2 of the ministerial decree 11 June 2020 issued by the Italian Ministry of Economic Development, which states that „*circular economy refers to an economic model in which the value of products, materials, and resources is maintained for as long as possible, and waste generation is minimized*". For France: Loi n° 2020-105 du 10 février 2020 relative à la lutte contre le gaspillage et à l'économie circulaire.

[62] The transition towards a Circular economy is mentioned in Government's decree: Ordonanţa de urgenţă nr. 92/2021 privind regimul deşeurilor, *Romanian Official Gazette*, Part I, n. 820, 26 August 2021. The decree has been adopted after receiving a letter of formal notice from the European Commission.

to a circular economy[63]. However unintended there is an apparent reductive nature of the legal promotion of the concept as currently used: it seems to be linked only to the notion of "waste" and to the waste hierarchy[64]. This link is nonetheless correct but insufficient and even useless since this would only be aimed to protect the environment. Therefore, a correct and clear common understanding is needed to enhance legal certainty and to unleash the full potential of the concept. Besides providing legal certainty, the acceptance of a universal definition has other advantages. On the one hand, it provides a framework within which the government and a sector (e.g. construction) can consider specific legislation or standards to achieve the circular objective and further shape the transition.[65] On the other hand, clarity on the concept of 'circular economy' can also lead to better enforcement to counter non-circular practices or 'greenwashing'[66]. In fact, academic literature affirms that the implementation of circular economy seems perfectly thought on paper but still needs concrete measures at legislative level through clear and unambiguous rules.[67] It is therefore not a coincidence that

[63] The Italian Environmental code was enacted with the Legislative decree 03 April 2006 n. 152, *Italian Official Gazette* 14 April 2006, n. 88. and the circular economy is mentioned in article 177.

[64] The common objectives of waste management and circular economy are pointed out in Article 180 and followings: foster sustainable production and consumption; promoting more efficient products considering their life cycle and the best available techniques *etc*.

[65] It could be a framework to guide circular public procurement. On circular public procurement: S. VAN GARSSE, *Circulair aankopen – Enkele reflecties*, in C. DE KONINCK, P. FLAMEY, P. T HIEL, B. WATHELET (eds.), *Jaarboek Overheidsopdrachten 2020 – 2021*, Brussels, EBP Consulting, 2021, 517 – 524; PLATFORM CB'23, *Leidraad circulair inkopen. Leidende principes voor een circulaire bouw*, https://platformcb23.nl/images/leidraden/Platform_CB23_Leidraad_Circulair-Inkopen_versie1.pdf; D. SÖNNICHSEN SÖNNICH, C. JESPER, *Review of green and sustainable public procurement: towards circular public procurement*, in *Journal of Cleaner Production* 2020, iss. 245, 1 - 18.

[66] E. VAN GOOL, *De rol van informatie binnen het omgevingsrecht*, in E.S. VAN AGGELEN, *Informatie en recht*, Antwerpen, Intersentia, 270.

[67] A. MURATORI, *Il nuovo piano d'azione per l'economia circolare: buoni propositi, ma anche un bel po' d'aria fritta*, in *Ambiente&Sviluppo*, 2020, vol. 4, p. 289-294.

the lack of common understanding and a clear definition[68] has been criticized by scholars[69] and demonstrated by stakeholders.[70]

4.2 *The core elements of a circular economy*

In order to shape a more universal definition, it is necessary to look for the different elements that actually characterise the circular economy. To this end, this contribution draws heavily on the insights already gained by KIRCHHERR et al. in their 2017 study analysing 114 (95 unique) definitions of a circular economy.

A first element concerns the systemic and holistic character of the transition to a circular economy. The transition acts on different levels: the micro (product), meso (industrial parks, demand systems) and macro level (city, region, country,...).[71] In addition, the circular economy also involves a paradigm shift.[72] The pursuit of a circular economy

[68] Providing a legal definition of the concept of circular economy would represent a boost for a whole new "Circular State" unlike the models of the past. F. DE LEONARDIS, *Economia circolare: saggio sui suoi tre diversi aspetti giuridici. Verso uno stato circolare?*, in *Dir. Amm.*, 2017 vol. 1, 40; M. COCCONI, *Circular economy and environmental sustainability*, *AmbienteDiritto*, 2020, vol. 3, p. 225-247; A. MURATORI, *Il nuovo piano d'azione per l'economia circolare: buoni propositi, ma anche un bel po' d'aria fritta*, *Ambiente&Sviluppo*, 2020, vol. 4, p. 289-294; S. ANTONIAZZI, *Transition to the Circular Economy and Services of Economic General Interest: An Overview of the Issue*, in *Federalismi*, 7, 2021, p. 1-21.

[69] A. VAN VAERENBERGH, F. LEYMAN, *"Product als dienst"-overeenkomsten, een stap in de richting van een circulaire economie*, *MER* 2019, afl. 1, 21; J. KIRCHHERR, D. REIKE, M. HEKKERT, *Conceptualizing the circular economy: An analysis of 114 definitions*, in *Resources, Conservation & Recycling* 2017, afl. 127, 221 – 232.

[70] Within his PhD research, Jonas Voorter also conducted semi-structured interviews with stakeholders from the Belgian construction sector. It became apparent that they all defined circular economy in another way.

[71] K. ANASTASIADES, J. BLOM, M. BUYLE, A. AUDENAERT, *Translating the circular economy to bridge construction: Lessons learnt from a critical literature review*, in *Renewable and Sustainable Energy Reviews* 2020, afl. 117, 2.

[72] V. PRIETO-SANDOVAL, C. JACA, M. ORMAZABAL, *Towards a consensus on the circular economy*, in *Journal of Cleaner Production* 2018, afl. 179, 605.

presupposes a fundamental change in our society.[73] The scientific literature confirms this vision.[74]

A second element concerns the strategies to be used to achieve the circular economy. The strategies to be used can be represented according to a so-called "R-framework". In their contribution, the authors refer to the 4R framework that, for example, underlies the European Waste Framework Directive and consists of 'Reduce', 'Reuse', 'Recycle' and 'Recover'.[75] These strategies are also part of a hierarchy where 'Reduce' is the best choice from a circular perspective and 'Recover' is the least good.[76] Besides the 4R framework, there is also a 3R framework ('Reduce', 'Reuse' and 'Recycle')[77] and even a 6R and 9R framework: 1) 'Refuse',

[73] N. VAN BUREN, M. DEMMERS, R. VAN DER HEIJDEN, F. WITLOX, *Towards a circular economy: The role of Dutch logistics industries and governments*, in *Sustainability* 2016, afl. 8, 5.

[74] P. JONES, R. BROWN, *Approaches to the circular economy* in H. KAUFMANN, M. PANNI (eds.), *Handbook of research on contemporary consumerism*, Pennsylvania (USA), IGI Global, 2019, 75; B. VERHEYE, *Toekomst van de circulaire vastgoedeconomie*, *TPR* 2019, afl. 1, 113; B. MOULIGNEAU, A. VAN PELT, *De Vlaamse aanpak van de transitie naar een circulaire economie*, *MER* 2019, afl. 1, 4; M. ESPOSITO, T. TSE, K. SOUFANI, *Introducing a circular economy: new thinking with new managerial and policy implications*, in *California Management Review* 2018, 2; A. SACCHI HOMRICH, G. GALVAO, L. GAMBOA ABADIA, M. M. CARVALHO, *The circular economy umbrella: Trends and gaps on integrating pathways*, in *Journal of Cleaner Production* 2018, afl. 175, 526; D. REIKE, W.J.V., VERMEULEN, S. WITJES, *The circular economy: new or refurbished as CE 3.0? – Exploring controversies in the conceptualization of the circular economy through a focus on history and resource value retention options*, *Resources, Conservation & Recycling* 2018, afl. 135, 259; V. PRIETO-SANDOVAL, C. JACA, M. ORMAZABAL, *Towards a consensus on the circular economy*, *Journal of Cleaner Production* 2018, afl. 179, 605; KIRCHHERR ET AL., *supra* note 20.; M. LIEDER, A. RASHID, *Towards circular economy implementation: a comprehensive review in context of manufacturing industry*, in *Journal of Cleaner Production* 2016, afl. 115, 37; A. MURRAY, K. SKENE, K. HAYNES, *The circular economy: an interdisciplinary exploration of the concept and application in a global context*, in *Journal of Business Ethics* 2015, afl. 140, 373.

[75] *Id.*

[76] Ibid. This hierarchy is not absolute. For example: article 4, 2. Directive 2008/98/EG which explicitly mentions the possibility to derogate from this hierarchy. See concerning cement: J.M. ALLWOOD, *Squaring the circular economy: the role of recycling within a hierarchy of material management strategies* in E. WORRELL, M.A. REUTER (eds.), *Handbook of recycling*, Amsterdam, Elsevier, 2014, 468.

[77] This is, for example, part of the Chinese law to promote circular economy: K. ANASTASIADES, J. BLOM, M. BUYLE, A. AUDENAERT, *Translating the circular economy to bridge construction: Lessons learnt from a critical literature review*, in *Renewable and Sustainable Energy Reviews* 2020, afl. 117, 2.

2) 'Reduce', 3) 'Reuse', 4) 'Repair', 5) 'Refurbish', 6) 'Remanufacture', 7) 'Repurpose', 8) 'Recycle' and 9) 'Recover' (energy).[78] So far, 38 different 're-words' have been found in the literature on circular economy.[79] These 38 words can all be fitted into the 4R framework in one way or another.[80] The strength of the framework is that it assumes a hierarchy.[81] After all, from a circular point of view, 'Reduce' is in principle much more interesting than recycling materials.[82] In addition, the different 're-words' can cover different charges[83], leaving enough room for technological innovations or socio-economic developments.[84]

[78] N. VAN BUREN, M. DEMMERS, R. VAN DER HEIJDEN, F. WITLOX, *Towards a circular economy: The role of Dutch logistics industries and governments*, in *Sustainability* 2016, afl. 8, 3.

[79] D. REIKE, W.J.V., VERMEULEN, S. WITJES, *The circular economy: new or refurbished as CE 3.0? – Exploring controversies in the conceptualization of the circular economy through a focus on history and resource value retention options*, in *Resources, Conservation & Recycling* 2018, afl. 135, 253.

[80] K. ANASTASIADES, J. BLOM, M. BUYLE, A. AUDENAERT, *Translating the circular economy to bridge construction: Lessons learnt from a critical literature review*, in *Renewable and Sustainable Energy Reviews* 2020, afl. 117, 2. KIRCHHERR et al. also prefer this framework.

[81] D. REIKE, W.J.V., VERMEULEN, S. WITJES, *The circular economy: new or refurbished as CE 3.0? – Exploring controversies in the conceptualization of the circular economy through a focus on history and resource value retention options*, in *Resources, Conservation & Recycling* 2018, afl. 135, 253; KIRCHHERR et al., *supra* note 20. N. VAN BUREN, M. DEMMERS, R. VAN DER HEIJDEN, F. WITLOX, *Towards a circular economy: The role of Dutch logistics industries and governments*, in *Sustainability* 2016, afl. 8, 3.

[82] For example: article 4, §3, 1° Decree of 23rd December 2011 on the sustainable management of material cycles and waste, *Belgian Official Gazette* 28 February 2012, 12.943. In specific cases, it could be more interesting to recycle instead of reusing products. 'Reuse' and/or 'Recycling' will not always lead to desirable results: W. HAAS, F. KRAUSMANN, D. WIEDENHOFER, C. LAUK, A. MAYER, *Spaceship earth's odyssey to a circular economy – a century long perspective*, in *Resources, Conservation & Recycling* 2020, afl. 163, 2.

[83] J.M. ALLWOOD, *Squaring the circular economy: the role of recycling within a hierarchy of material management strategies*, in E. WORRELL, M.A. REUTER (eds.), *Handbook of recycling*, Amsterdam, Elsevier, 2014, 445 – 477. This article mentions 'reduce', 'reuse' and 'recycle'.

[84] R. MERLI, M. PREZIOSI, A. ACAMPORA, *How do scholars approach the circular economy? A systematic literature review*, in *Journal of Cleaner Production* 2018, afl. 178, 704 -705.

A third point for discussion is who will have to help shape the circular economy. In the first instance, one immediately thinks of companies that can accelerate the circular economy with their business models and innovations.[85] In addition to these business models, however, consumers also have an important role to play.[86] After all, if we fail to take consumer behaviour into account, a kind of 'rebound effect' may arise. Companies that achieve (economic and ecological) efficiency gains in the creation of circular products will see their production costs fall, which will also reduce the cost price of these products. Lower prices will lead to higher consumption levels if consumption patterns are not adjusted as part of the transition to a circular economy. In this way, increased economic efficiency cancels out ecological gains.[87] This is an important point that also confirms the holistic nature of the transition.

The transition to the circular economy represents a possible path to a more sustainable society. Sustainability has both an economic, ecological and social component.[88]

[85] T. LAHTI, J. WINCENT, V. PARIDA, *A definition and theoretical review of the circular economy, value creation, and sustainable business models: where are we now and where should research move in the future?,* in *Sustainability* 2018, afl. 8, 1 -19. M. LEWANDOWSKI, *Designing the business models for circular economy – towards the conceptual framework,* in *Sustainability* 2016, vol. 8, afl. 1, 1 – 28. See in a critical way: T. ZINK EN R. GEYER, *Circular economy rebound,* in *Journal of Industrial Ecology* 2017, vol. 21, afl. 3, 593 – 602.

[86] For example: P. JONES, R. BROWN, *Approaches to the circular economy*, in H. KAUFMANN, M. PANNI (eds.), *Handbook of research on contemporary consumerism*, Pennsylvania (USA), IGI Global, 2019, 75; J. KIRCHHERR, D. REIKE, M. HEKKERT, *Conceptualizing the circular economy: An analysis of 114 definitions*, in *Resources, Conservation & Recycling* 2017, afl. 127, 228; N. VAN BUREN, M. DEMMERS, R. VAN DER HEIJDEN, F. WITLOX, *Towards a circular economy: The role of Dutch logistics industries and governments*, in *Sustainability* 2016, afl. 8, 2.

[87] J. KORHONEN, A. HONKASALO, J. SEPPÄLÄ, *Circular Economy: the concept and its limitations*, in *Ecological Economics* 2018, afl. 143, 43. Further reading: T. ZINK, R. GEYER, *Circular economy rebound*, in *Journal of Industrial Ecology* 2017, vol. 21, afl. 3, 593 – 602. T. ZINK and R. GEYER also point to the risk that secondary products will not replace primary materials and, instead, establish a whole new market. This can also hamper the environmental ambitions of a circular economy. See as well: D. MASI, S. DAY, J. GODSELL, *Supply chain configurations in the circular economy: a systematic literature review*, in *Sustainability* 2017, afl. 9, 1 and 15.

[88] J. KIRCHHERR, D. REIKE, M. HEKKERT, *Conceptualizing the circular economy: An analysis of 114 definitions*, in *Resources, Conservation & Recycling* 2017, afl. 127, 224.

The link between sustainability and the circular economy can be approached in different ways. Geissdoerfer et al. establish in their research that the link can be seen as conditional, beneficial or as a trade-off. They conclude, rightly so, that the link is rather beneficial in nature. More specifically, they refer to the subgroup relationship ('subset') in which the circular economy is one of the possible solutions for creating a sustainable system (see table below). They come to this conclusion because the current definition and research on the circular economy focuses mainly on the economic aspect, oversimplifies the ecological aspect and (completely) leaves out the social aspect.[89] Considering the sustainable development goals[90] - and the fact that the circular economy does not address all formulated sustainability goals - the choice for the subgroup relationship can be confirmed.

Table 4
Relationship types between the Circular Economy and sustainability.

General direction	Type of relationship	Short description Circularity/closed loop systems are seen as …	Examples in literature	Graphical representation
Conditional	Conditional relation	One of the conditions for a sustainable system	Läpple, 2007 Rashid et al., 2013	A→B
	Strong conditional relation	The main solution for a transformation to a sustainable system	Bakker et al., 2014 EMF, 2013b UNEP, 2006	A➡B
	Necessary but not sufficient conditional relation	A necessary but not sufficient condition for a sustainable system	Nakajima, 2000	
Beneficial	Beneficial relationship	Beneficial in terms of sustainability, without referring to condition-ality or alternative approaches	European Commission, 2014	+A→+B
	Subset relation (structured and unstructured)	One among several solutions for fostering a sustainable system	Allwood et al., 2012 Bocken et al., 2014 Evans et al., 2009 Garetti and Taisch, 2012 Seliger, 2007 Weissbrod and Bocken, 2017	
	Degree relation	Yielding a degree of sustainability with other concepts being more and/or less sustainable	OECD, 2009	
Trade-off	Cost-benefit/trade-off relation	Having costs and benefits in regard to sustainability, which can also lead to negative outcomes	Allwood, 2014 Andersen, 2007	
	Selective relation	Fostering certain aspects of sustainability but lacking others	Murray et al., 2015	

[89] In the proposed holistic approach, there is time and also a need for equal opportunities for research on the economical, ecological or societal aspect of sustainability.

[90] *Supra* footnote 4.

Picture 2: Possible relations between circular economy and sustainability[91]

Sustainable development is essentially about *people, profit and planet*.[92] In addition to these ecological, economic and social dimensions, Kirchherr et al. also add a time aspect in their search for a definition. After all, the Brundtland report explicitly states that "*humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs*." (own emphasis).[93] This intergenerational addition is welcomed and will be included in the proposal for a universal description that will be the subject of the next section.

2° Proposing a universal characterization

The preceding section makes it clear that there are various elements that characterise the circular economy. It is therefore desirable to provide a description that encompasses the core of the circular economy. This universal description will at certain points deliberately remain vague in order to leave room for new insights and trends. Any further research or legislative initiative may focus on specific parts of the circular economy, such as for example the business models, the consumption behaviour, the system change, etc. If a stakeholder specifically identifies the specific point of the universal description of the circular economy he/she is working on, the focus points of the transition towards a circular economy can be crystallised and the current confusion ('confused concept') surrounding the concept will

[91] M. GEISSDOERFER, P. SAVAGET, N. M.P. BOCKEN, E.J. HULTINK, *The circular economy – A new sustainability paradigm*, in *Journal of Cleaner Production* 2017, afl. 143, 766.

[92] K. ANASTASIADES, J. BLOM, M. BUYLE, A. AUDENAERT, *Translating the circular economy to bridge construction: Lessons learnt from a critical literature review*, in *Renewable and Sustainable Energy Reviews* 2020, afl. 117, 2.

[93] Report of the World Commission on Environment and Development "Our Common Future", 1987, https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf, rnr. 27; J. KIRCHHERR, D. REIKE, M. HEKKERT, *Conceptualizing the circular economy: An analysis of 114 definitions*, in *Resources, Conservation & Recycling* 2017, Afl. 127, 224.

slowly disappear. In this way, we will take a further step towards leaving the 'validity challenge period' behind us.[94]

Eventually, Kirchherr et al. propose the following definition:

"A circular economy describes an economic system that is based on business models which replace the 'end-of-life' concept with reducing, alternatively reusing and recovering materials in production/distribution and consumption processes, thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), with the aim to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations."[95]

In addition, a large number of different definitions and descriptions were found in the literature. Considering the elements examined above, one other definition stands out:

"The circular economy is an economic system that represents a change of paradigm in the way that human society is interrelated with nature and aims to prevent the depletion of resources, close energy and materials loops, and facilitate sustainable development through its implementation at the micro (enterprises and consumers), meso (economic agents integrated in symbiosis) and macro (city, regions and governments) levels. Attaining this

[94] *Supra* number 8. Also: R. MERLI, M. PREZIOSI, A. ACAMPORA, *How do scholars approach the circular economy? A systematic literature review*, in *Journal of Cleaner Production* 2018, afl. 178, 704 -705. MERLI et al. confirm in this article that the concept 'circular economy' is still in the validity challenge period.

[95] J. KIRCHHERR, D. REIKE, M. HEKKERT, *Conceptualizing the circular economy: An analysis of 114 definitions*, in *Resources, Conservation & Recycling* 2017, afl. 127, 224 - 225.

circular model requires cyclical and regenerative environmental innovations in the way society legislates, produces and consumes."[96]

This definition is particularly interesting because it strongly(more) emphasises the system perspective, which should be a necessary element in any description of a circular economy (Supra).

When the strengths of the above-mentioned definitions are combined, a comprehensive description (definition sensu latissimo) of a circular economy emerges:

"*The circular economy is an economic system that represents a change of paradigm in the way that human society (business models and consumer behaviour) is interrelated with nature and aims to replace the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering resources, energy and materials, thus operating at the micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (city, region, nation and beyond), in order to accomplish sustainable development, which implies creating environmental quality, economic prosperity and social equity, to the benefit of current and future generations.*"

5. CONCLUSION

Our society is evolving. Today, there is much greater interest in elements such as the climate, the scarcity of earthly resources, our focus on consumption, etc. The transition to a circular economy is seen as an opportunity to make our society more sustainable.

[96] V. PRIETO-SANDOVAL, C. JACA, M. ORMAZABAL, *Towards a consensus on the circular economy*, in *Journal of Cleaner Production* 2018, afl. 179, 610.

As explained the term 'circular economy' is an umbrella term that, given this qualification, has a fixed development trajectory. It is important that clarity is provided in due course so that the life of the circular economy concept does not come to an untimely end.

Some authors have suggested that the concept of "circular economy" is an essentially contested one, which would make it very difficult or even impossible to provide a definition. In this article, however, it is argued that the circular economy does not meet at least one of the conditions for application.

Since it is clear that working out a definition *sensu latissimo* is a possibility, it is interesting to look for the constitutive elements for this definition of a circular economy. Especially the earlier work of Kirchherr is a great source of inspiration here. Ultimately, this contribution proposes a universal definition that is very much in line with Kirchherr's proposal, but with a somewhat stronger focus on the (social) paradigm shift that the transition to a circular economy presupposes.

A definition *sensu latissimo* is, looking at the earlier observation concerning the qualification of the circular economy as an umbrella term, in our view also useful, desirable and plausible in the light of the principle of legal certainty.

The (legal) transition to a circular economy will increase in importance in the coming years. With an adequate and universal description, policymakers, but also entrepreneurs and consumers, can work to further integrate and apply the concept. It forms an ideal but also necessary starting point to give the transition to a circular economy an extra boost and to avoid the concept eventually collapsing and becoming bogged down in good intentions.

Abstract. *The transition to a circular economy is a systemic change that has gained considerable attention in the past few years. It has as a main purpose the replacement of the current linear economy (take – make – waste), and its enormous repercussions on society,*

with a more cyclical approach. It is undeniable that circular economy is a possible pathway to a more sustainable society. Nonetheless, from a legal perspective the concept of circular economy itself has not been defined yet. The paper starts with an in-depth analysis of the notion of circular economy as an umbrella term and the consequences of its qualification as an "essentially contested concept" pursuing the theory that was coined by Walter Bryce Gallie in 1956. As a consequence, if the study shows that the "circular economy" turns out to be an essentially contested concept, it would not be possible to give an adequate definition of this notion. Hence, we wouldn't have a general principle to decide which vision of the circular economy is right or wrong. On the other hand, even if the concept would turn out not to be an essentially contested concept, therefore likely to be defined, there is no certainty that this will be, in fact, achieved. Therefore, the general aim of this paper is to provide an answer to a specific question: the possibility to provide a universal definition of the concept "circular economy".

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LEGITIMATE EXPECTATIONS ON BOTH SIDES OF THE CHANNEL OR WHEN MISS COUGHLAN VISITS BELGIAN PUBLIC LAW

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INDEX

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1. INTRODUCTION

Among all the litigious situations that the Belgian observer learns while examining the doctrine of legitimate expectations in English Law, the most controversial case seems to be that between *Miss Coughlan* and the *North and East Devon Health Authority*.

There is no need to remind that *Miss Coughlan* has been the victim of a traffic accident in 1971, whereby she has notably become tetraplegic. Then, she has been continuously cared in a hospital — *Newcourt* — that the administration decided, at some point, to close. Later, she was relocated at *Mardon House*, while promising her she would not have to move as long as she would want to remain there.

It does not even need to remind that, following a public health policy change, the administration has backtracked on this promise, without proposing, at the same time, to *Miss Coughlan* a concrete alternative comparable to the situation she enjoyed at *Mardon House*.

The judge in charge of the case ruled that the measure of *Mardon*'s closure had to be quashed since *Miss Coughlan* could legitimately expect that she would remain at *Mardon House* as long as she would want and, consequently, that *Mardon* could not be closed as it was. According to the judge, no motive of general interest justified otherwise in this case, the reasons of *Miss Coughlan*'s relocation being of a financial order and representing a tiny amount of money as compared to the annual budget of *National Health Service*.

Here are the most important terms of the judgement issued:

"*89. We have no hesitation in concluding that the decision to move* Miss Coughlan *against her will and in breach of the health authority's own promise was in the circumstances unfair. It was unfair because it frustrated her legitimate expectation of having a home for life in* Mardon House. *There was no overriding public interest which justified it. In drawing the balance of conflicting interests, the court will not only accept the policy change without demur but will pay the closest attention to the assessment made by the public*

body itself. Here, however, as we have already indicated, the health authority failed to weigh the conflicting interests correctly. Furthermore, we do not know (for reasons we will explain later) the quality of the alternative accommodation and services which will be offered to Miss Coughlan. *We cannot prejudge what would be the result if there was an offer accommodation which could be said to be reasonably equivalent to* Mardon House *and the health authority made a properly considered decision in favour of closure in the light of that offer. However, absent such an offer, here there was unfairness amounting to an abuse of power by the health authority*"[2].

For a Belgian lawyer, the situation so described and so solved by the English judge in English law suggests considering whether legitimate expectations are envisaged in the same way as in Belgian law (I) and, beyond, how the Belgian administrative judge (II) and the Belgian judicial judge (III) might have ruled on the Coughlan case if they would have had to settle it.

2. LEGITIMATE EXPECTATIONS FROM LONDON TO BRUSSELS

How legitimate expectations are legally perceived in English (2.1) and Belgian (2.2) laws?

2.1. Legitimate expectations in English law

The Belgian observer who discovers the limits within which the doctrine of legitimate expectations is received in English Public Law points out that the general interest must guarantee that the administration has the latitude indispensable to lead any action aimed at satisfying this interest.

He sees, in the doctrine of legitimate expectations, the legal notion allowing to compensate either the severest effects of an administrative change in policy or guideline, or

[2] C.A. (Civ. Div.), *R. v North and East Devon Health Authority, Ex. p. Coughlan,* 2001, 16 July 1999, 2001, QB, p. 213, par. 89.

a promise made by the administration and that the administration intends to negate subsequently.

While pursuing his readings, the Belgian observer also notes that, in presence of a situation worthy of protection, legitimate expectations can, in English Law, give to the citizen the right to be heard or to present views about the new treatment that the administration plans to apply to him.

Only in very rare occasions, legitimate expectations go so far as to recognise to the citizen the right to enjoy the policy, the guideline or the promise which was that that the citizen would have continued to benefit from, if the administration would not have changed its mind.

While the precise scope of the concept of legitimate expectations is, according to the literature, still not perfectly fixed in English Law, one can summarize the trend of judgements issued so far in this field, by pointing out that:

- The administration is in charge of satisfying the general interest — which is its rationale — and, so, is entitled to change its views at any time, according to the needs of this interest;

- If the change effected by the administration for the purpose of satisfying the general interest has far-reaching consequences for the addressee of the administrative measure, the judge can, in the name of legitimate expectations, quash this measure in case of the addressee's views have not been collected before.

  In this case, the judgement so issued may lead the administration to take a new measure — the previous one having been annulled — and, beforehand, to hear or to seek views of the addressee, while making clear that the administration is not required to share or to follow these views;

- Only in certain circumstances, when particularly far-reaching consequences are to deplore for the administrative measure's addressee in question, the judge has

quashed this measure since the administration negated too sharply the treatment of which its beneficiary enjoyed under the application of the previous administrative measure and which he could legitimately expect the maintenance of.

In this case, the judgement so issued must lead the administration to take a new measure — the previous one having been annulled — and, in order to observe the *res judicata* of this judgement, to ensure that the content of the new measure does not depart — at least too much — from that of which his addressee enjoyed under the application of the previous administrative measure and which he could legitimately expect the maintenance of[3].

[3] On the subject of legitimate expectations in English law, see, among many sources, S. SCHOENBERG, *Legal Certainty and Revocation of Administrative Decisions: A Comparative Study of English, French, and EC Law*, in *Yearbook of European Law*, 1999-2000, p. 257-298; M. ELLIOTT, *Coughlan: Substantive Protection of Legitimate Expectations Revisited* in *Judicial Review*, 2000, p. 27-32; R. THOMAS, *Legitimate Expectations and Proportionality in Administrative Law*, London, Hart Publishing, 2000, p. 129; D. BLUNDELL, *Ultra Vires legitimate expectations* in *Judicial Review*, 2005, p. 147-155; P. CRAIG, *EU Administrative Law*, Oxford, Oxford University Press, 2012, p. 549-589; R. WILLIAMS, *The multiple doctrines of Legitimate Expectations* in *Law Quarterly Review*, 2016, p. 639-663; P. CRAIG, *Administrative law*, London, Sweet & Maxwell, 2016, p. 669-708; R. THOMAS, *Legitimate expectations and the separation of powers* in *English and Welsh Administrative law*, *in* M. GROVES and G. WEEKS (eds.), *Legitimate expectations in the Common law World*, Oxford, Hart Publishing, 2017, p. 53-77; P. DALY, *A pluralist account of Deference and Legitimate Expectations*, *in* M. Groves and G. Weeks (eds.), *Legitimate expectations in the Common law World*, Oxford, Hart Publishing, 2017, p. 101-120; K. HUGHES, *R v. North and East Devon Health Authority [2001]: Coughlan and the Development of Public Law*, *in* S. Juss and M. Suskin (ed.), *Landmark Cases in Public Law*, Oxford, Hart Publishing, 2017, p. 181-210; M. ELLIOTT, R. THOMAS, *Public Law*, Oxford, Oxford University Press, 2017, p. 531-536.

2.2 Legitimate expectations in Belgian law

In Belgian law as in English law, legitimate expectations do not coincide with a precept recognized by a normative text, whether constitutional, legislative or regulatory.

Yet, legitimate expectations are legally binding for both the administration and the citizen. This is because legitimate expectations correspond to a "general principle of law", that is an unwritten rule revealed or, if one prefers, created by the judges through their lines of cases in order to plug a legal loophole. In other words, a "general principle of law" is a complementary normative exigence considered by the judges as necessary to supplement the legal arsenal and add to the latter a new legal requirement[4]. As the French scholar Franck MODERNE writes:

"*It can be simply induction from particular provisions of texts in force, references to the spirit of an institution or a text in order to reflect the presumed intention of the legislator, recourse to the nature of things or to the essence of an institution out of any linkage to a text, or interpretation of the national community's latent or diffuse aspirations*"[5].

[4] See not. J. JAUMOTTE, *Les principes généraux du droit administratif à travers la jurisprudence administrative in* B. BLERO (ed.), *Le Conseil d'État de Belgique cinquante ans après sa création (1946-1996)*, Brussels, Bruylant, p. 600; F. LEURQUIN-DE VISSCHER, *Existe-t-il un principe de subsidiarité ?*, in F. DELPEREE (dir.), *Le principe de subsidiarité*, Brussels, Bruylant, 2002, p. 29. On the general principle of law, see, more generally, P. MARCHAL, *Principes généraux du droit*, *Répertoire pratique du droit belge*, Brussels, Bruylant, 2014, p. 317.

[5] F. MODERNE, *Légitimité des principes généraux et théorie du droit*, *Revue française de droit administratif*, 1999, p. 733-734, free translation from French. See also C. PARMENTIER, *La sécurité juridique, un principe général de droit?, in La sécurité juridique. Actes du colloque organisé par la Conférence libre du Jeune Barreau de Liège le 14 mai 1993*, Liège, Ed. du Jeune Barreau de Liège, 1993, p. 23.

In the hierarchy of legal norms, the general principles of law are given a certain legal force: they are either constitutional, or legislative or even regulatory, as the written norms are[6].

But a general principle of law shall bow down before a written norm having the same legal force[7]. For instance, a general principle of law having legislative force is considered as lower in the hierarchy of norms than a written legislative act is, and so forth[8].

Among the "general principles of law", legitimate expectations are usually seen by the Belgian judges as one of the "general principles of good administration"[9]. They are recognized as having legislative value, unlike the general principle of legal certainty[10], a

[6] See not. I. MATHY, *Les principes généraux : genèse et consécration d'une source majeure du droit administratif*, *in* S. BEN MESSAOUD AND F. VISEUR (ed.), *Les principes généraux de droit administratif*, Collection de la Conférence du Jeune Barreau, Brussels, Larcier, 2017, p. 45-57.

[7] *Ibid.*

[8] See P. MARCHAL, *op. cit.*, p. 44-45.

[9] See not. J. JAUMOTTE, *Les principes généraux du droit administratif à travers la jurisprudence administrative*, in B. BLERO (ed.), *Le Conseil d'État de Belgique cinquante ans après sa création (1946-1996)*, *op. cit.*, p. 686; S. SEYS, D. DE JONGHE AND F. TULKENS, *Les principes généraux du droit*, *in* I. Hachez and consorts (dir.), *Les sources du droit revisitées*, vol. 2, *Normes internes infraconstitutionnelles*, Limal, Anthemis, 2012, p. 532; P. GOFFAUX, *Dictionnaire de droit administratif*, 2nd ed., Brussels, Bruylant, 2016, p. 357-358; M. MORIS and F. BELLEFLAMME, *Les principes de bonne administration en droit administrative et en droit fiscal*, *in* P.-O. DE BROUX, B. LOMBAERT, F. TULKENS (ed.), *Actualité des principes généraux en droit administratif, social et fiscal*, Coll. Recyclages en droit, p. 157.

[10] See not. J. SALMON, J. JAUMOTTE, E. THIBAUT, *Le Conseil d'État de Belgique*, vol. 1, Brussels, Bruylant, 2012, p. 858.

principle which it is sometimes said that legitimate expectations are the "subjective component" of and which has constitutional force[11].

In order to be regularly used, the principle of legitimate expectations requires, in Belgian law, the meeting of three conditions: a situation caused by the administration; which raises a legitimate expectation on the part of another person; without that any "serious motive" or "objective and reasonable justification" can be argued by the administration which would justify that the latter can go back on legitimate expectations it has aroused[12].

Among the situations that the administration can cause under the scheme in question, error can certainly raise legitimate expectations.

It is notably the case when the administration made a mistake in a date and that this error has repercussions on the calculation of the time limit concerning a remedy open to challenge one of its acts[13].

Beyond errors, other situations led the judge to find that the administration had raised legitimate expectations on the part of a person.

[11] See not. D. RENDERS B. GORS, *Origine et contours des principes généraux de bonne administration*, *Les dialogues de la fiscalité*, 2012, p. 415.

[12] See not., in more or less variable terms, Council of State (Bel.), L'associaton de droit public Association hospitalière de Bruxelles — Hôpital universitaire des enfants Reine Fabiola, 18 December 2020, n° 249.292; Council of State (Bel.), L'association de droit public Association hospitalière de Bruxelles — Centre hospitalier universitaire Saint-Pierre, n° 250.285, 31 March 2021 ; Council of State (Bel.), Vanlandeghem, 5 août 2021, n° 251.345; Council of State (Bel.), s.a. Bluetail Flight School, 14 September 2021, n° 251.492.

[13] See not. Council of State (Bel.), s.a. Electrabel and consorts, 1st February 2016, n° 233.675.

On the basis of what other scholars have listed[14], we can cite: a course of action clear and well established[15]; promises[16]; concessions[17]; precise assurances given without reserve[18]; a memorandum[19]; a circular[20]; a memorandum of understanding concluded between the

[14] See R. SIMAR P. ABBA, Sécurité juridique, légitime confiance, *patere legem quam ipse fecisti*. Transparence administrative ou principes transparents ?", *in* S. BEN MESSAOUD, F. VISEUR (ed.), *Les principes généraux de droit administratif*, Collection de la Conférence du Jeune Barreau, Brussels, Larcier, 2017, p. 109.

[15] The fact that the administration, once in the past, consulted the representatives of the pharmaceutical sector before the adoption of a regulation cannot be considered as constituting a "constant practice" which would have given rise to an obligation of repeating this consultation, so that the principle of legitimate expectations does not impose to the administration to proceed to a new consultation before adopting an agreement or a measure (see Council of State, *a.s.b.l. Association Générale de l'industrie du médicament and consorts*, n° 205.919, 28 June 2010).

[16] It cannot be deduced from the circumstances of the case that the administration would have promised anything (see Council of State (Bel.), *Havelange*, 28 April 2016 n° 234.572).

[17] See Council of State (Bel., Gen. Ass.), *Missorten*, n° 93.104, 6 February 2001; Council of State (Bel.), *Antoine*, 5 November 2015, n° 232.822.

[18] The administration does not provide any precise assurances susceptible to give rise to justified expectations, if all it does is to indicate, in a letter, "carefully and in the conditional tense", that the training certificate "could be accepted, subject to providing further information" (see Council of State (Bel.), *Depersonalized*, 24 September 2001 n° 99.052).

[19] The public authority cannot allege that the time limit for lodging an appeal was ten "calendar" days if it had been specified in a memorandum that this time limit was ten "working" days, by explicitly excluding Saturdays, Sundays and public holidays, so that the civil servants concerned in the case at issue could legitimately believe in this information (see Council of State (Bel.), *Goyaerts*, 30 December 1998, n° 77.889).

[20] The administration is at risk of violating the legitimate expectations of the citizen if it does not follow the indications enshrined in a circular which would amount to courses of action aimed at guiding the administration in the exercise of its discretionary power (see Council of State (Bel.), *Depersonalised*, 10 November 2006, n° 164.627).

administration and the union representatives[21]; displayed assessment criteria[22]; an abstention[23]; or even the obviousness[24].

The situation which allegedly generates legitimate expectations on the part of a person must be in a causal link with the expectations allegedly aroused[25]

Among other things, the element which is allegedly at the basis of the principle of legitimate expectations application's triggering, must, thus, be the fact of the administration which the principle is opposed to[26]. To put it another way, the principle in question cannot

[21] There is a violation of the principle of legitimate expectations in the circumstances where the administration had announced it would respect the content of memorandum of understanding concluded with the union representatives and that it does not respect the latter, even exceptionally (See Council of State (Bel.), *Jonckers*, n° 136.032, 14 October 2004).

[22] If the assessment criteria defined by an examination board have been displayed, the board imposes to itself to follow rules of conduct which, even if they do not amount to a regulation, oblige the board to specifically justify the reasons why it should depart from them (see Council of State (Bel.), *Giet*, n° 185.703, 14 August 2008).

[23] The administration frustrates the legitimate expectations of one of its civil servants when: (1) it had initiated, three years earlier, a procedure aimed at deciding his retirement in the interest of the service; (2) then, it has suspended this procedure during the sick-leave of the person concerned; then it does not have pursued the procedure just after his return from sick-leave; (3) while, at the same time, closing the service in which the civil servant in question worked and hearing him in the frame of a selection procedure for other positions within other services of the same administration (see Council of State (Bel.), *Sacré*, n° 239.253, 28 September 2017).

[24] The candidate who participates to a recruitment competition can legitimately expect that the tests relating to it are held regularly, so that his legitimate confidence is misled if it is not the case (see Council of State (Bel.), *Van Nypelser*, n° 68.626, 3 October 1997).

[25] See R. SIMAR P. ABBA, *op. cit.*, pp. 109-111.

be argued vis-à-vis an administration on the basis of an act stemmed from another administration[27]

The confidence which is aroused must, moreover, be legitimate. For example, a person cannot allege legitimate expectations if he is in bad faith or - at least in principle - if its claim violates a statutory or regulatory rule[28].

Even if legitimate expectations have been aroused through a situation caused by the administration, the principle at stake does not necessarily imply that the citizen is entitled to enjoy his expectations.

A "serious motive" or, sometimes, simply an "objective and reasonable justification" can allow the administration to override the aroused legitimate expectations[29]. The analysis of the jurisprudence reveals that the judge admits diverse justifications invoked by the administration to depart from its course of action or to renege on its commitments or promises.

Generally speaking, the jurisprudence is established in the sense that the principle of legitimate expectations cannot serve to justify the adoption of an illegal decision[30].

[26] See Council of State (Bel.), *s.a. Mercedes-Benz Belgium Luxembourg*, 16 June 2017, n° 238.545; Council of State (Bel.), *Vannieuwenhuize and De Smet*, n° 238.695, 27 June 2017; Council of State (Bel.), *s.a. Mineralz es treatment*, 22 October 2020, n° 248.699; Council of State (Bel.), *Spits and Spons* 12 May 2021, n° 250.594.

[27] *Ibid.*

[28] See. not. Council of State (Bel.), *Detimmerman*, 1st August 2019 n° 245.271; Council of State (Bel.), *Crespin*, 24 October 2019, n° 245.893.

[29] See not. Council of State (Bel.), *s.a. Mercedes-Benz Belgium Luxembourg*, 16 June 2017, n° 238.545.

[30] See not. P. GOFFAUX, *Dictionnaire de droit administratif, op. cit.*, pp. 359-362. See also Council of State (Bel.), *s.a. Entreprises Jacques Pirlot*, n° 241.123, 27 March 2018; Council of State (Bel.), *s.c.r.l. Intermédiance and*

However, this is not always the case[31], even though the prevalence of the legitimate expectations' principle *contra legem* is very rare.

Furthermore, the administration must always be in measure to change its policy and, consequently, to amend the legal acts which are necessary to conclude this policy, so that the general interest is satisfied[32]. It is however established that, by doing that, caution is called[33]. Moreover, guidelines in the appreciation of certain concepts can evolve. This is notably the case about the notion of « bon aménagement des lieux » in matters of urban planning law[34].

Partners, 25 June 2018, n° 241.890,; Council of State (Bel.), *Detimmerman*, 1st August 2019, n° 245.271; Council of State (Bel.), *Crespin*, 24 October 2019, n° 245.893.

[31] The Council of State has notably admitted that: "*[...] in the case of the indication, in a display notice prescribed by the law to the municipal authority, of an administrative appeal time limit to lodge to the Government which is longer than the legal one, while the mention of this time limit is legally compulsory, the judge can decide, after having weighed the requirements of the law and those of the legitimate expectations, that the Rule of Law is better served by the maintenance of the erroneous administrative indication effects which have aroused the confidence at stake than by the strict application of the literal terms of the law; that the judge must regard the interests of each party and cannot tolerate any disproportionate breach of formal law in any circumstances*" (see Council of State (Bel.), *s.a. Electrabel and consorts*, n° 233.675, 1st February 2016).

[32] See not. Council of State (Bel.), *Lemaire*, 26 May 2016, n° 234.864.

[33] See not. D. DE JONGHE, P.-F. HENRARD, *L'actualité des principes généraux de droit administratif et de bonne administration en droit administratif: questions choisies*, *in* P.-O. DE BROUX, B. LOMBAERT Et F. TULKENS (ed.), *Actualité des principes généraux en droit administratif, social et fiscal*, *op. cit.*, p. 10.

[34] See Council of State (Bel.), *Brancart and Cullus*, n° 221.487, 22 November 2012.

3. THE MISS COUGHLAN'S EXPECTATIONS AND THE BELGIAN ADMINISTRATIVE JUDGE

We believe that the Miss Coughlan's legitimate expectations might have been apprehended by the Belgian Administrative Judge into two different channels: judicial review, on the one hand (A); the exceptional damage litigation, on the other (B).

3.1 Judicial Review

Similarly to English Law, a unilateral administrative act can be annulled in Belgian Law, via the channel of judicial review.

An annulment can be pronounced if the challenged act breaches a legal rule or general principle of law that its author had to observe at the moment of its adoption[35].

Moreover, this annulment can only be decided by the Council of State, regardless the unilateral administrative act challenged and regardless the author of the act in question[36].

[35] See not. D. RENDERS, *La consolidation législative de l'acte administratif unilatéral*, Brussels, Bruylant, Paris, L.G.D.J., 2003, p. 59, and the references cited. For an illustration, see not. Council of State (Bel.), *Commune de Montigny-le-Tilleul*, n° 226.903 du 27 mars 2014.

[36] Art. 14 of the Acts on the Belgian Council of State, coordinated on 12 January 1973, *Moniteur belge*, 21 March 1973. On Judicial Review, see not. P. LEWALLE, with the collaboration of L. Donnay, *Contentieux administratif*, 3rd ed., Brussels, Larcier, p. 629-873; D. RENDERS, TH. BOMBOIS, B. GORS, CH. THIEBAUT, L. VANSNICK, *Droit administratif*, t. III, *Le contrôle de l'administration*, Brussels, Larcier, 2010, p. 206-307; M. LEROY, *Contentieux administratif*, 5th ed., Limal, Anthemis, 2011, pp. 161-686; J. SALMON, J. JAUMOTTE, E. THIBAUT, *Le Conseil d'État de Belgique*, vol. 1, *op. cit.*, p. 393-1085; S. LUST, *Rechtsbescherming tegen de (administratieve) overheid. Een inleiding*, Brugge, die Keure, 2014, p. 100-159; J. SOHIER, *Manuel des procédures devant le Conseil d'État*, Waterloo, Kluwer, 2014, p. 17-119; M. PÂQUES, *Principes de contentieux administratif*, Brussels, Larcier, 2017, p.

There is one exception: when a specific Act has entrusted another judge — either administrative or judicial — to settle the annulment litigation of the category of acts which the act at issue is part of[37]. As an example, the litigation concerning the measures taken by the independent administrative authority established to regulate the gas and electricity markets has been entrusted to the Court of Markets, which has become the name of one of the Brussels Court of Appeal's chambers — a judicial jurisdiction —[38].

It is worth specifying that Belgium experiences an administrative jurisdictional order which is not organized in the form of a pyramid, with first instance courts at its base, courts of appeal in the middle and a supreme court at its top.

With regard to administrative courts, there is a Council of State and a myriad of administrative courts which are specialised in a variety of areas and of which judgements are subjected to cassation proceedings, generally lodged before the Council of State[39].

225-400; L. DONNAY, P. LEWALLE, *Manuel de l'exécution des arrêts du Conseil d'État*, Brussels, Larcier, 2017, p. 502; R. STEVENS, K. DIDDEN, *Raad van State/I. Afdeling bestuursrechtspraak/2. Het procesverloop*, Brugge, die Keure, 2018, p. 9-580; I. OPDEBEEK, S. DE SOMER, *Algemeen bestuursrecht, Grondslagen en beginselen*, 2nd ed., Antwerpen-Cambridge, Intersentia, 2019, p. 577-631; D. RENDERS, *Droit administratif général*, Brussels, Larcier, 2019, p. 632-646; D. RENDERS B. GORS, *Le Conseil d'État,* Brussels, Larcier, 2020, p. 33-356; A. MAST, J. DUJARDIN, M. VAN DAMME, J. VANDE LANOTTE, *Overzicht van het Belgisch Administratief Recht*, 22nd ed., Mechelen, Kluwer, 2021, p. 1247-1392.

[37] Art. 14, 1st par., of the Acts on the Belgian Council of State, *id.*

[38] See Act of 25 December 2016 "modifiant le statut juridique des détenus et la surveillance des prisons et portant des dispositions diverses en matière de justice" (*Moniteur belge*, 30 December 2016), art. 51, 56, 59, 60, 64, 75, 77, 107, 109, 111 to 114, 157, 158 and 160 to 166.

[39] See not. D. RENDERS, *Droit administratif général*, *op. cit.*, 2019, p. 630-631 and 655-658.

As an example of specialised administrative courts, we can give the Competition Council, the Council for Alien Law Litigation or even the Commission for aid to victims of intentional acts of violence, and so forth[40].

Beyond the administrative courts evoked above, which have all been established at the federal level, one must now mention the existence of Flemish administrative courts which have been created in several areas, whereas the organisation of the judiciary is still a federal matter[41]. This is notably the case in Urban Planning law, in Environmental law or in Educational law[42].

The legal basis on which the Flemish Region and Community were entitled to create these administrative courts lies in what we call, in Belgian law, the implied powers' theory[43].

[40] *Id.*, p. 630.

[41] See not., on this subject, J. VANPRAET (ED.), *Administratieve rechtscolleges*, Brugge, die Keure, 2014, p. 121; A. Maes, "Het nieuwe DBRC-decreet: een eerste blik op de procedurele wijzigingen voor de Raad voor vergunningsbetwistingen", *Chroniques de Droit public-Publiekrechtelijke Kronieken*, 2015, p. 363-386; T. VANDENPUT, P. DE MAYER, M. BERTRAND, "Les nouvelles juridictions administratives régionales en matière d'urbanisme et d'environnement", *In* F. Viseur Et J. Philippart (Ed.), *La Justice Administrative*, Brussels, Larcier, 2015, P. 609; I. OPDEBEEK, S. DE SOMER, *Algemeen bestuursrecht, Grondslagen en beginselen*, *op. cit.*, 2017, p. 642-653, and the references cited; D. RENDERS, D. DE VALKENEER, "Où peut aller la justice administrative flamande, en particulier si la coupole n'est pas encore pleine?", observations on Const. Court, n° 152/2015, *Administration publique*, 2016, p. 557-570; D. RENDERS, "Belgian administrative justice organisation: when Federalism or devolution brings justice with it, or when regionalism is invading Europe?", *Ius Publicum*, 2018/1.

[42] *Ibid.*

[43] On the subject of the implied powers' theory in matters of justice specifically, see not. D. DE BRUYN, Les compétences implicites en matière d'organisation de juridictions, observations on Const. Court, 14 February 2001, n° 19/2001 et Const. Court, 13 March 2001, n° 33/2001, *Journal des Tribunaux*, 2002, pp. 4-8 ; X. DELGRANGE ET N. LAGASSE, La création de juridictions administratives par les communautés et les régions, *in* H. DUMONT, P.

This theory is based on a special legislative provision[44] which, as interpreted by the Constitutional Court, entitles a constituent entity of the Belgian Federation to encroach on the competences of other constituent entities of the Federation, under the conditions that this encroachment be necessary to the exercise of one of its own competences; be marginal; and cannot make impossible for the other constituent entities of the Federation to rule the same policy or question in another way[45].

If it had to be settled in Belgian law as a judicial review, the *Coughlan* case would have led the protagonists to cross swords before the Council of State, in first and last instances. As a matter of fact, it is the Council of State which, in Belgian law, is in charge of ruling on the legality of a closure measure such as that applied to *Mardon House*, unless a specialised court has been established to settle the category of measures which the closure at issue is part of, which is not the case to this day.

Moreover, in the light of all the considerations related to how legitimate expectations are recognized in Belgian law, it is absolutely conceivable that the Council of State, in the frame of its judicial review, could have allowed the argument of *Miss Coughlan* based on the principle of legitimate expectations. Firstly, the promise had been made by the administration. Secondly, *Miss Coughlan* could legitimately believe in this promise. Thirdly, and lastly, the Council of State could, in the circumstances of the case, consider that the alleged motives, financial in nature, without being accompanied by any relocation measure which would offer an equivalent comfort to that of which *Miss Coughlan* enjoyed in *Mardon House*, did not justify that the administration can go back on the promise it had made.

JADOUL ET S. VAN DROOGHENBOROECK (ed.), *La protection juridictionnelle du citoyen face à l'administration*, Brussels, La Charte, 2007, pp. 487-524; A.-S. BOUVY, "La place des juridictions administratives régionales et communautaires dans la Belgique fédérale", *Revue belge de droit constitutionnel*, 2015, pp. 215-264.

[44] Art. 10 of the Special Act of 8 August 1980 "of institutional reforms", *Moniteur belge*, 15 August 1980.

[45] See, in matters of justice specifically, Const. Court, n° 8/2011, 27 January 2011.

3.2 The litigation of exceptional damage

Apart from judicial review, the Belgian Council of State is in charge of different other jurisdictional competences. One of them is known as "the exceptional damage litigation"[46].

[46] On the subject of the exceptional damage litigation, see not. A. MAST, *Le Conseil D'état Et Le Contentieux De L'indemnité*, *In Mélanges Jean Dabin*, Brussels, Bruylant, 1963, p. 777-794; CH. HUBERLANT, E*ssai De Délimitation De La Compétence Du Conseil D'état D'avec Celle Des Cours Et Tribunaux Au Contentieux De L'indemnité*, *In Miscellanea W.-J. Ganshof Van Der Meersch*, T. Iii, Brussels, Bruylant, Paris, L.G.D.J., 1972, p. 509-532; M. LEROY, *Le Contentieux De L'indemnité Avant Et Après La Loi Du 3 Juillet 1971*, *Recueil De Jurisprudence Du Droit Administratif Et Du Conseil D'état*, 1974, p. 225-262; M. VAN DAMME, *De Aansprakelijkheid Van Wet- En Decreetgever In Het Licht Van Artikel 11 Van De Gecoördineerde Wetten Op De Raad Van State*", *Tijdschrift Voor Bestuurswetenschappen En Publiekrecht*, 1982, p. 296-307; P. LEWALLE, *La Réparation Du Dommage Exceptionnel Par Le Conseil D'état: Mythe Ou Réalité* ?, *Annales De Droit De Liège*, 1980, p. 183-214; M. LEROY, *Indemnité Pour Préjudice Exceptionnel — Évaluation*, *Administration Publique*, 1988, p. 73-76; J. SOHIER, *La Responsabilité De L'état Du Fait Des Vaccinations Obligatoires: De La Responsabilité Pour Faute Dans L'exercice De La Fonction Réglementaire Au Contentieux De L'indemnité Pour Rupture De L'égalité Des Citoyens Devant Les Charges Publiques, Observations On Council Of State (Bel.), Paasch-Jetzen*, N° 41.396, 16 December 1992, *Journal Des Tribunaux*, 1993, p. 334-338; A. VAN OEVELEN, *Het Rediduaire Karakter Van De Bevoegdheid Van De Raad Van State Om Uitspraak Te Doen Over De Eisen Tot Herstelvergoeding Voor Buitengewone Schade*, *Rechtskundige Weekblad*, 1998-1999, p. 1416-1418; R. ANDERSEN, B. LOMBAERT ET S. DEPRÉ, "LES CONTENTIEUX MÉCONNUS", *IN* B. BLERO (Ed.), *Le Conseil D'état De Belgique Cinquante Ans Après Sa Création (1946-1996)*, Brussels, Bruylant, 1999, p. 269-308; J. SOHIER, *Des Vaccinations Obligatoires Et Des Contours De La Compétence 'Résiduaire' Du Conseil D'état Au Contentieux De L'indemnité*, *Revue Critique De Jurisprudence Belge*, 2000, p. 9-19; P. LEWALLE, With The Collaboration Of L. Donnay, *Contentieux Administratif*, 3rd Ed., Brussels, Larcier, 2008, p. 499-525; D. RENDERS, TH. BOMBOIS, B. GORS, CH. THIEBAUT, L. VANSNICK, *Droit Administratif*, T. Iii, *Op. Cit.*, p. 381-396; M. LEROY, *Contentieux Administratif*, *Op. Cit*., p. 849-898; J. SALMON, J. JAUMOTTE, E. THIBAUT, *Le Conseil D'état De Belgique*, Vol. 1, *Op. Cit.*, p. 333-386; J. SOHIER, *Manuel Des Procédures Devant Le Conseil D'état*, Waterloo, Kluwer, 2014, p. 147-155; M. QUINTIN, "Contentieux De L'indemnité En Droit Administratif Belge", *Administration Publique*, 2017, p. 157-169 ; I. OPDEBEEK ET S. DE SOMER, *Algemeen Bestuursrecht, Grondslagen En Beginselen*, 2nd Ed., *Op. Cit.*, p. 600-604; D. RENDERS ET B. GORS, *Le Conseil D'état, Op. Cit.*, p. 507-536 ; A. MAST, J. DUJARDIN, M. VAN DAMME AND J. VANDE LANOTTE, *Overzicht Van Het Belgisch Administratief Recht*, *Op. Cit.*, p. 1423-1436.

In the situation where the administration has, by its fact, caused an exceptional damage, without committing any fault, the Belgian Council of State can, on the basis of a specific ground of jurisdiction, grant the compensation of this damage[47].

A prerequisite is required: the compensation of the damage allegedly suffered must be claimed by the applicant to the administration concerned, prior to regularly solicit the Council of State if the prerequisite has not been entirely successful[48].

The reason why this ground of jurisdiction does exist — which is the matter of the Council of State only if "another court has not been entitled to settle it"[49] — lies in the idea that one cannot tolerate that the citizen suffers, without any compensation, heavy sacrifices for the benefit of the society[50].

In this perspective, the exceptional damage litigation aims to allow the compensation of persons that the legal action of public powers seriously injured in an abnormal way, in defiance of the principle of equality with regard to public burdens[51].

[47] Art. 11 of the Acts on the Belgian Council of State, coordinated on 12 January 1973, *Moniteur belge*, 21 March 1973.

[48] Art. 11, 1st par., of the Acts on the Belgian Council of State, *id.*

[49] See not. Council of State (Bel.), *De Vriese*, n° 160.163, 15 June 2006.

[50] See not. J. SOHIER, *Manuel des procédures devant le Conseil d'État*, *op. cit.*, p. 147.

[51] See not. Council of State (Bel.), *De Boeck*, n° 2.658, 9 July 1953.

The triggering factor of the exceptional damage must be the act, omission or act of the administration[52].

As a result, if the triggering factor stems from the legislator[53], an organ of the judicial power[54] or even a citizen[55], one cannot conceive a compensation under the legal scheme in question.

Furthermore, the triggering factor must have been directly caused and, if not exclusively, at least principally by the administration[56]. Even if it is partial, the interference in the causal link between the triggering factor and the damage is sufficient to justify the rejection of the request which, to be allowed, imposes that the prejudice is directly and solely imputable to the administration[57].

[52] See not. M. LEROY, *Contentieux administratif, op. cit.*, p. 878; D. BATSELE AND M. SCARCEZ, *Abrégé de droit administratif*, Brussels, Larcier, 2015, p. 677; M. QUINTIN, *Contentieux de l'indemnité en droit administratif belge*, *op. cit.*, p. 158.

[53] See not. Council of State (Bel.), *De Vriese*, n° 160.163, 15 June 2006; Council of State, *Krack and consorts*, 2 July 2009, n° 195.045.

[54] See not. Council of State (Bel.), *Lambert*, n° 111.028, 4 October 2002; Council of State (Bel.), *Kurtulus*, , 24 June 200, n° 120.8753.

[55] See not. Council of State (Bel.), *Meunier*, 24 April 1997, n° 66.067.

[56] See not. Council of State (Bel.), *Mennicken and consorts*, n° 208.354, 21 October 2010, Council of State (Bel.), *Grégoire*, 24 May 2011, n° 213.439.

[57] *Ibid.*

The legislative provision which sets up the exceptional damage provides for that the compensation finds its basis in the equity[58].

As a consequence, the applicant must invoke an unfair or abnormal treatment, without referring to a rule allegedly violated, which would induce the existence of a fault and, consequently, which would exclude the competence of the Council of State, any condemnation on the grounds of a fault being the exclusive prerogative of the judicial judge in the frame of the extracontractual civil liability litigation[59].

To succeed before the Council of State, an exceptional damage must be proved[60].

The exceptional damage is "the abnormal prejudice, exceptional, exceeding by its nature or its importance the common inconveniences and the sacrifices that social life imposes […]"[61]. The assessment of the "exceptional" character of the prejudice depends, thus, on the circumstances of the case.

[58] Art. 11, 1st par., of the Acts on the Belgian Council of State, *op. cit.* See not. Council of State (Bel.), *Hanot*, n° 243.671, 12 février 2019.

[59] See. not. Council of State (Bel.), *NV Henvro and consorts*, n° 209.606, 9 December 2010; Council of State (Bel.), *Demoulin*, 8 November 2013, n° 225.411. Cf. *infra*: n° 25-30.

[60] See not. D. RENDERS, TH. BOMBOIS, B. GORS, CH. THIEBAUT, L. VANSNICK, *Droit administratif*, t. III, *op. cit.*, pp. 383-387 and the references cited.

[61] Parliamentary Documents, Sénat, extraordinary session 1939, n° 80, cited by P. LEWALLE, with the collaboration of L. Donnay, *Contentieux administratif, op. cit.*, p. 518.

The exceptional damage — which can be both material and moral[62] — must, moreover, be innate, current and certain, so that the hypothetical prejudice and the loss of uncertain benefits are excluded[63].

Among the damages considered as exceptional by the Council of State, one can notably point out: an early retirement[64]; the abnormal delay for an appointment or a promotion[65]; a compulsory polio vaccination[66]; a broken promise of appointment[67]; the slaughtering of pigs requested by the administration following the triggering of the swine fever[68]; and so forth[69]. Conversely, there is no exceptional damage when the administration terminates a domain concession, this contract being, by nature, precarious and revocable[70].

[62] Art. 11, 1st par., of the Acts on the Belgian Council of State, *op. cit.*

[63] Council of State (Bel.), *Delatte*, n° 177.496, 30 November 2007; Council of State (Bel.), *Krack and consorts*, n° 195.045, 2 July 2009; Council of State (Bel.), *Mennicken and consorts*, n° 208.354, 21 October 2010.

[64] See Council of State (Bel.), *Leynen*, n° 3.385, 13 May 1954.

[65] See Council of State (Bel.), *Bossart*, n° 43.717, 5 July 1993.

[66] See Council of State (Bel.), *Paasch-Jetzen*, n° 41.396, 16 December 1992, *Journal des Tribunaux*, 1993, p. 332 and observations J. Sohier, "La responsabilité de l'État du fait des vaccinations obligatoires : de la responsabilité pour faute dans l'exercice de la fonction réglementaire au contentieux de l'indemnité pour rupture de l'égalité des citoyens devant les charges publiques"; Council of State (Bel.), *Silay ans consorts*, n° 60.362, 21 June 1996.

[67] See Council of State (Bel.), *Gilman*, n° 943, 16 June 1951.

[68] See Council of State (Bel.), *NV Henvro and consorts*, n° 215.736, 13 October 2011.

[69] See, on this subject, D. RENDERS, TH. BOMBOIS, B. GORS, CH. THIEBAUT, L. VANSNICK, *Droit Administratif*, T. Iii, *Op. Cit.*, Pp. 383-387 And The References Cited. See Also A. MAST, J. DUJARDIN, M. VAN DAMME AND J. VANDE LANOTTE, *Overzicht Van Het Belgisch Administratief Recht*, *Op. Cit.*, Pp. 1428-1430.

Having to treat a request which would fulfil all the prerequisites, the Council of State orders the compensation of the prejudice suffered, not by ordering positive or negative injunctions, but by condemning the administration to pay "compensatory damages"[71].

The Council of State, which rules by a judgement, must, when it makes its decision, take "into account every circumstances of public and private interest"[72].

In these conditions, the Council of State has a large margin of appreciation to measure the prejudice[73]. In order to quantify the latter, the Council may resort to an expert[74]. It also can allocate only a partial reparation of the prejudice — where appropriate, the part of it which coincide with what exceeds the normal burden imposed by social life —[75]. However, it cannot order the compensation of the prejudice up to an amount superior to the amount asked for to the administration, before lodging an appeal to the Council of State[76].

[70] See Council of State (Bel.), *Mennicken and consorts*, 21 October 2010, n° 208.354.

[71] Art. 11, 1st par., of the Acts on the Belgian Council of State, *op. cit.* The provision uses the terms of "demande d'indemnité", which gives rise to compensatory damages and only that (see J. SALMON, J. JAUMOTTE ET E. THIBAUT, *Le Conseil d'État de Belgique*, vol. 1, *op. cit.*, p. 384. See, for example, Council of State (Bel.), *Jaumotte*, n° 17.138, 15 July 1975. In this case, the applicant gained an amount of 300.000 Belgian Francs.

[72] Art. 11, 1st par., of the Acts on the Belgian Council of State, *op. cit.* See, for example, Council of State (Bel.), *Silay and consorts*, n° 133.634, 7 July 2004.

[73] See not. D. BATSELÉ, M. SCARCEZ, *Abrégé de droit administrative*, *op. cit.*, p. 678.

[74] See not. Council of State (Bel.), *Silay and Yarali*, 21 June 1996, n. 60.362; Council of State (Bel.), *Deblaere*, 9 May 2008, n° 182.842.

[75] See not. J.-CL. GEUS AND CH. LAMBOTTE, "Le Conseil d'État", *in Répertoire notarial*, t. XV, Livre VII, Brussels, Larcier, 1985, p. 43.

[76] Council of State (Bel.), *Silay and consorts*, 7 July 2004, n° 133.634.

In the *Coughlan* case, it seems to be undeniable that the triggering factor was the fact of the administration, without interference from the part of *Miss Coughlan* or from anyone other.

The situation seems to be very special and could have given rise, in this context, to an exceptional damage, in comparison with other situations which have been above mentioned.

In the frame of the exceptional damage litigation, the compensation could not have been other than a financial indemnity. As a result, *Miss Coughlan* could not have been repatriated to *Mardon House*. Furthermore, this indemnity could, where appropriate, be limited to the part of the damage which would exceed the normal burden imposed by social life.

4. THE MISS COUGHLAN'S EXPECTATIONS AND THE BELGIAN JUDICIAL JUDGE

It must be pointed out that, in Belgian law, it is also possible to ask the judicial judge for controlling the unilateral action of the administration, or its omission.

It is, then, for soliciting the protection of a subjective right — in other words a prerogative — that the administration, through the act that it took — or the omission that it made —, threatens, frustrates or flouts.

In order to do so, the act's addressee may notably invoke the illegality of the unilateral administrative act or omission which violates the right which he claims protection of. On the basis of the illegality of the act, the applicant seeks most often to prove that an extracontractual civil fault has been committed (A). Even if it is very seldom, he can also try to obtain the forced execution of the unilateral commitment of the administration (B).

4.1 The extracontractual civil liability

For a long time, Belgian law has had a narrow conception of the separation of powers. On behalf of this conception, the Belgian judge having in charge the extracontractual civil liability litigation — the judicial judge — had created a distinction between the administration as a private person and the administration as a public power[77].

By a judgement *La Flandria* issued on 5 November 1920, the Court of cassation has however admitted that the liability of the public power could be questioned for having damaged a civil right and that this liability was ruled by articles 1382 and following of the Civil Code[78].

In order to challenge the extracontractual civil liability of the administration, the applicant has to prove that the administration has committed a fault, namely either has failed to comply with its obligation of respecting all rules and principles hierarchically superior which are binding – and which, if they are international or European, must have a direct effect –, or has failed to comply with the "general duty of care" which imposes upon all, pursuant to articles 1382 and 1383 of the Civil Code[79].

If the action or the omission of the administration is inconsistent with one of its obligations, an illegality has been committed which, according to the jurisprudence of the

[77] See not. C. CAMBIER, *Droit administratif*, Brussels, Larcier, 1968, p. 561 and follow., spec. p. 562 and the references cited.

[78] Cassation (Bel.), 5 November 1920, *Pasicrisie*, 1920, I, p. 193, concl. First Advocate-General P. Leclercq. See, on this subject, P. VAN OMMESLAGHE, La responsabilité des pouvoirs publics pour la fonction juridictionnelle et la fonction législative, *in* P. Van Ommeslaghe (ed.), *Actualités en droit de la responsabilité*, Collection "UB3", Brussels, Bruylant, 2010, p. 110-112.

[79] See not. D. RENDERS, *Droit administratif général*, Brussels, Bruylant, 2019, pp. 621-622, and the references cited.

Court of cassation, amounts to a fault in the civil sense of the term — subject to certain reservations —[80].

If the civil fault has been proven and that this fault has caused a damage, the person who has committed the fault is liable to compensate the damage so caused.

In principle, any type of damage generated by any type of extracontractual civil fault can be compensated.

The way to compensate differ. It can be either by a positive or a negative injunction addressed to the administration in order to fulfil its "primary" or "very" obligation ("réparation en nature"), or by an order to pay "compensatory damages" — in other words an amount of money estimated by the judge as equivalent to all the prejudices suffered due to the unfulfillment of the "primary" or the "very" obligation ("réparation par équivalent").

If the applicant claims for a positive or negative injunction aimed at fulfilling the "primary" — or the "very" — obligation, the judge can order this injunction if this injunction is compatible with the factual situation and if this injunction has not been banned by the

[80] See not. D. DE ROY, D. RENDERS, "*La responsabilité extracontractuelle du fait d'administrer, vue d'ensemble*", *in* D. Renders (ed.), *La responsabilité des pouvoirs publics, Actes des XXIIe Journées d'études juridiques Jean Dabin*, Brussels, Bruylant, 2016, p. 31-92, and the references cited.

law[81]. If the applicant claims "compensatory damages", the judge can allocate them in any circumstances, whether an injunction is factually and legally workable — or not —[82].

It is worth specifying that, if a positive or a negative injunction is claimed under the conditions above mentioned, it is usually believed that the judge does not breach the principle of separation of powers as far as the injunction that the judge orders to the administration does not infringe the margin of appreciation that the administration has in the frame of its discretionary competence[83].

As an example, the judge may order the administration to rule on an authorisation request, by no longer committing the illegality previously committed. As a matter of right and of fact, the obligation made to the administration to rule one direction or the other does not depend on the injunction of the judge, but on the circumstance that the administration is legally bound to exercise its competence — to put it simply, the administration has the legal obligation of ruling on an authorisation request: it does not have any choice —. As for the injunction which consists in being banned from recommitting the illegality sanctioned in the judgement, it does not infringe the principle of separation of powers, since the discretionary

[81] See not. See not. D. RENDERS, "Dans quelle mesure le principe de la séparation des pouvoirs fait-il interdiction au juge de condamner l'administration à réparer en nature le dommage cause par sa faute extracontractuelle?", obs. on Cass., 4 September 2014, *Revue Générale de Droit Civil*, 2015, pp. 571-579, and the references cited. See also M. JOASSART, "Le juge civil et la séparation des pouvoirs", commentaire des arrêts de la Cour d'appel de Bruxelles du 21 février 2014 et du 12 septembre 2014, *Administration publique*, 2016, pp. 435-447; A. LEBRUN, "Jusqu'où le juge peut-il forcer l'Exécutif à agir? — Petit rappel", observations on J.P. Herstal, 20 December 2013, *Jurisprudence Liège, Mons et Bruxelles*, 2016, p. 1682.

[82] See not. D. RENDERS, *Droit administratif général*, *op. cit.*, p. 629.

[83] See not. D. RENDERS, "Dans quelle mesure le principe de la séparation des pouvoirs fait-il interdiction au juge de condamner l'administration à réparer en nature le dommage causé par sa faute extracontractuelle?", observations on Cass., 4 September 2014, *op. cit.*, p. 578, and the references cited. See, for a recent illustration, Cass., 12 March 2020, C.18.0383.N.

competence is entirely preserved, this competence having to be exercised in line with the law.

In case of binding competence — in other words, if the administration is required to adopt the decisional content that the law prescribes —, the injunction made to the administration is, by nature, respectful of the principle of separation of powers. The reason of this lies in the fact that the administration does not have any margin of appreciation and, so, could not, by hypothesis, encroach upon this[84].

As an example, if the law establishes that in the event that three conditions are met, a subvention must be granted to the applicant, the administration has no choice but to grant the subvention if these three conditions are met. If the administration did not do so, then that a judge observes that the conditions were met, though, and that the administration had a binding competence, the judge does not breach the separation of powers principle by ordering to the administration to allocate the subvention. As a matter of fact, the judge limits himself to observe that the administration was required to do so.

In the *Coughlan* case, it might be argued that the administration has violated the general principle of legitimate expectations — first form of civil fault — and/or the general duty of care which imposes upon all, on the basis of articles 1382 and 1383 of the Civil Code, since the administration would not have behaved as any administration normally careful and diligent placed in the same situation — second form of civil fault —.

In either case, the judicial judge could condemn the administration to compensate the damage suffered by *Miss Coughlan*. Could he condemn the administration to pay compensatory damages? The answer is undoubtedly affirmative, the judge having the possibility to do so in any circumstances. Could he condemn the administration to observe an injunction? The answer is not necessarily affirmative. In presence of a discretionary

[84] *Ibid.*

competence, the judge could only order the administration to act in compliance with legitimate expectations or in compliance with the general duty of care which — regarding the circumstances of the case and the grounds indissolubly linked to the judgement's conclusions — would probably give rise to one of the following measures: either repatriating *Miss Coughlan* to *Mardon House* if there were no other serious motives or objective and reasonable justifications than the insignificant financial gain achieved by the public health administration; or relocating *Miss Coughlan* in premises presenting a standard of comfort equivalent to *Mardon House*, if serious motives or objective and reasonable justifications could be duly argued.

4.2 The unilateral commitment of the administration

One case has been recorded in which, in Belgian Public Law, the unilateral commitment of the administration has been considered, by the judicial judge, as source of obligation for the administration and for the benefit of the citizen. The case in question has a drug name: *Softenon*[85].

In Belgium as in other countries in the world — sometimes under another name –, the drug in question caused severe deformities to children conceived between 1958 and 1963 by mothers having resorted to this drug as sleeping pill and/or cure nausea, while being pregnant.

[85] Brussels (ch. 18th), 22 February 2018, *Administration publique*, 2019/4, p. 418-434. On this judgement, see not. E. DE SAINT MOULIN, "L'engagement unilateral de volonté à la rescousse des victimes du Softenon. Commentaire de l'arrêt de la Cour d'appel de Bruxelles du 22 février 2018", *Administration publique*, 2019/4, pp. 434-453; A. CATALDO, F. GEORGE, "L'engagement par déclaration unilatérale de volonté dans le chef des pouvoirs publics à la lumière de l'arrêt Softenon", *in* D. RENDERS (dir.), *Actualités du contentieux administratif*, CUP, vol. 197, Limal, Anthemis, 2020, p. 153-212.

On 21 April 2010, the Federal Minister for Public Health at the time wrote to various Belgian victims of the drug as follows:

"*I am pleased to let you know that, on my initiative, the Council of Ministers has decided, as an outcome of the negotiations intervened in the frame of the recent budgetary control relating to the thalidomide victims: a one-off amount of 5.000.000 EUR is foreseen for the benefit of the thalidomide victims, amount which will be taken in charge on the budget of the administrative costs of the National Sickness and Invalidity Insurance Institution [in abbreviated form: INAMI] and compensated within the global budgetary objective of health care.*

This amount will be allocated to a Private Interest Foundation of which the corporate object will be the grant of a lump-sum to each victim born in Belgium between 1st January 1958 and 1st April 1963 who will prove that he or she suffers from birth defects linked to the intake, by their mothers during the pregnancy, of one of the medicines distributed by R. COLES *firm, containing thalidomide.*

This is the mandate which has been assigned to me by the Government, and I of course intend to fulfil it, first and foremost by creating very soon the legislative basis requested to allow the payment by the INAMI of the amount of 5.000.000 EUR to the Foundation to create. This decision was unhoped in view of the current budgetary context which is particularly difficult, and I am pleased to have obtained it in these circumstances"[86].

By a judgment of 22 February 2018, the Brussels Court of Appeal holds that, according to what appellants argue […], "it is without a doubt a unilateral commitment,

[86] *Id.*, free translation from French, point 15.

moreover confirmed by an official press release of 22 March 2010"[87], which reads as followed:

"*At the behest of [the Minister for Public Health], the Government has accepted to set aside an amount of 5 million euros for the benefit of the thalidomide victims, more commonly referred to as* Softenon.

This amount will be paid to a Foundation, still to create, which will be assigned to distribute this sum between the concerned persons.

This measure, brought with the conviction of the Minister, represents an important gesture of support towards persons with birth defects particularly disabling"[88].

The Brussels Court of Appeal stresses that:

"*This commitment by unilateral statement of will, externalised in that way, has been made without being accompanied by any reservation and, being accepted by the appellants, it is binding for the Belgian State not only towards appellants who demand the respect for it, but towards — following its own terms — anyone able to prove to be suffering from birth defects caused by the intake, by his or her mother during the pregnancy, of medicines distributed in Belgium by the* R. COLES *firm, containing thalidomide […]*"[89].

The Brussels Court of Appeal further highlights that:

"*As regards its validity, it does not matter that this unilateral commitment does not contain any recognition of liability from the Belgian State in the* Softenon *drama. As a matter*

[87] *Id.*, par. 53.

[88] *Id.*, par. 15 and 53.

[89] *Id.*, par. 54.

of fact, it is not requested to seek the cause of such a commitment in the moral duty or conscience to repair the damage; the will of a State to support the victims of a social drama, such as the Softenon *one, is enough (in this way, a State ensures to come to the assistance of victims of certain natural disasters)*"[90].

The Court further notes that:

"*[…] if it is true that, neither the Minister on its own, nor the Council of Ministers could decide to allocate any amount to the Foundation still to create, the grant of a budget coming within the remit of the House of representatives, the Belgian State took, as early as April 2010, the commitments of (i) creating a Foundation aimed at assisting the victims of the thalidomide and (ii) of submitting to the House of representatives a draft bill in order to allocate to this foundation an amount of 5.000.000 euros in the following terms: [draft bill]*"[91].

The Court lastly holds that:

"*[…] as soon as the Government has agreed […] to create a Foundation for the benefit of the thalidomide victims who were born in Belgium, and to submit to the House of representatives a draft bill aimed at attributing to this Foundation an amount of 5.000.000 EUR, this commitment has conserved and conserves, since the appellants have been informed of this commitment and accepted it, its binding force; […]*"[92].

For these reasons, the Brussels Court of Appeal:

[90] *Id.*, par. 55.

[91] *Id.*, par. 58.

[92] *Id.*, par. 62.

"*Orders the Belgian State, represented by Madam Minister for Social Affairs and Public Health to submit to the House of representatives a draft bill in order to include in the next budgetary law, such as that reproduced under point 58 of this judgement for the purpose of the creation of the private utility foundation referred to in the draft bill*"[93].

It follows from the above considerations that the unilateral commitment of the administration can, in some instances, be used against the latter and impose to it to do what it was committed to do — no more and no less —, without being allowed to weigh the fulfilment of this commitment with "serious motives" or other "objective and reasonable justifications" giving it a right to backtrack.

Even though the cases of unilateral commitment of the administration are very rare in Belgian law — it is the only one we know for the time being —, it should not be excluded that the judicial judge would have ruled similarly in a case equivalent to the *Coughlan* one, since the Belgian State would have been bound by an unconditional commitment and given the factual circumstances in question and the tragic nature of the situation.

Thereupon, the terms in which the British Court of Appeal reports the promise made to *Miss Coughlan* by the English Public Health Administration can usefully be recalled:

"86. […]. *This was an express promise or representation made on a number of occasions in precise terms. It was made to a small group of severely disabled individuals who had been housed and cared for over a substantial period in the health authority's predecessor's premises at* Newcourt. *It specifically related to identified premises which it was represented would be their home for as long as they chose. It was in unqualified terms. It was repeated and confirmed to reassure the residents. It was made by the health authority's predecessor for its own purposes, namely to encourage* Miss Coughlan *and her fellow residents to move out of* Newcourt *and into* Mardon House*, a specially built substitute home*

[93] *Id.*, operative provisions of the judgment.

in which they would continue to receive nursing care. The promise was relied on by Miss Coughlan. *[…]"*[94].

If the Belgian judicial judge had considered that, as in the *Softenon* case, it was also question of a unilateral commitment — "without being accompanied by any reservation and accepted by [*Miss Coughlan*]" —, it is to *Mardon House* that *Miss Coughlan* would have been repatriated, without any other possible alternative.

Even then, it should not be seen a violation to the separation of powers, the commitment of the administration being, by hypothesis, its own decision, in other words the exercise, by itself, of its discretionary competence only revealed — or reminded — by the judge.

5. CONCLUSION

It is striking to observe that Belgian law seeks, via different channels, to apprehend situations generated by the administration which display different features unacceptable, disloyal, unjustified or even unfair.

Whether through legitimate expectations as a ground for judicial review, extracontractual civil liability, unilateral commitment or even exceptional damage, the legislator and the judge endeavour to provide opportunities for helping the battered citizen to restore his rights.

[94] C.A. (Civ. Div.), *R. v North and East Devon Health Authority, Ex. p. Coughlan*, 16 July 1999, 2001, QB, p. 213, par. 86.

However, it is worth noting that, through all the channels pointed out, the role played by the circumstances of the case is decisive and, beyond it, the role of the judge which, in the final analysis, has the sensitive task to assess them.

The way in which the situation will be solved may, for its part, significantly vary between the obligation of putting back the citizen into his previous position, the obligation of putting back the citizen into a position equivalent to that in which he was placed, and the obligation to pay a financial indemnity, full or partial.

Undoubtedly, pleading the unilateral commitment of the administration would have constituted, on the Belgian side of the Channel, the best way to obtain a true comeback to *Mardon House*…

Abstract. *In English law, the case between Miss Coughlan and the North and East Devon Health Authority is central to the doctrine of legitimate expectations raised by the administration. The question arises as to how the Belgian courts would have decided, or at least could have decided, such a case. In order to answer this question, one examines the extent to which, in Belgian law, the legitimate expectations raised by the administration require it to honour them. It then asks how the administrative and ordinary courts could have been seized of the Coughlan case and how they could have decided it. From this overview, it is concluded that pleading the existence of a unilateral commitment of the administration before the ordinary judge would have been the surest way to obtain Miss Coughlan's comeback to the health care institution in which the administration had promised her that she would be able to finish her days before dislodging her.*

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INNOVATION AND LOCAL GOVERNANCE:

THE GOVERNMENT-AS-A-PLATFORM APPROACH

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INDEX

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1. INTRODUCTION

The impact of the novel Coronavirus (COVID-19) outbreak changed the way in which cities and territories are to be administrated. In times of digital revolution and complex societies, local governments require innovative administration processes crossed by three main components: information and communication technologies integration (digitalization); analytical tools that convert data into usable information (informatization); and organizational structures promoting collaboration and smart governance (open government and innovation).[2]

As recently observed, the digital transformation of the public sector became essential for the guarantee of the "right to good administration" declared by the Charter of Fundamental Rights of the European Union, Art. 41.[3] Nevertheless, it shall be remarked that the digital transition of local government administrations requires a deep re-engineering of organizational structures and governance models, since the mere adaptation from analogical to digital tools does not guarantee, *per se*, good administration. Nowadays, the growing pluralistic outline of local communities increased the complexity in managing local governments' activities, which cannot further be understood as separate functions and services but need, instead, a holistic and integrated governance approach.[4]

[2] L. FOLLIOT – LALLIOT, P. MCKEEN, *Procurement and Smart Cities: Exploring examples on both sides of the Atlantic*, in *Ius Publicum Network review*, vol. 2, 2019, 1 ff.

[3] See D. U. GALETTA, *Digitalizzazione e diritto ad una buona amministrazione (il procedimento amministrativo tra diritto UE e tecnologie ICT)*, in *Il diritto dell'amministrazione pubblica digitale* (R. CAVALLO PERIN, D.U. GALETTA eds.), Turin, Giappichelli, 2020, 85 ff.

[4] M. RAZAGHI, M. FINGER, *Smart Governance for Smart Cities*, in *Proceedings of the IEEE*, vol. 106, no. 4, 2018, 682.

In the most cases, the traditional local government administration structure organized on a territorial and functional basis is not suitable anymore for the efficient pursuit of its functions.[5] The new governance model requires involvement of private citizens, nongovernmental organisations as well as networks of public organisations, and marks the shift of the role of public administration from 'governing' to solving public problems in collaboration with others.[6] Smart cities provide an ideal opportunity for exploring new digital technologies and their impact on citizens participation for the adoption of e-participation influences policy design and policymaking, leading to smart solutions.[7] This leads to an important transformation in the way cities and territories are governed and introduces new challenges to the traditional local governance models.

2. THE ROLE OF DIGITAL PLATFORMS IN LOCAL PUBLIC ADMINISTRATIONS

In governance structure legitimacy is required not only of the governing system, local authorities or public organisations; but also of other participants, including citizens.[8] The complexity of problems within the local administration context has reached a point where digitalization and collaboration among a large number of stakeholders are essential,

[5] On this topic see R. CAVALLO PERIN, G.M. RACCA, *Smart cities for an intelligent meeting of social needs*, in *Le futur du droit administratif – The future of administrative*, (J.B. AUBY ed.), Lexis Nexis, 2019, 431-437.

[6] S. SECINARO et al., *Does Citizen Involvement Feed on Digital Platforms?*, in *International Journal of Public Administration*, 2021, 2.

[7] A. VISVIZI at al., *Irregular migratory flows: Towards an ICTs' enabled integrated framework for resilient urban systems. Journal of Science and Technology Policy Management*, 8/2, 2017, 227-242.

[8] L. HÄIKIÖ, *From Innovation to Convention: Legitimate Citizen Participation in Local Governance*, in *Local Government Studies*, 38/4, 2012, 415-435.

since no single actor can have the adequate knowledge and resources to tackle them alone.[9] This increased the need of empowering horizontal-based governance models focused on collaboration with non-state actors and aimed at of co-defining how the public interest, which is to be pursued in different fields.[10] The roles and functions undertaken by citizens in smart city governance models are dynamic and evolve over time. This highlights how smart city initiatives have differentiated outcomes and how the mode of governance in a societal and institutional context plays an important role in shaping patterns of citizen participation.[11] Some public spheres of the city are now governed through the collective actions of different stakeholders rather than through activities exercised by the public administration alone.[12] This emerges more and more rapidly in the fields of online services that local authorities are required to guarantee to their citizens and enterprises.[13] The European strategy geared toward

[9] M. RAZAGHI, M. FINGER, *Smart Governance for Smart Cities*, cit., 681; C. NUNES SILVA, *Global Trends in Local Governance,* in ID. (eds) *Contemporary Trends in Local Governance. Local and Urban Governance.* Springer, Cham, 2020, 1-19.

[10] C.M. COLOMBO, *New forms of local government and the transformation of Administrative Law*, in *European Public Law*, vol. 24, no.3, 2018, 575; R. E. LEVITT, W. HENISZ et al., *Governance challenges of infrastructure delivery: The case for socioeconomic governance approaches*, in *Proc. Construct. Res. Congr.*, 2010, vol. 2, 757-767; N. TEWARI, G. DATT, *Towards FoT (Fog-of-Things) enabled Architecture in Governance: Transforming e-Governance to Smart Governance*, 2020 International Conference on Intelligent Engineering and Management (ICIEM), 2020, 223-229; M. DAS AUNDHE, R. NARASIMHAN, *Public Private Partnership (PPP) Outcomes in E-Government: A Social Capital Explanation*, in *International Journal of Public Sector Management* 2016, vol. 29, no. 7, 638-658.

[11] Cf. E. PRZEYBILOVICZ et al., *Citizen participation in the smart city: findings from an international comparative study*, in *Local Government Studies*, 48/1, 2022, 23-47.

[12] To stress the importance of enhancing citizens' participation, the Organization for Economic Co-operation and Development (OECD) has praised metropolitan authorities for being 'local agents of change', as they can easily identify the best opportunities for change and innovation and collaborate with the private sector and civil society to experiment with new solutions.

[13] S. RANCHORDÁS, *Citizens as Consumers in the Data Economy: The Case of Smart Cities*, in *EuCML 4*, (2018), 155 et seq. (157).

the realization of the Digital Single Market (DSM)[14] has progressively evolved with the ambitious goal of shaping the digital future of Europe by considering digital technologies as an enabler for the improvement of citizens' quality of life, to provide new opportunities for businesses, and also to combat climate change in combination with the Europe's green transition[15]. The Digital Europe Programme (DEP)[16], presented by the European Commission in June 2018 and launched in early 2021, represents the consolidation of these strategies and provide strategic funding to answer these challenges. The Italian Digital Administration Code[17] recognizes the centrality of citizens' rights in the use of digital public administration services while emphasizing the need to implement the principles of accessibility, high usability and availability, completeness of information, high interoperability[18] of the local administrations' data. Beside of that, the EU Regulation n.1724/2018 establishing the Single Digital Gateway (SDG)[19] indicates mandatory quality parameters that websites of Member States' public administrations shall comply with to enable overall higher quality of

[14] See European Commission (2015a), *Digital Single Market Strategy*, COM(2015) 192 final and European Commission (2015d), *Single Market Strategy*, COM(2015) 550 final.

[15] See A. SIKORA, *European Green Deal – legal and financial challenges of the climate change*, in *ERA Forum* vol. 21, 2021, 681-697.

[16] Online: The Digital Europe Programme | Shaping Europe's digital future (europa.eu), accessed 19 November 2021.

[17] Legislative decree of 7th March 2005, n. 82.

[18] The concept of interoperability recalls the possibility of wider and easier circulation of information and data in the public sector. See G. CARULLO, *Government in the Digital Era: Can We Do More with Less?* in *Information and Communication Technologies Challenging Public Law, beyond Data Protection. Atti del 12° congresso annuale della Societas Iuris Public Europaei* (SIPE), Milano, 25-27 maggio 2017, (J. ZILLER E D. U. GALETTA eds.), Baden, Nomos Verlagsgesellschaft, 2018, 143-152.

[19] Regulation EU 2018/1724 of 2 October 2018 establishing a single digital gateway to provide access to information, to procedures and to assistance and problem-solving services and amending Regulation (EU) No 1024/2012 - hereinafter SDG Regulation.

information on the Single Market and accessibility of administrative procedures for cross-border users.[20] The aim is to put the citizen in the centre by eliminating the burdens in access to public services by means of reorganised and innovative internal processes, as well as strengthened cooperation between public bodies. Specifically, the SDG is a portal designed to guide citizens and businesses to find information on European and national rules, rights and procedures with links to the sites where these can be done online, with the goal of bringing 21 administrative procedures online by 2023, making fully transnationally accessible national online services.[21] To that extent, the development of digital administrative networks between Member States and Union administrations plays a key role not only for the fostering of the European Single Market, but also for the rapid digital transformation of local governments.[22] Since the advent of the second digital revolution, local governments are forced to seek ways for their cities to become more ethical, inclusive, intelligent, and sustainable in order to address the challenges of the digital society (such as information sharing, citizen engagement, transparency and openness). The smart-city concept is indeed mostly considered from a technology-orientated perspective that stresses the use of information and communication technologies (ICTs) and big data; and the same goes for smart governance. This latter is regarded as basis for developing smart governance through the application of emergent ICTs that improve decision-making processes and collaboration

[20] See R. BHATTARAI, I. PAPPEL, et al., *The Impact of the Single Digital Gateway Regulation from the Citizens' Perspective*, in *Procedia Computer Science*, vol.164, 2019, 159-167.

[21] H. GRAUX, *The Single Digital Gateway Regulation as an Enabler and Constraint of Once-Only in Europe*, in *The Once-only Principle* (R. KRIMMER et al. eds), Cham, Springer, 2021, 83 ff. (86-89).

[22] The Single Digital Gateway (SDG) has been established to promote mobility for citizens and businesses within the Union through the consolidation of so-called "dialogue system" capable to facilitate and improve online access to up-to-date information, administrative procedures, and assistance services. Therefore, the SDG Regulation is based on the once-only principle and is aimed at streamlining interactions between citizens, enterprises, and competent administrative authorities by reducing the amount of administrative burden. See C. SCHMIDT, R. KRIMMER, T. LAMPOLTSHAMMER, "*When need becomes necessity" - The Single Digital Gateway Regulation and the Once-Only Principle from a European Point of View*, in *Open Identity Summit 2021* (H. ROßNAGEL eds.), Bonn, Gesellschaft für Informatik e.V., 2021, 223-228.

among governments, citizens, and other stakeholders.[23] This implies not only the exploitation of the advantages offered by new technologies, but also – and above all – the capability to overcome organizational as well as legal challenges by means of new prototypal solutions.[24]

To empower digitalization-driven local governance models, digital platforms begun to be applied to the city context. This is the case of the emerging "platform urbanism[25]" aimed at addressing various urbanization problems with the assistance of open data, participatory innovation opportunity, and collective knowledge to support local governance efforts in the development of smarter cities.[26] Platforms are revolutionizing every dimension of our society by providing potential for a new kind of value creation and allowing organizations to create entire ecosystems that leverage the expertise of a diverse pool of external complementors, resulting in an unprecedented scope of innovation[27].

As known, the most critical determinant of any platform's success is its ability to attract participants to join and contribute to it, since on its own a platform cannot create value. Contemporary models of public governance advocate the creation of public value through articulated initiatives involving governments and society, where the opening up of data and

[23] G. VIALE PEREIRA, et al., *Smart Governance in the Context of Smart Cities: A Literature Review*, in *Information Polity*, vol. 23, no. 2, 2018, 143-162.

[24] S. MAMROT, K. RZYSZCZAK, *Implementation of the OOP in Europe*, in *The Once-only Principle* (R. KRIMMER et al. eds), cit., 12.

[25] S. VAN DER GRAAF, P. BALLON, *Navigating platform urbanism*, in *Technol. Forecast. Soc. Chang.*, 2019, vol. 142, 364-372.

[26] P. REPETTE et al., *The Evolution of City-as-a-Platform: Smart Urban Development Governance with Collective Knowledge-Based Platform Urbanism*, in *Land* 2021, vol. 10, no. 1, 2021, 33 ff. See also M. DEMICHELIS, *Innovazioni nell'uso degli spazi pubblici post-pandemia: il caso italiano nel contesto europeo*, in *DPCE online*, issue 2, 2020, 2481 ff.; J. MORISON, J. COBBE, *Understanding the Smart City: Framing the challenges for law and good governance*, in (J.B. AUBY ed.), *Le futur du droit administratif*, cit., 375 ff.

[27] S. REPONEN, *Government-as-a-platform: enabling participation in a government service innovation ecosystem*, Johtamisen laitos, 2017, *passim.*

the mobilization of collective knowledge is becoming essential to enable the co-creation of samrt solutions for local administrations.[28] Therefore, new platform-based approaches are emerging, which are associated with the local government's application of digital technologies to expand the possibilities of co-production of public services.[29] The ongoing "platformization" of public administrations' activities can thus be conceptualized as a model of sociotechnical governance supported by digital architecture technologies with open and modular standards that guarantee the connection between government and society while increasing public value.[30] This also marks the transition from centralized management to so-called "representative governance"[31] aimed at promoting the community participation in the construction of their own cities.[32]

Whereas the concept of platform government emerged long ago, supporting technologies and infrastructures are now being installed and implemented with highly integrative technologies such as Cloud computing, big data analytics, social media, Internet

[28] T. ZHUANG et al., *The role of stakeholders and their participation network in decision-making of urban renewal in China: The case of Chongqing,* in *Cities*, issue 92, 2019, 47-58.

[29] See D. BOLLIER, *The City as Platform: How Digital Networks Are Changing Urban Life and Governance,* The Aspen Institute, Washington DC, 2016; A.G. GABRIEL, *Transparency and accountability in local government: Levels of commitment of municipal councilors in Bongabon in the Philippines,* in *Asia Pac. J. Public Adm.*, issue 39, 2017, 217-223; E. BELLIARDO, *Innovation and sustainability in public procurement,* at ICON-S Mundo, The future of public law, (online, 9 luglio 2021). The Smart City Challenges: procurement and innovation.

[30] P. REPETTE et al., *The Evolution of City-as-a-Platform,* cit., 38; see also A. LOVARI, G. DUCCI, *The challenges of public sector communication in the face of the pandemic crisis: professional roles, competencies and platformization,* in *Sociologia della comunicazione,* vol. 61, issue 1, 2021, 9-19.

[31] For an interesting analysis on this topic see: A RAHMADANY, M. ACHMAD, *The Implementation E-Government to Increase Democratic Participation: The Use of Mobile Government,* in *Jurnal Studi Sosial Dan Politik*, 2021, vol. 5, no. 1, 22-34.

[32] J.R. GIL-GARCIA, *Conceptualizing smartness in government: An integrative and multi-dimensional view*, in *Gov. Inf. Q.*, 2016, issue 33, 524-534.

of Things, and Artificial Intelligence[33], which open up real opportunities by facing realistic challenges for public management.[34] Within this framework, the pressure for government innovations, such as algorithmic bureaucracy[35] and collaborative value creation, is increasing and changes the nature of work in government while the decision-making processes are re-institutionalized.[36]

[33] To recall some of the more outstanding voices at international level: L.A. BYGRAVE, *Minding the Machine: Article 15 of the EC Data Protection Directive and Automated Profiling,* in *Computer Law and Security Review*, 17, 1, 2001, 16 ff.; D.R. DESAI, J.A. KROLL, *Trust But Verify: A Guide to Algorithms and the Law*, in *Harvard Journal of Law & Technology*, 31, 1, 2017, 1-64; N.M., RICHARDS, J.H. KIN, *Big Data Ethics*, in *Wake Forest Law Review*, 49, 2014, 393; P. SCHWARTZ, *Data Processing and Government Administration: The Failure of the American Legal Response to the Computer*, in *Hastings Law Journal*, 43, 1992, 1321 ff.; G. DE MINICO, *Towards an "Algorithm Constitutional by Design",* in *BioLaw Journal –Rivista di BioDiritto*, vol. 1, 2021, 381 ff. In the Italian literature see, *inter alia*, R. CAVALLO PERIN, D.U. GALETTA (eds.), *Il diritto dell'Amministrazione Pubblica digitale*, 2020, cit.; F. LAVIOLA, A*lgoritmico, troppo algoritmico: decisioni amministrative automatizzate, protezione dei dati personali e tutela delle libertà dei cittadini alla luce della più recente giurisprudenza amministrativa*, in *BioLaw Journal –Rivista di BioDiritto*, 3, 2020, 389-440, S. ROSSA, *Contributo allo studio delle funzioni amministrative digitali*, CEDAM, Milan, 2021; L. PARONA, *Government by algorithm: un contributo allo studio al ricorso dell'intelligenza artificiale nell'esercizio di funzioni amministrative*, in *Giorn. Dir. Amm.*, 1/2021, 10 ff.; G. ORSONI, E. D'ORLANDO., *Nuove prospettive nell'amministrazione digitale: Open Data e algoritmi*, in *Istit. fed*., 3/2019, 593 ff.; L. MUSSELLI, *La decisione amministrativa nell'età degli algoritmi*, in *Media Laws – Riv. dir. media*, n. 1/2020, 18 ff.; D.U. GALETTA, *Algoritmi, procedimento amministrativo e garanzie: brevi riflessioni, anche alla luce degli ultimi arresti giurisprudenziali in materia*, in *Riv. it. dir. pubbl. comunit.*, 3/2020, 501 ff.; E. CARLONI, *Algoritmi su carta. Politiche di digitalizzazione e trasformazione digitale delle amministrazioni*, in *Dir. pubbl.*, 2/2019, 363 ff.;

[34] See J. CHEVALLIER, *Vers l'État-plateforme ?*, in *Revue française d'administration publique*, vol. 167, no. 3, 2018, 627-637.

[35] B. LEPRI et al., *Fair, Transparent, and Accountable Algorithmic Decision-Making Processes?*, in *Philosophy and Technology*, vol. 31, 2018, 611-612; I. ALBERTI, *Artificial intelligence in the public sector: opportunities and challenges*, in *Eurojus*, Special Issue, vol.3, 2019, 149-163; T. M. VOGL et al., *Smart Technology and the Emergence of Algorithmic Bureaucracy: Artificial Intelligence in UK Local Authorities*, in *Public Administration review*, vol. 80, issue 6, November/December 2020, 946-961.

[36] S. KIM et al., *Platform Government in the Era of Smart Technology*, in *Public Administration Review*, 2021, 1-7. See also I. MARTIN DELGADO, *Una panorámica general del impacto de la nueva Ley de Procedimiento Administrativo Común en las relaciones de los ciudadanos con la Administración Pública*, in Id. (ed.), *El Procedimiento administrativo y el régimen jurídico de la administración pública desde la perspectiva de la innovación tecnológica*, Innap Investiga, 2017, 159 ff. (173-193); G. CARULLO, *Decisione amministrativa e Intelligenza Artificiale*, in *Diritto dell'informazione e dell'informatica*, issue 3, 2021, p. 431-461; G. PINOTTI, *Amministrazione digitale algoritmica e garanzie procedimentali*, in *Labour & Law Issues*, 7/2021, 77-.95.

3. DIGITAL E-GOVERNMENT PLATFORMS

Digital E-Government structures have been developed to provide public information dissemination, accept electronic document submissions, manage them via e-protocol and support the processing phases with appropriate electronic structure characterized by easy communication among the organization's departments.[37] This includes tools serving communicational and informative governmental functions through a user-friendly, interoperable and distributed web-based architecture.[38] As mentioned before, public services need to not only be delivered through E-Government platforms, but also to be coproduced with the engagement of social players (citizens and other main stakeholders). In this regard such platforms act as digital commons, where the society and public agents interact and collaborate.[39] Moreover, E-Government platforms constitute an extensive area of knowledge, principles, and policies wherein services are designed from the perspective of the end-user.[40] This implies considering the requirements, priorities, and preferences of each type of user.

[37] A. DRIGAS, L. KOUKIANAKIS, *Government Online: An E-Government Platform to Improve Public Administration Operations and Services Delivery to the Citizen*, in *Visioning and Engineering the Knowledge Society. A Web Science Perspective. WSKS 2009. Lecture Notes in Computer Science* (M.D. LYTRAS et al. eds.), Springer, Berlin 2009, 530 ff.

[38] See L. HASSAN et al., *Gameful civic engagement: A review of literature on gamification of e-participation*, in *Government Inf. Q.*, vol. 37, no. 3, 2020, 1 et seq.; A. KALIONTZOGLOU, *A secure e-Government platform architecture for small to medium sized public organizations*, in *Electronic Commerce Research and Applications*, vol. 4, issue 2, 2005, 174-186; D. ROZHKOVA, N. ROZHKOVA, U. BLINOVA, *Development of the e-Government in the Context of the 2020 Pandemics*, in *Advances in Digital Science. ICADS 2021. Advances in Intelligent Systems and Computing* (T. ANTIPOVA, et al. eds.), vol. 1352, Springer, Cham, 465-476.

[39] M.J. RIBEIRO ROTTA et al., *Digital Commons and Citizen Coproduction in Smart Cities: Assessment of Brazilian Municipal E-Government Platforms*, in *Energies* 2019, vol.12, no.14, 2813.

[40] See P.G. NIXON et al. (eds.), *Understanding E-Government in Europe: Issues and challenges*, Routledge, London, New York, 2010; K MOSSBERGER, C. TOLBERT, *The effects of E-Government on trust and confidence in government*, in *Pub. Adm. Rev*., 2003, 66 ff.; L. AL-HAKIMCHE, *Global E-Government: Theory, Applications and Benchmarking*, *Hershey*, 2007.

For this reason, the spreading out of digital E-Government platforms includes the restructuring and reengineering of organizations and their services through user-centric exploitation of ICTs and Internet of Things.[41] On the contrary, platforms that only broker different groups of users are not capable of achieving co-participated governance and develop Internet-based services to ensure that citizens have access to essential public data. Research findings demonstrate that a platform that is open, flexible, transparent and accessible attracts participation.[42] E-Government platforms are thus required to encompass social elements (participation of stakeholders in the development of services and public policies that generate value to society) and technical elements (existence of an infrastructure information and communication technology with open, evolving, and adaptable standards architecture).[43]

Another main challenge of evolving E-Government platforms regards the accomplishment of full ICT-integration with high security standards within the several public administration processes.[44] To that purpose, an indispensable prerequisite is the development

[41] The OECD defines digital government as "the use of digital technologies, as an integrated part of governments' modernisation strategies, to create public value" and that it "relies on a digital government ecosystem comprised of government actors, non-governmental organisations, businesses, citizens' associations, and individuals which supports the production of and access to data, services and content through interactions with the government. The OECD's definition of e-government is similar: "the use by the governments of information and communication technologies (ICTs), and particularly the Internet, as a tool to achieve better government." OECD (2014), *Recommendation of the Council on Digital Government Strategies*, online: http://www.oecd.org/gov/digital-government/Recommendation-digital-government-strategies.pdf, accessed 19 November 2021; J. ORTIZ-BEJAR, *Design and Implementation of Digital Platform for e-Government*, in *2021 IEEE URUCON*, 2021, 547-551; A. DRIGAS, L. KOUKIANAKIS, *Government Online: An E-Government Platform to Improve Public Administration Operations and Services Delivery to the Citizen*, in *Proceedings of the WSKS 2009*, Chania, Crete, Greece, 2009, 523-532.

[42] S. REPONEN, *Government-as-a-platform: enabling participation in a government service innovation ecosystem*, cit., 32 ff.

[43] M. DE REUVER et al., *The digital platform: A research agenda*, in *J. Inf. Technol.*, 2017, issue 33, 124-135.

[44] On this topic see L. SIDERIS et al. (eds.), *E-Democracy, Security, Privacy and Trust in Digital World*, Springer International Publishing, Switzerland, 2014; K. ANDREASSON (ed.), *Cybersecurity. Public Sector Threats and Responses*, CRC Press, Broken Sound Parkway, 2012; I. HOFFMAN, K. B. CSEH, *E-administration, cybersecurity*

of an electronic infrastructure, which support e-protocol, e-applications/e-petitions and internal organizational function of the public organization.[45] E-Government systems influence almost all aspects of the life of a society, therefore they are the largest software systems ever used.[46] This shows that the escalation of the E-Government services begins with easy access to governmental information and passes through the e-transactions between citizens and the public organization reaching the electronic (direct) delivery of the requested document.[47] This is also related with the characteristics of E-Government data, which are often sensitive (personal, secret, business, etc.) and scattered over various components. Whenever the needed data should not be directly accessible for the querying people, the solution can be based on service-oriented architecture. To do that, the data can be used by applications producing the information, provided that the application's outputs (*i.e.,* the information) is controlled by a trusted body.[48]

In city administration, government and society partnership is sought through the configuration of an ecosystem that combines technological infrastructure made available by the platform owner (government) with a wide range of external participants (citizens and enterprises, society), who will have the opportunity to participate and complement the platform with innovative services and applications.[49] Governance and institutions play a

and municipalities – the challenges of cybersecurity issues for the municipalities, in *Cybersecurity and Law*, vol. 2, 2020.

[45] A. DRIGAS, L. KOUKIANAKIS, *Government Online*, cit., 532.

[46] J. KRAL, *e-Government: Challenges and Lost Opportunities*, in *Visioning and Engineering the Knowledge Society. A Web Science Perspective. WSKS 2009. Lecture Notes in Computer Science* (M.D. LYTRAS et al. eds), Springer, Berlin, 2009, 484.

[47] A. DRIGAS, L. KOUKIANAKIS, *Government Online: An E-Government Platform to Improve Public Administration Operations and Services Delivery to the Citizen*, ibid., 523.

[48] See J. KRAL, *e-Government: Challenges and Lost Opportunities*, cit., 486 seq.

[49] P. REPETTE et al., *The Evolution of City-as-a-Platform*, cit., 44.

crucial role for the structuring of platform ecosystems[50] (which can be declined as private platform ecosystems, government platform ecosystems and decentralized platform ecosystems)[51].

Unlike the private sector, the motivating reasons for the adoption of platforms by the government focus on how to serve citizens efficiently in the era of rapid technological, social, and economical changes.[52] It is a matter of articulating new competences in order to guarantee the definition of public policies meeting citizen's needs.[53] All these considerations stress out how digital E-Government platforms within platform-based governance models can have a disruptive impact on local governance: they foster fluid and synergistic interaction among public administrations, institutions and citizen by means of four basic city assets, *i.e.* people, data, infrastructure and technology.[54] This represents an important step toward innovative smart governance implementation, wherein digital platforms represent an essential tool for enabling open and participatory models.

[50] Different kinds of e-governmental services have taken into use in several countries all over the world. The transition is often driven by the seen benefits in, e.g., efficiency, money savings as well as empowerment of citizens. Nonetheless, the current models often fail to take a citizen into account enough. Therefore, it is essential to approach this topic by using an ecosystem viewpoint to define and explain this phenomenon and presents the concept of `e-government ecosystem', which finds its roots on basis of a philosophical foundation on citizenship. See further M. M. RANTANEN, J. KOSKINEN, S. HYRYNSALMI, *E-Government Ecosystem: A new view to explain complex phenomenon,* in *42nd International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO),* IEEE, 2019, 1408-1413.

[51] See further M. KITSING., J. VALLISTU, *Future of Governance for Digital Platform Ecosystems,* in *Proceedings of Fifth International Congress on Information and Communication Technology. Advances in Intelligent Systems and Computing,* (X.S. YANG et al. eds), Springer, Singapore, 2021, 334-341.

[52] P. REPETTE et al., *The Evolution of City-as-a-Platform,* cit., 45.

[53] *Ibid.*

[54] D. BOLLIER, *The City as Platform,* cit., 45 ff.

4. THE GOVERNMENT-AS-A-PLATFORM (GAAP) APPROACH

A city can be defined "smart" when it "invests in its human and social capital in conjunction with the communication and information infrastructure to fuel sustainable economic growth and improve the population's quality of life".[55] This means that technology – despite being increasingly disseminated and accessible to the population – does not replace human responsibility in the governance process, but shall rather represent an integrated means to solve complex problems by providing greater interactivity, quality, and efficiency of public administrations.[56] To that extent, institutional openness can be regarded as the use of purposive inflows and outflows of knowledge, data and information to foster innovation.[57] Open innovation constitutes a fundamental paradigm to reach digital public administrations and enable smart governance models where governments take advantage of the experience

[55] A. CARAGLIU, C. DEL BO et al., *Smart cities in Europe,* in *Proceedings of the 3rd Central European Conference in Regional Science*, Kosice, Slovakia, 7–9 October 2009, 50. As the authors stress out, the main characteristics of smart cities are: (a) Infrastructure network, which allows good connectivity; (b) Strategic vision, to develop the city's competitiveness through new technologies and the involvement of multiple actors, and; (c) Adoption of a sustainable and inclusive urban development approach that emphasizes social capital in urban development. See also V. FERNANDEZ-ANEZ, *Stakeholders Approach to Smart Cities: A Survey on Smart City Definitions,* in *Smart Cities. Lecture Notes in Computer Science,* (E. ALBA et al. eds) 2016, Springer, Cham, 157-167.

[56] P. REPETTE et al., *The Evolution of City-as-a-Platform,* cit., 39; C. I. VELASCO RICO, *Smart Cities for all: Usability and Disability Bias,* in *European review of Digital Administration and Law,* vol. 2, issue 1, 2021, 157 et seq; D.U. GALETTA, *Public Administration in the Era of Database and Information Exchange Networks: Empowering Administrative Power or Just Better Serving the Citizens?,* in *European Public Law,* vol. 25, issue 2, 2019, 171 et seq.

[57] H.W. CHESBROUGH et al., *Open Innovation: Researching a New Paradigm*. Oxford, Oxford University Press, 2006, *passim;* L. SARTORI, *Open Government; What Else?,* in *Istituzioni del federalismo*, issue 3-4, 2013, 753 ff.; J. VON LUCKE, K. GROSSE, *Open Government Collaboration. Opportunities and Challenges of Open Collaborating With and Within Government,* in *Open Government. Opportunities and Challenges for Public Governance*, (M. GASCÒ-HERNANDEZ ed.), New York, 2014, 189 ff.

of the citizens to develop "smart" digital services.[58] Nonetheless, digital technologies require consensual, transparent, effective and inclusive governance to promote open spaces for collaboration.[59] In the scope of governance, digital platforms enhance local government innovation by means of outside-in, inside-out and coupled streams of data and information that open up the innovation process.[60] That's why the concept of City-as-a-Platform (CaaP)[61] is spreading up as technological and political infrastructure that allows local society to play a direct role in the government of the Smart Cities.

Digital platforms enable the creation of a network of services (ecosystems) for local governments. Such ecosystems are built upon data and services in the frame of platforms that process big data with distributed autonomic and intelligent systems. The existence of different ecosystems is unavoidable because the digital architecture of informatized local administrations includes different domains such as healthcare, transportation, education etc. Each ecosystem has different characteristics and requires different boundary resources, which evolve as result of the activity of orchestration of the data production and are used to address and constrain the generativity of ecosystems.[62] Within this context, the concept of

[58] N. KOMNINOS, *Intelligent cities: Towards interactive and global innovation environments,* in *Int. J. Innov. Reg. Dev*., 2009, issue 1, 337-355; K.A. PASKALEVA, *The smart city: A nexus for open innovation?*, in *Intell. Build. Int*., 2011, issue 3, 153-171; S. SECINARO et al., *Does Citizen Involvement Feed on Digital Platforms?*, cit.,1-19.

[59] A.J MEIJER, M.P. BOLÍVAR, *Governing the smart city: A review of the literature on smart urban governance*, in *Int. Rev. Adm. Sci*., 2016, issue 82, 392-408. For a critical overview on the role of openness and transparency in e-Government Strategies see F. BANNISTER, R. CONNOLLY, *The Trouble with Transparency: A Critical Review of Openness in e-Government,* in *Policy and Internet*, 3/2011, 1 ff.

[60] O. GASSMAN et al., *The future of open innovation*, in *R&D Management*, vol. 40, issue3, 2010, 213-22.

[61] See D. BOLLIER, *The City as Platform*, cit.,48.

[62] A. GHAZAWNEH, O. HENFRIDSSON, *Balancing platform control and external contribution in third-party development: The boundary resources model*, in *Information Systems Journal*, 2012, vol. 23, no. 2, 174.

Government-as-a-Platform (GaaP)[63] envisages a new coordination structure among all administrative levels from closed relationships into open, flat, and unstructured relationship by means of shared software and data that open the service production processes to actors who traditionally play an external role to public administration.[64] Such model relies on a new way of building digital public services using a collaborative development model by a community of partners, providers and citizens to share and enhance digital public processes and capabilities, or to extend them for the benefit of society. As a result, the GaaP can be defined as a government service innovation ecosystem, which empowers a revolutionary solution for improving public administrations' structures and processes[65].Within this model, local government becomes a convener and an enabler[66]: it acts as an intermediary facilitating collaboration. Open platforms play therefore a primary role for the implementation of GaaP solutions at local level.[67] Important prerogatives concern, on the one hand, the autonomy by which participants can produce new content without additional help from the platform's original creators; on the other hand, the participatory design of platforms' infrastructure with clear rules and interoperable systems architecture. The EULF Blueprint Recommendation on

[63] In its seminal work *Government as a platform*, O'Reilly outlines the key factors that make the platform organization in the public sector more efficient than other organizational configurations. See T. O'REILLY, *Government as a platform*, in *Innovations: Technology, Governance, Globalization*, 2011, vol. 6, no. 1, 13-40. See also D. LINDERS, *From E-government to we-government: Defining a typology for citizen coproduction in the age of social media*, in *Government Information Quarterly*, 2012, vol. 29, no.4, 446-454.

[64] A. CORDELLA, A. PALETTI, *Government as a platform, orchestration, and public value creation: The Italian case*, in *Government Information Quarterly*, vol. 36, Issue 4, 2019, 101 f.

[65] S. REPONEN, *Government-as-a-platform: enabling participation in a government service innovation ecosystem*, Johtamisen laitos, 2017, 61 ff.

[66] T. O'REILLY, *Government as a Platform*, cit., 14.

[67] See M. ALHAWAWSHA, T. PANCHENKO, *Open Data Platform Architecture and Its Advantages for an Open E-Government*, in *Advances in Computer Science for Engineering and Education III. Advances in Intelligent Systems and Computing* (Z. HU et al. eds.), Springer, Cham, 2021, 631-639.

Standardisation and Reuse[68] provides that public administrations should consider adopting GaaP approaches to share components, service designs, platforms, data and hosting across public authorities, enabling data and services to be reused as effectively and widely as possible. With this regard, standardization, modularity, and component reuse constitute crucial features that facilitate new applications and allow developers to add value to the governmental platform's ecosystems. Nevertheless, the real benefits will only occur if local government move from the compartmental logic to horizontal structures toward central platforms that centralize common data in a strategic, homogeneous, and interoperable way, according to the GaaP model.

4.1. The implementation of GaaP in Germany

The digital transformation of the German public sector is embedded in a large-scale reform focused on digitalization and de-bureaucratization of public services, which represents an important step towards making local service delivery more citizen-centered and user-oriented.[69] The GaaP implementation is currently divided into two large-scale projects, *i.e.*, the digitalization programs[70] and the *Portalverbund* (National portal network)[71]. The

[68] Recommendation 10: *Adopt a common architecture to develop digital government solutions, facilitating the integration of geospatial requirements*, in R. BOGUSLAWSKI et al., *European Union Location Framework Blueprint, JRC Technical Report*, European Commission, 2020, 54-57. Available online: https://publications.jrc.ec.europa.eu/repository/bitstream/JRC117551/jrc117551_eulf_blueprint_v4.0.pdf, accessed 19 November 2021.

[69] See S. KUHLMANN et al., *The Digitalisation of Local Public Services. Evidence from the German Case*, in *The Future of Local Self-Government* (T. BERGSTRÖM et al. eds), Palgrave Macmillan, Cham, 2021, 101-113.

[70] Precisely the *Digitalisierungsprogramm Bund* and the *Digitalisierungsprogramm Föderal.*

[71] Online: https://www.bmi.bund.de/DE/themen/moderneverwaltung/verwaltungsmodernisierung/portalverbund/portalverbund-node.html, accessed 19 November 2021.

German Online Access Act (*Onlinezugangsgesetz*-OZG)[72] adopted in 2017 thus foresees that Federal government, states, and municipalities shall deliver 575 public services online through the National portal network by the end of 2022.[73] Therefore, the joint digital portal-structure represent the heart of GaaP implementation in Germany and takes the form of the *Portalverbund*, which provides the technical linkages to the sixteen *Länder* administrative portals and their municipalities, and ensures interoperability between all administrative levels. It creates a network of portals serving as an informational signpost directing citizens to whichever authority carries out the services, regardless of which landing page they access through. The sharing of data in a decentralized manner is ensured by requiring all administrative portals to provide similar search and pay components as well as user accounts and mailing function.[74]

This has been regarded as an ambitious attempt to promote the digital transformation of the multi-level German administration while harmonizing and integrating a highly fragmented digital landscape.[75] Nevertheless, Germany has been ranked in the low- to mid-

[72] *Gesetz zur Verbesserung des Onlinezugangs zu Verwaltungsleistungen (Onlinezugangsgesetz - OZG)* of 14th August 2017 (BGBl. I S. 3122, 3138), online: http://www.gesetze-im-internet.de/ozg/BJNR313800017.html, accessed 19 November 2021.

[73] In the OZG Implementation Catalogue, the 575 services that are to be provided online are broken down into 14 categories, according to the user's perspective. The Federation is responsible for putting a total of 115 into digital form while the different federal states and local governments' responsibility concerns 460 services. Cf. S. HALSBENNING, *Digitalisierung öffentlicher Dienstleistungen*, in *HMD Praxis der Wirtschaftsinformatik*, vol. 58, 2021, 103-1053.

[74] For an in-depth analysis on this topic see T. SIEGEL, *Auf dem Weg zum Portalverbund - Das neue Onlinezugangsgesetz (OZG)*, in *Die Öffentliche Verwaltung*, 2018, 185-192; C. K. PETERSEN, *Die Kommunen und der Portalverbund*, in *Deutsches Verwaltungsblatt (DVBl)*, 2018, 1534 ff.

[75] I. MERGEL, *Digitale Transformation als Reformvorhaben der deutschen öffentlichen Verwaltung*, in *Der moderne Staat – Zeitschrift für Public Policy, Recht und Management* 2019, 12/1, 162-171,

field of digital government rankings[76] and public's use of existing digital services has been steadily declining during the past few years even though large-scale investments in IT spending have been made.[77] This all-encompassing reform represents a holistic approach to foster the implementation of digital services and the adoption of open-source software to guarantee interoperability. Furthermore, because of the German federal structure and its so-called "three columns system" comprising the General Administrative Procedures Act[78], tax procedure law and social law, several administrative procedures cannot be uniformly digitalized.[79] This particularly affects local administrations[80], as they have the most points of contact with citizens, but have at the same time a very heterogeneous level of digitalization.[81]

To unlock the full potential of ICT-related public sector innovation and digital transformation, governments must embrace collaborative working structures and network-based approaches to governance.[82] For this reason, a crucial part of the policy design related to the German Online Access Act has been put into a novel arrangement in the German

[76] See DESI (2019). *The Digital Economy and Society Index (DESI) Ranking*. Retrieved November 2, 2019, online: https://ec.europa.eu/digital-single-market/desi, accessed 19 November 2021.

[77] See I. MERGEL, *Digital Transformation of the German State*, in *Public Administration in Germany. Governance and Public Management* (S. KUHLMANN et al. eds.) Cham, 2021, 331-355.

[78] *Verwaltungsverfahrensgesetz* (VwVfG) of 25.5.1976, BGBl., I, 1976, 102.

[79] C. FRAENKEL-HAEBERLE, *Fully Digitalized Administrative Procedures in the German Legal System*, in *European Review of Digital Administration & Law – Erdal* vol. 1, issue 1-2, 2020, 105-111.

[80] For an in-depth analysis of the complexity in integrating the German municipalities into the portal network see C.K. PETERSEN, *Die Kommunen und der Portalverbund,* in *Deutsches Verwaltungsblatt*, vol. 133, issue 23, 2018, 1534-1542.

[81] S. HALSBENNING, *Digitalisierung öffentlicher Dienstleistungen*, cit., 1038.

[82] Ibid. On this topic see also C. DJEFFAL *Normative Leitlinien Für Künstliche Intelligenz in Regierung und Verwaltung*, in *(Un)Berechenbar? Algorithmen und Automatisierung in Staat und Gesellschaft, Kompetenzzentrum Öffentliche IT (ÖFIT), Fraunhofer-Institut für Offene Kommunikationssysteme FOKUS,* (R. KAR MOHABBAT et al. eds.), Berlin, 2018, 493 ff.;

administrative system, which led to the creation of digitalization labs for designing digital services by bringing together Federal government, state, and local authorities, end-users and private-sector actors.[83]

4.2. The implementation of GaaP in the U.K.

From the late 1990s onwards, the UK Government invested on the development of common platform components and cross-Government infrastructure aimed at insulating the delivery channels for accessing public services from the complexity of Government's existing back office.[84] Since 2010 the Government Digital Service[85] focused more on open participation and accessibility for citizens to provide them with a single government portal for accessing services and policy guidance *i.e.,* GOV.UK[86]. Once the portal has been implemented, the emphasis has shifted to the creation of common building blocks that departments can reuse to build services such as common payment solution and automated text notifications systems.[87] The importance of open technical standards emerges about the GaaP implementation that could link existing systems to a wide range of access channel technologies. GOV.UK, as well as the German portal network, provides citizens and businesses with a government portal for accessing digital services. Still, while the German

[83] J. FLEISCHER et al., *Policy labs as arenas for boundary spanning: inside the digital transformation in Germany*, in *Public Management Review*, 2021, online: https://doi.org/10.1080/14719037.2021.1893803.

[84] A. BROWN et al., *Appraising the impact and role of platform models and Government as a Platform (GaaP) in UK Government public service reform: Towards a Platform Assessment Framework (PAF)*, in *Government Information Quarterly*, vol. 34, issue 2, 2017, 167-182.

[85] Government Digital Service was created in 2012 by the Cabinet Office to lead digital transformation across government and pioneered the concept of GaaP.

[86] Online: https://www.gov.uk, accessed 19 November 2021.

[87] See SHADBOLT et al. *Linked open government data: lessons from Data.gov.uk.* in *IEEE Intelligent Systems*, 2012, vol. 27, no. 3, 16-24.

platform solution looks more like a network of several data-sources, the UK version can be seen as a single source of data for digital public services.[88] Another important difference lies in the way these platforms use common building blocks and basic services. In the UK, for example, the GOV.UK pay solution can be directly reused in the creation of services, whereas in Germany, the focus is more on sharing reliable data, while the technical functions can still differ across portals at federal, state, and local levels.[89]

To empower the digital transition process, local authorities in UK begun to adopt a variety of "smart" technological changes such as artificial intelligence and predictive analytics to rethink the structure of public administration.[90] Nevertheless, there is an opportunity missed to use GOV.UK as part of a broad participatory process related to GaaP: while some Government processes have been redesigned through the use of technology, many of them still mimic the previous paper processes and failed to take advantage of technology to fundamentally rethink processes around the service outcomes.[91]

4.3. The implementation of GaaP in Estonia

Estonia is considered the first Country to realize GaaP to efficiently manage data-driven administration in the public sector. Its digital transformation process started in 1994

[88] For an in-depth analysis on this topic see A. BROWN, *Appraising the impact and role of platform models and Government as a Platform (GaaP) in UK Government public service reform: Towards a Platform Assessment Framework (PAF),* in *Government Information Quarterly*, 2017, vol. 34, no. 2, 167-182.

[89] See H. MARGETTS, A. NAUMANN, *Government as a Platform: what can Estonia show the world?,* online: https://www.ospi.es/export/sites/ospi/documents/documentos/Government-as-a-platform_Estonia.pdf.

[90] T. M. VOGL et al., *Smart Technology and the Emergence of Algorithmic Bureaucracy: Artificial Intelligence in UK Local Authorities,* in *Public Administration Review*, 2020.

[91] A. BROWN et al., *Appraising the impact and role of platform models and Government as a Platform (GaaP) in UK Government public service reform,* cit., 180.

with the first draft of the 'Principles of Estonian Information Policy'[92] as basis for an action plan for establishing an information society.

The Estonian Government focused on developing three main 'layers' of the platform concept. Those encompass: a system of registries and data exchange that allow departments and agencies to share data (X-Road[93]); a system of digital and mobile identification (eID[94]); and a service layer accessed through various portals (the largest of which is the official state portal, eesti.ee.[95]).[96] The digital services available on these layers are used for interacting and

[92] The publication has been compiled by Estonian Information Centre and PHARE Public Administration Development Program. Online: https://ega.ee/wp-content/uploads/2020/01/Eesti-infopoliitika-p-hialused.pdf, accessed 19 November 2021.

[93] X-Road is a system of registries whereby each has an authorized owner of the data, responsible for its maintenance and security. The system relies on a unique 16-digit personal identifier (similar to the UK National Insurance Number, but with which every citizen is issued at birth) for every person which can be used to retrieve personal data from any registry, as well as a number of other identifiers for businesses, properties, vehicles and so on. The result is like a peer-to-peer network, where any data in flight (that is, in transit) is encrypted. Every X-Road environment is managed by a competent organization (centre) that defines the applied security policy and manages the information of its ecosystem members. Web: https://e-estonia.com/solutions/interoperability-services/x-road/, accessed 19 November 2021.

[94] The electronic ID (eID) infrastructure, based on PKI-based authentication and digital signatures was introduced in 2002 with the addition of a mobile ID in 2007. An electronic identity card is used as a container for the certificates. This secure system of identification and authentication means that every user of Estonian government may identify themselves to the system (through digital signatures), enabling them to access services from both public and private sectors. The eID can be used for various purposes including banking, internal applications of a company or public portals, and for signing encrypted emails. See E-GOVERNANCE ACADEMY, *e-Estonia: eGovernance in Practice*, 2016, 15. Available at: http://ega.ee/wpcontent/uploads/2016/06/e-Estonia-e-Governance-in-Practice.pdf, accessed 19 November 2021.

[95] The service layer, accessed through platform eesti.ee, the official Estonian State eServices portal since 2003, and other service portals. Citizens can access more than 800 services, most of which use X-Road. Any citizen interacting with the service layer can see who has accessed data that relates to them when they log on, as there is an audit trail of all accesses and changes to the data.

[96] H. MARGETTS, A. NAUMANN, *Government as a Platform: what can Estonia show the world*?, cit., 2.

transacting with both public and private sectors.[97] With the introduction of X-Road, most of state services begun to be delivered online, including e-Police, e-Business that links to a data registry of all legal entities registered in Estonia, e-Health, e-School, etc.[98] X-Road constitutes a technical and organizational environment enabling secure data exchange between various information systems, where public and private sector institutions can connect their de-centrally organized information systems with the central component.[99] It can be considered as a federation with the capability to provide secure Internet-based data exchange across different ecosystems. The Government's boost towards digitalization also led to the creation of innovative e-Procurement environment an information portal of public procurement.[100]

After the 2007 cyber-attacks the Government reacted with the ambition of securing the infrastructure platforms through block-chain systems and became one of the leading nations in cyber security.[101] Although when the GaaP concept was first introduced the necessary ICT infrastructures were not sufficiently developed, the recent digital innovations have transformed the previous electronic government – which was system and architecture-

[97] For an interesting analysis on the recent development of Estonian e-government see D. RENDULIĆ et al., *E-government innovation: the case of Estonia and implications for entrepreneurship and public sector in south-east Europe*, in *Contemporary economic and business issues,* (D. BODUL et al. eds.), University of Rijeka, Faculty of Economics and Business, 2021, 125 ff.

[98] See H. SEO et al., *The Priority of Factors of Building Government as a Platform with Analytic Hierarchy Process Analysis*, in *Sustainability*, vol. 12, 2020, 5615.

[99] See further M. A. WIMMER, *Once-Only Principle Good Practices in Europe,* in *The Once-only Principle* (R. KRIMMER et al. eds), cit., 71 f.

[100] See M. A. SIMOVART, M. BORODINA, *A qualitative step from e-communication to e-procurement: the Estonian e-procurement model*, in *Ius Publicum Network review*, vol. 2, 2017, 1 et seq.

[101] R. OTTIS, *Analysis of the 2007 cyber-attacks against Estonia from the information warfare perspective*, in *Proceedings of the 7th European Conference on Information Warfare and Security*, Plymouth, 2008, 163-168

oriented – to a real network of services linked by platforms.[102] Even though GaaP has never been an explicit model in the development of Estonian digital government, the application of interoperable structures based on central control and coordination has revealed the importance of the principles of openness, simplicity, participation, and leading by example.[103]

5. CRITICAL ISSUES ON THE DIGITAL TRANSFORMATION OF LOCAL PUBLIC ADMINISTRATIONS: THE CASE OF ITALY

E-Government platforms in Italy (called "enabling platforms") constitute GaaP solutions that offer transversal and reusable functionalities for local governments by reducing times and costs. There are so-called "process services platforms" that digitally carry out a complete process (for example E-procurement[104]) and so-called "task service platforms", which

[102] H. SEO et al., *The Priority of Factors of Building Government as a Platform with Analytic Hierarchy Process Analysis*, cit., 5615.

[103] H. MARGETTS, A. NAUMANN, *Government as a Platform: what can Estonia show the world*?, cit., 30.

[104] The digitalization of the procurement processes of Assets and services of public administrations (electronic public procurement) is one of the main drivers of the policies of the European Commission; the aim, in the medium term, is to digitize the entire procurement process of public administrations in the two phases of pre- and post-award, ie from the publication of calls for tenders until the payment (end-to-end electronic procurement).The pre-awarding involves the dematerialization and the regulation of public tenders by means of telematic tenders. In implementation of the European directives, the completion of the telematic tenders involves the obligation of electronic communications and specifically the use of: e-notification: electronic publication of calls for tenders; e-access: electronic access to tender documents; e-submission: electronic submission of offers; ESPD: single European tender document; e-Certis: the information system that allows the identification of certificates and certificates most frequently requested in procurement procedures. The project eNEIDE (eNotification and ESPD Integration for Developing E-procurement) aims at building an ICT architecture designed to be modular and compliant with EU regulations and best practices, in order to ensure wide cross-border interoperability. As regards the evolution of Italian contract register National Database of Public Contracts (BDNCP), the integration with the European TED (Tenders Electronic Daily) platform will allow the national infrastructure to complete automatically the ePublication process at the end of the pre-award phase. See further G.M. RACCA, *Le innovazioni necessarie per la trasformazione digitale e sostenibile dei contratti pubblici*, in *Contratti Pubblici e Innovazioni per l'Attuazione della legge delega* (R. CAVALLO PERIN, M. LIPARI, G.M. RACCA eds.), Neaples, Jovene, 2022, 9-32.; R. CAVALLO PERIN, *La*

implement individual functions across the digital administrative procedures (for example user authentication through the Public Digital Identity System – SPID[105]).[106] Eventually, there are "data service platforms", which ensure access to validated data sources that local administrations need for carrying out their institutional functions (such as the Electronic HealthFile - FSE[107]).[108]

As known, cross-functional collaboration works at best when access to a 'single source of truth' is provided.[109] This means that the main obstacle to reach efficient coordination and integration for Italian local administrations doesn't concern primarily skill base or technology, but rather interoperability, accessing and integrating local government's

digitalizzazione e l'analisi dei dati, Ibid., 119-126; V. CERULLI IRELLI, *Le innovazioni normative e i contratti pubblici*, Ibid., 45-63.

[105] SPID is the Public Digital Identity System that guarantees all citizens and businesses a single, secure and protected access to the digital services of the Public Administration.

[106] Art. 64-bis of the Italian Administration Code represents the legal basis of "Telematic Access to Services of Public Administration". SPID is regulated also by D.P.C.M. of October 24th, 2014. See R. TITOMANLIO, *Considerazioni introduttive sul Sistema Pubblico per la Gestione dell'Identità Digitale (SPID)*, in *GiustAmm.it*, vol. 3, 2015.

[107] The FSE is a key element of the Italian digital healthcare strategy, which is aimed at improving healthcare services, limiting waste and inefficiencies, improving the cost-quality ratio of healthcare services and reducing the differences among regions. For a critical analysis of this topic see: L. FERRARO, *Il Regolamento UE 2016/679 tra Fascicolo Sanitario Elettronico e Cartella Clinica Elettronica: il trattamento dei dati di salute e l'autodeterminazione informativa della persona*, in *BioLaw* 4/2021, 91-115; A. PIOGGIA, *La sanità italiana di fronte alla pandemia. Un banco di prova che offre una lezione per il futuro*, in *Diritto pubblico*, 2/2020, 385-403; G. SDANGANELLI, *La gestione del rischio clinico e delle connesse responsabilità per l'effettività del diritto alla salute*, in *federalismi.it.*, 5/2022, 214- 235.

[108] D. PEPE, *Intelligenza artificiale per la PA: i benefici, le sfide e il giusto approccio*, in *Agenda Digitale*, 12 April 2018.

[109] P. UNGUREANU et al., *Multiplex boundary work in innovation projects: the role of collaborative spaces for cross-functional and open innovation*, in *European Journal of Innovation Management*, vol. 24, no. 3, 2021, 984-1010; E. FIDELIS, *Exploring the Impact of Cross-Functional Collaboration on Organizational Mission Alignment* (April 30, 2019), available at SSRN: https://ssrn.com/abstract=3396876 or http://dx.doi.org/10.2139/ssrn.3396876, Accessed 19 November 2021.

data that are trapped in functional silos.[110]Furthermore, to define the technical rules of interoperability it is necessary to predefine exactly what interactions will be allowed between two or more systems, thereby identifying and structuring the related data that will have to be exchanged. The realization of an interoperable system therefore implies a case-by-case assessment and normally involves a far greater degree of complexity than the creation of an isolated system, and this complexity gradually increases with the quantity and variety of information to be exchanged, and the systems to be interconnected.[111]

Cloud Computing is part of the solution: it guarantees reduced costs, instant scalability and agility, but also (and above all) data quality and unity from multiple sources.[112] However, defining and implementing effective interoperability standards for local administrations' data remains a crucial challenge to "break down data silos": to achieve real interoperability, data needs to be approached "outside the silo". Still, many Italian local government organizations are rigid and many of their systems are quite old. As result, governments find particularly complex to make cloud adoption decisions.

IT integration is challenging to analyze due to the dual role of technological issues and organizational factors that makes its adoption complex to manage.[113] This shows how the digital revolution impacts at local administrations' organizational level by paving the way to new models, where digital platforms are directly linked to a network of actors and services

[110] O. ALI, V. OSMANAJ, *The role of government regulations in the adoption of cloud computing: A case study of local government*, in *Computer Law & Security Review*, vol. 36, April 2020, 1 ff.

[111] G. CARULLO, *Government in the Digital Era: Can We Do More with Less?* in *Information and Communication Technologies Challenging Public Law, beyond Data Protection*, cit., 145 et seq.

[112] See *infra*, § 5.2.

[113] O. ALI *et al.*, *Assessment of Complexity in Cloud Computing Adoption: a Case Study of Local Governments in Australia*, in *Inf Syst Front* (2021).

and allow public administrations to perform their institutional functions by means of ICTs-integration in accordance with the GaaP approach.[114]

5.1. The GaaP implementation in Italy

The reforms that the Italian Government has undertaken to develop platform components following the GaaP approach started in 2015 with the Digital Growth Strategy[115]. Over the past years, the Italian Agency for Digitalization (*Agenzia per l'Italia Digitale* - AgID)[116] and the Italian Digital Transformation Team (*Team Per La Transformazione Digitale)*[117] adopted the 2017-2019 three-year Plan for ICTs in Public Administrations[118] and developed numerous actions aimed at fostering the use of digital services through the diffusion of enabling platforms[119]. The Italian Digital Transformation Team embarked on rebooting Italy's digital innovation footprint by understanding the digital transformation as socio-

[114] See M. JANSSEN, E. ESTEVEZ, *Lean government and platform-based governance—Doing more with less* in *Government Information Quarterny*, issue 30, 2013, 1 et seq.

[115] Since the approval by the Council of Ministers of the Digital Growth and Ultra Broadband plans many projects and actions have been carried out, such as the e-invoicing, the creation of an open data portal of the Italian public administration and the National Resident Population Registry (ANPR).

[116] The main purpose of the Agency is to guarantee the achievement of the Italian digital agenda objectives and contribute to the diffusion of information and communication technologies, with the aim of fostering innovation and economic growth. AgID has the task of coordinating public administrations in the implementation of the Three-Year Plan for information technology in Public Administration and supports digital innovation and promotes the dissemination of digital skills, also in collaboration with international, national and local institutions and bodies.

[117] The Italian Team Digital is a temporary body the government constituted in 2016 to boost the development of Italian digital platforms.

[118] Piano Triennale per l'Informatica nella Pubblica Amministrazione 2019-2021, online: https://pianotriennale-ict.italia.it/piano, accessed 19 November 2021.

[119] See eGovernance Academy, *e-Estonia: eGovernance in Practice*, cit., 9.

technical and socio-political solution.[120] One pillar of the current 2020-2022 Plan for ICTs in Public Administration [121] concerns the development of national platforms to provide core digital services (*e.g.*, identification payments to all public agencies at all levels of government procurement and artificial intelligence). Key components of such shared services are catalogues of private and public open data, which facilitates the collaboration among public agencies and the co-production of public services with external actors.[122] Another priority is related to the enhancement of general digital competencies and skills.[123] To that purpose, the European Union is promoting investments in technologies, infrastructures and digital processes in the Member States in order to bridge the deep digital disparity in infrastructures and culture, as shown by Italy's rankings by the Digital Economy and Society Index (DESI). Therefore, part of the National Strategy for Digital Skills[124] is aimed at increasing citizens' digital skills and competencies, by encouraging the use of digital public services to interact with public administrations through the involvement of young volunteers (digital

[120] To that end, it developed the "io italia" app (https://io.italia.it/) that would consolidate several digital services on to a single platform and automatize all front-office-phases. P. DATTA, *Digital Transformation of the Italian Public Administration: A Case Study*, in *Communications of the Association for Information Systems*, issue 46, 2020, 253.

[121] Piano Triennale per l'Informatica nella Pubblica Amministrazione 2019-2021, online: https://www.agid.gov.it/it/agenzia/stampa-e-comunicazione/notizie/2020/08/12/il-piano-triennale-linformatica-nella-pa-2020-2022, accessed 19 November 2021.

[122] S. P. OSBORNE, *From public service-dominant logic to public service logic: are public service organizations capable of co-production and value co-creation?*, in *Public Management Review*, vol. 20, no. 2, 2018, 225-231.

[123] Cf. Piano Triennale per l'Informatica nella Pubblica Amministrazione 2020-2022, online: https://pianotriennale-ict.italia.it/piano, accessed 19 November 2021.

[124] *National Strategy for Digital Skills* approved by Ministerial Decree of the Minister for Technological Innovation and Digitalization, July 21, 2020. The Strategy has been drafted jointly with the help of Ministries, Regions, Provinces, municipalities, universities, research institutes and with the informal exchanges with the European Commission, under the direction of the Technical Steering Committee of "Repubblica Digitale", and the coordination of the Department for Digital Transformation - Presidency of the Council of Ministers on behalf of the Minister for Technological Innovation and Digitization. Available online: https://repubblicadigitale.innovazione.gov.it/assets/docs/national-strategy-for-digital-skills.pdf, accessed 19 November 2021.

facilitators). The process of digital transformation of Italian Public Administrations is now fostered by the National Recovery and Resilience Plan (PNRR)[125], financed with funds from the European Recovery and Resilience Next Generation EU (NGEU)[126], which identifies, among its missions, the digital transition of the Italian public sector.

Focusing on local government's digitalization, local public administration's information systems solutions are often silo-based and barely coordinated, so that the organization tend to be fragmented, reflecting their autonomies.[127] This resulted in duplications of digital infrastructures and interoperability flaws. With this regard, AgiD platforms represent an important response to the fragmentation of the Italian local public administration, and to the inefficiency that the lack of coordination generated across the twenty Italian regions.[128] They were planned to avoid duplication of investments for similar services at the local level and to support the development of ecosystems, which can reduce the complexity of coordination axes.[129]

These platforms became the backbone of the Italian GaaP architecture, and the new 2020-2022 Plan for ICTs in Public Administration envisages the GaaP model of Italian local government as an adaptable "operating system". This relies on physical infrastructures – such

[125] *The Recovery and Resilience Plan: Next Generation Italia*, approved by the Council of Ministers on 12 January 2021, available online: https://www.mef.gov.it/en/focus/documents/PNRR-NEXT-GENERATION-ITALIA_ENG_09022021.pdf, accessed 19 November 2021.

[126] *Regulation (EU) 2020/2094 of 14 December 2020 establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 crisis*, available online: https://eur-lex.europa.eu/eli/reg, accessed 19 November 2021.

[127] Cf. F. DANIELSEN, *Benefits and Challenges of Digitalization: An Expert Study on Norwegian Public Organizations*, in DG.O 2021: *The 22nd Annual International Conference on Digital Government Research, (June* 2021), 317-326.

[128] A. CORDELLA, A. PALETTI, *Government as a platform*, cit., 9.

[129] Ibid., 8.

as data centres, Cloud, and telecommunication infrastructures – and on intangible ones, *i.e.* all the data of public organizations and new platforms – *inter alia,* Public Digital Identity System (SPID[130]); Electronic management of payments to PA (PagoPa[131]); Electronic Identity Card (CIE); Electronic invoicing (FE); The mobile application (APP IO) to access from smartphones the services local and national digital public services, intended to be the tool through which all PAs make their services usable online to enable citizens to make self-certifications, submit applications and declarations, and make payments through PagoPa; National Register of Resident Population (ANPR[132]); Index of Public Administrations (IPA); Transmission of collection and payment orders between public administrations and treasurers (SIOPE+)[133].

5.2. Main hindrances to the implementation of Cloud computing solutions

The digitalization of the Italian public administration and its migration to Cloud solutions constitute some of the main objectives pursued by the National Recovery and Resilience Plan. Specifically, the empowerment of local administration through modern, interoperable, and secure infrastructure represents an essential prerogative to foster

[130] SPID was imposed by law in 2014 in order to provide a single way to identify citizens for digital services and avoid duplication, inefficiencies, and redundancies a multitude of independent and incompatible identification systems had generated.

[131] PagoPA was required by article 5 of the CAD (*Codice dell'Amministrazione Digitale*) and by the law D.L. 179/2012 and it unifies all the digital payments across the entire Italian public administration and eliminates all the digital payment solutions individual national and local agencies had developed. SPID provides a national and cross-departmental identification solution.

[132] *Anagrafe Nazionale Popolazione Residente* - ANPR unifies all the registries single municipalities across the country had developed and autonomously managed.

[133] See Fig. 5. Structure of the Italian operating system, online: http://pianotriennale-ict.readthedocs.io/en/latest/doc/02_modello-strategico-di-evoluzione-dell-ict-della-pa.html, accessed 19 November 2021. See further online: https://www.agid.gov.it/en/platforms, accessed 19 November 2021.

innovation and promote the deployment of digital platforms. In this context, the transition to Cloud computing is one of the most important challenges, as it works as technological substrate that enables the development of new technologies. Considering that Artificial Intelligence, Machine Learning, Big Data Analytics, and the Internet of Things require heavy computational power and storage space, Cloud computing came as a solution to integrate these technologies in local public administrations while improving the reliability and scalability of organizational systems[134]. However, despite being one of the most evolving developments in IT applications, Cloud adoption has not been a smooth ride for Italian local administrations.

Cloud computing is defined as a system of interconnected computers with dynamic provisioning of resources, "so that a consistent service-level agreement can be arranged between the service provider and its consumers".[135] It is a model for enabling network access to a shared pool of configurable computing resources that offers a means for digital government services to be delivered in a more agile, faster, and cheaper manner compared with traditional information technology infrastructure.[136] Nevertheless, local governments show a considerable resistance to Cloud computing. This depends on different reasons, such as the fact that their previous infrastructure investment may not have reached its "end of life" yet, or that staff capabilities may not be ready for a migration into a new system. Moreover, Cloud migration often includes redesigning database systems, instituting technical interoperability policies, developing Cloud governance mechanisms, and adjusting public

[134] See C. MILLARD (ed.), *Cloud Computing Law*, Oxford, 2013.

[135] R. BUYYA et al., *Cloud computing and emerging IT platforms: Vision, hype, and reality for delivering computing as the 5th utility*, in *Future Generation Computer Systems*, 25/6, 2009, 599-616.

[136] D.C. MARINESCU, *Cloud computing: theory and practice*, Morgan Kaufmann, 2022, *passim*.

sector procurement policies.[137] Such transition thus imposes a radical local governance's change, which many local bodies are not capable to concrete yet. Another reason regards the lack of specificity among government regulations and the lack of support to local governments. Indeed, many aspects concerning this topic require closer scrutiny as, for example, privacy issues.[138] Also, at the present time, cybersecurity is not effective enough to ensure trust by organizations.[139] All those aspects therefore need greater analysis and appropriate solutions.

The PNRR provides that the development of a national Cloud storage will take place in parallel and in synergy with the GAIA-X European project.[140] The architecture of Gaia-X is based on the principle of decentralization, since it is the result of a multitude of individual platforms that follow a common standard that creates a networked system that

[137] On this topic see F. GORGERINO, *Legal Basis and Regulatory Applications of the Once-Only Principle: The Italian Case*, in *The Once-only Principle* (R. KRIMMER et al. eds), cit., 104-125 (115 ff.).

[138] T. ABELL et al. (eds.), *Cloud Computing as a Key Enabler for Digital Government across Asia and the Pacific*, cit., 13 ff.

[139] See R. KRIMMER et al., *The Once-Only Principle: a matter of Trust*, in ID. et al. (eds), *The Once-only Principle*, cit., 1-8.

[140] The EU launched Gaia-X whose origin stems from the German Federal Government to create the next generation of data infrastructure for Europe, its companies, and its citizens. This infrastructure needs to meet the highest standards in terms of digital sovereignty and aims to foster innovation. The targeted infrastructure is regarded as the cradle of an ecosystem, where data and services can be made available, collated and shared in a trusted environment. The goal was to establish a more robust framework in 2020 and to launch the very first use cases by 2022. Gaia-X thus aims to create a European standardization forum to define the operating protocols of Cloud services, from the control of processed and stored data on the infrastructure. The project activity is divided into. two areas: i) analysis and requirements development of some use cases (about 40) belonging to 8 different domains (Industry 4.0, Healthcare, Finance, Public Sector, Smart Living, Energy, Mobility, Agriculture); ii) the reference architecture, the basic technical functionality of the data infrastructure and the technical implementation. GAIA-X claims to support the objectives of the European Data Strategy and uses current technologies (cloud, containers, APIs, etc.) and has the participation of seven EU countries and more than 300 organizations, joined by a nonprofit association of companies (French and German for now). Cf. A. BRAUD, G. FROMENTOUX, B. RADIER, O. LE GRAND, *The Road to European Digital Sovereignty with Gaia-X and IDSA*, in *IEEE Network*, vol. 35, no. 2, 2021, 4-5.

links many Cloud services providers together.[141] Launched in July 2019 by the governments of Germany and France, the project aims to create the a federated data infrastructure for Europe based on the principles of security by design and privacy by design, capable of ensuring easy access to providers, nodes and services, through federated data catalogs, interoperability and portability of data and applications. But firstly, according to the Cloud First strategy, the adoption of Cloud services shall be implemented by means of the rationalization of Data Centers of the Central public administration and the reinforcement of the National Strategic Poles for digital infrastructures, which, at the central level, will be responsible for coordinating and managing them.[142] Aside of that, the migration of existing infrastructures and applications to the Cloud model[143] is envisaged and regulated by the AgiD Cloud Enablement Program[144]. It recognizes that the move toward Cloud solutions can be a gradual process and therefore different options are available, including private Cloud, hybrid Cloud, and public Cloud deployments.[145]

[141] See more at https://www.data-infrastructure.eu/GAIAX/Navigation/EN/Home/home.html.

[142] The Public Administration's need for connectivity is expressed through four different lines: 1. the extension and adjustment of the administrations' connection capacity, including using virtual network infrastructures that allow for the development of a centralized routing paradigm and traffic processing; 2. the adjustment of connectivity to allow the offices of the public administrations to access the internet and Cloud services; 3. the adjustment of connectivity to inter-connect the National Strategic Poles (NSPs) and allow them to supply cloud services; 4. the adjustment of connectivity to allow citizens and businesses to use public services. Cf. Strategia Cloud Italia Documento sintetico di indirizzo strategico per l'implementazione e il controllo del Cloud della PA.

[143] AGID, *Il modello Cloud per la PA*, Piano Triennale per l'informatica nella Pubblica Amministrazione 2020-2022, online: https://docs.italia.it/italia/piano-triennale-ict/cloud-docs/it/stabile/index.html, accessed 19 November 2021.

[144] Online: https://docs.italia.it/italia/cloudenablementprogram/html, accessed 19 November 2021.

[145] See further T. ABELL et al. (eds.), *Cloud Computing as a Key Enabler for Digital Government across Asia and the Pacific*, Asian Development Bank Sustainable Development Working Paper No. 77, June 2021, 3 ff.

5.3. SaaS platforms' flaws

Cloud computing activities can be categorized into three types of services: Software-as-a-Service (SaaS), Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS).

In SaaS model, a Cloud provider hosts software applications and provides them on demand to customers (such as Google Apps, Dropbox, BigCommerce, and so on). In this case the user does not need to download any type of file, but the service can be used simply through Internet as end-user application. The applications are accessible from various client devices through either a thin client interface, such as a web browser (e.g., web-based email), or a program interface.[146]

In the IaaS option, third-party providers offer software and hardware tools that are conceived to develop Internet applications (as, for instance, Windows Azure). This Cloud service model supplies processing and other basic computing resources, where the users can install and run different software such as operating systems and other programs.[147] It thus encompasses the hardware infrastructure that underlies every Cloud service as raw computing resource.

Eventually, the PaaS consists of platforms for developing and deploying software applications. It can be seen as a bridge platform between applications (SaaS) and the

[146] I. SON et al., *Assessing a new IT service model, cloud computing*, in *Proceedings of Pacific Asia Conference on Information Systems*, 2011, 1-11.

[147] See O. ALI et al., *Cloud computing technology adoption: Evaluation of key factors in local governments,* in *Information Technology and People* 2020, 1 et seq.

infrastructure part (IaaS), where the service provider focuses on hardware infrastructure, while the user focuses on developing its application.[148]

From April 2019 Italian public administrations can only acquire IaaS, PaaS and SaaS services qualified by AgID and published in the Online Cloud Marketplace[149], where they can compare costs and main characteristics declared by the supplier.[150] To that extend, the Italian Central Purchase Body "Consip Spa"[151] has announced an open call for tenders for the conclusion of a Framework Agreement of 18 months concerning "Cloud services for public administrations".[152] SaaS and the Cloud can be used by local public administrations to digitalize their services and functions with many advantages, but they also have disadvantages.[153] Indeed, trough SaaS platforms, local governments can have many customized applications and data stored in proprietary databases.[154] On the one hand, this enhances differentiation among local administrations, but, on the other hand, it creates many

[148] A.M. MOHAMMED, R.M ZEEBAREE, *Sufficient Comparison Among Cloud Computing Services: IaaS, PaaS, and SaaS: A Review*, in *International Journal of Science and Business, IJSAB International*, vol. 5, no. 2, 2021, 17-30.

[149] Online: https://catalogocloud.agid.gov.it, accessed 19 November 2021.

[150] Circolari AgID 2/2018 e 3/2018.

[151] Website: https://www.consip.it, accessed 19 November 2021.

[152] Cf. *Gara a procedura aperta per la conclusione di un Accordo Quadro avente ad oggetto l'affidamento di Servizi applicativi in ottica cloud e l'affidamento di servizi di PMO per le pubbliche amministrazioni*, Online: https://www.consip.it/bandi-di-gara/gare-e-avvisi/gara-servizi-applicativi-in-ottica-cloud-e-pmo, accessed 19 November 2021.

[153] S. FLOERECKE, F. LEHNER. *Meta-study of success-related factors of SaaS providers based on a cloud computing ecosystem perspective* in *Handbook on Digital Business Ecosystems* (S. BAUMAN ed.), Edward Elgar Publishing, 2022, 327-347.

[154] F. GIACOMINI, C. MUZZI. *Promoting digital innovation in the public sector: managerial and organisational insights from a case study*, in *International Journal of Public Sector Performance Management*, issue 8, vol. 3, 2021, 236-252.

lock-in issues[155]. This is mostly related to the fact that when the public administration is only provided with the "closed" version of the program but doesn't own the source code, therefore local governments will have trouble in switching to a SaaS/Cloud platform without prejudice for the existent dataset.[156] Furthermore, the issue of free software becomes increasingly relevant with regard to the autonomy of the public administrations from the manufacturers and the awareness of how the software works, involving – by consequence – transparency problems.[157]

Another important profile is related to the indication of the rules on the basis of which the software must be programmed.[158] Applied research carried out in Piedmont Region (Italy) highlights that most SaaS qualified platforms are actually not suitable neither in terms of effectiveness nor in terms of best value for money. Most services merely dematerialize the administrative procedures without reaching a high level of digitalization. This is particularly remarkable by Single Point of Access for Enterprises (SUAP) domains.[159] Therefore, more

[155] Cf. B. LUNDELL et al., *Addressing Lock-in Effects in the Public Sector : How Can Organisations Deploy a SaaS SolutionWhile Maintaining Control of Their Digital Assets?,* in *Proceedings of Ongoing Research, Practitioners, Posters, Workshops, and Projects at EGOV-CeDEM-ePart 2020 co-Located with the IFIP WG 8.5 International Conference EGOV-CeDEM-ePart 2020,* Linköping University, Sweden (Online), 31 August-2 September 2020, 289-296; G. CARULLO, *Principio di neutralità tecnologica e progettazione dei sistemi informatici della pubblica amministrazione,* in *Ciberspazio e diritto : rivista internazionale di informatica giuridica*, issue 21, vol.1, 2020, 33-48.

[156] M. CUSUMANO, *Cloud Computing and SaaS as New Computing Platforms,* in *Technology Strategy and Management*, April 2010, vol. 53, no. 4, 29.

[157] A. G. OROFINO, *The Implementation of the Transparency Principle in the Development of Electronic Administration*, in *European Review of Digital Administration & Law - Erdal* vol. 1, issue 1-2, 2020, 123-142 (131-138).

[158] Ibid., 134 ff.

[159] Cf. V. SOTTILI, *I risultati dell'indagine sull'operatività dei SUAP,* at *L'amministrazione Semplice per i Comuni e per le Imprese,* ANCI Piemonte Conference of 23rd November 2019, Turin.

attention shall be paid to the integration of SaaS services, their standards, and their implication on e-government principles.

6. CONCLUSIONS

The global health emergency has led to a renewed centrality of the public sector, which aims at rebuilding relationships based on trust between institutions and citizens.[160] This also stressed out the pivotal role of the digital transformation towards the enforcement of European Open Governments,[161] where public administrations use the opportunities offered by the new digital environment to facilitate their interactions and ensure the right to access documents and proceedings, according to the principle of transparency.[162] On the other hand, the pandemic showed the importance in enhancing collaboration and solidarity for the implementation of innovative citizen-centric public administrations, which must be able to respond to the challenges of a multiform complexity of needs in the cities of tomorrow.[163] None of such challenges can be adequately addressed without a strengthened European

[160] R. KRIMMER et al., *The Once-Only Principle: a matter of Trust,* in ID. et al. (eds), *The Once-only Principle*, cit., 5 et seq.

[161] See B. UBALDI, *Open Government Data: Towards Empirical Analysis of Open Government Data Initiatives,* OECD Working Papers on Public Governance, No. 22, OECD Publishing, Paris, 2013 (18 et seq.).

[162] G.M. RACCA, *La trasparenza e la qualità delle informazioni come forma diffusa di controllo sulle amministrazioni pubbliche*, Report for "Accademia per l'Autonomia", 5 maggio 2015; S. FOÀ, *La trasparenza amministrativa e i suoi limiti*, in *Scritti in onore di Franco Pizzetti* (C. BERTOLINO et al. eds.), Edizioni Scientifiche Italiane, Neaples, 2020, 497-525; F. GORGERINO, *L'accesso come diritto fondamentale e strumento di democrazia: prospettive per la riforma della trasparenza amministrativa*, in *federalismi.it*, 5/2022, 96-127.

[163] P. HALL, *Cities of tomorrow: An intellectual history of urban planning and design in the twentieth century,* Oxford, Blackwell Publishers, 1996; J-B. AUBY, *Droit de la ville: Du fonctionnement juridique des villes au droit à la Ville*, Paris, 2013; R. CAVALLO PERIN, *Beyond the Municipality: The City, its Rights and its Rites*, in *It. Journal of Public Law*, issue 2, 2013, 307 et seq.

integration[164] aimed at consolidating the Digital Single Market for sustainable development[165], where data become a strategic resource for managing future Cities. Within this context, the GaaP approach is based on a digital foundation for governments to share data and services, which has been proposed as innovative model enabling a "ecosystem of participation".[166] It encloses a new way of building digital public services using a collaborative development model for the benefit of the society at various levels (city, regional, national).[167] Such approach applied to the emerging local government's models might play a pivotal role for the effective digitalization of local administrations and impacts on their traditional governance models. However, there remain several key blockers that local governments shall overcome as, for instance, the tackling of the technical, legal, and bureaucratic barriers to sharing data between local administrations' departments[168]. The use of open data and cross-government platforms represents a way to break down the data-silos, but, at the same time, governments need to invest in data security and Cloud solutions.

Eventually, local governments should prevent data duplication and ensure that the solutions are interoperable between departments and Member States' administrations.

[164] R. CAVALLO PERIN, *L'organizzazione delle pubbliche amministrazioni e l'integrazione europea,* in *A 150 anni dall'unificazione amministrativa europea,* (L. FERRARA, D. SORACE eds.), vol. I, Firenze University Press, 2016, 3-36; G. M. RACCA, R. CAVALLO PERIN, *Plurality and diversity of Integration models: the Italian unification of 1865 and the European Union ongoing Integration process,* in *The Changing Administrative Law of an EU member state. The Italian case,* (D. SORACE, L. FERRARA eds.) Cham, Springer, 2021, 5-22.

[165] See E. LATOSZEK, *Fostering sustainable development through the European Digital Single Market*, in *Economics and Business Review*, vol. 7 (21), no. 1, 2021, 68-89.

[166] T. O'REILLY, *Government as a Platform,* cit., 37.

[167] H. MARGETTS, A. Naumann, *Government as a Platform: what can Estonia show the world?*, web: https://www.ospi.es/export/sites/ospi/documents/documentos/Government-as-a-platform_Estonia.pdf. See also E. Latoszek, *Fostering sustainable development through the European Digital Single Market*, cit., 69.

[168]Cf. G. CARULLO, *Government in the Digital Era: Can We Do More with Less?* in *Information and Communication Technologies Challenging Public Law, beyond Data Protection. Atti del 12° congresso annuale della Societas Iuris Public Europaei* (SIPE), cit., 146 ff.

Governments among Europe are evolving towards platform-like Single Point of Contacts, where citizens and businesses can complete most public administration procedures fully online.[169] The adoption of the Single Digital Gateway Regulation creates a horizontal, non-sector specific legal framework for the direct exchange of digital evidence between public administrations in different Member States by creating a shared legal basis and establishing trust.[170] For the full implementation of the Single Digital Gateway, local government shall thence fastener the integration of GaaP approach working firstly on the critical issues concerning the compliance of local administrations' current digital solutions with the once-only principle[171].

Without interoperable data elements that can move smoothly between different systems there's often no efficient way to exchange information and coordinate public administrations' data. To solve this problem, the European ISA² program (Interoperability Solutions for European Public Administrations) promotes and implements interoperability solutions between public administrations in the Union and finances technological infrastructures and opening source data analytics tools that can be used at European, national and regional level.[172] The 2020 Work Plan included 43 actions financed and managed directly

[169] See T. O'REILLY, *Government as a Platform*, cit.

[170] On this topic see H. GRAUX, *The Single Digital Gateway Regulation as an Enabler and Constraint of Once-Only in Europe*, in *The Once-only Principle* (R. KRIMMER et al. eds), 83 ff.; D. U. GALETTA, *La Pubblica Amministrazione nell'era delle ICT: sportello digitale unico e intelligenza artificiale al servizio della trasparenza e dei cittadini?*, in *Ciberspazio e Diritto*, issue 3, 2018, 319-336.

[171] Until now many Member States and associated countries have started to implement the OOP at national level, but the cross-border implementation is still work in progress. For an overview based on the findings of the EU-funded "The Once-Only Principle Project (TOOP)" and mobile Cross-Border Government Services for Europe (mGov4EU) see C. SCHMIDT et al. *"When need becomes necessity" - The Single Digital Gateway Regulation and the Once-Only Principle from a European Point of View*, in *Open Identity Summit 2021*, (H. ROßNAGEL, et al. eds.), cit., 223-228.

[172] See ISA² - Interoperability solutions for public administrations, businesses and citizens, online:https://ec.europa.eu/isa2/home_en, accessed 19 November 2021.

by the European Union concerning, *inter alia*, interoperability tools, open data, geospatial solutions and eProcurement Analytics.[173] Furthermore, the Digital Europe Programme[174] foresees higher investments in the strategic capacities that allow to develop and use digital solutions at scale, and strives for interoperability in key digital infrastructures, such as extensive 5G (and future 6G) networks and deep tech. The aim is to implement a reinforced EU governments interoperability strategy to ensure common standards for the consolidation of borderless data flows and services in the public sector.[175]

The digital transformation is not limited to an organizational moment aimed at better achieving administrative goals through the application of ITCs and simplification actions. If adequately linked with innovation, this process deploys a creative impulse to new, "born-digital" administrative functions and public services.[176] To that extent, the challenge of adapting the purchase of goods, works and services for local administrations to such innovative perspective by integrating the use of ICTs, data analytics and networked organizational structures in public procurement takes on a propulsive role. Whenever municipalities procure goods and services, they carry out a public function of industrial policy, which cannot avoid innovation and digitalization to comply with the Constitutional principle of effectiveness and adequacy of public administrations' activities (art. 118 of the

[173] See AgID, Interoperabilità PA europee: proposta AgID nel piano di lavoro 2020 del programma ISA², online: https://www.agid.gov.it/it/agenzia/stampa-e-comunicazione/notizie/2020/01/29/interoperabilita-pa-europee-proposta-agid-piano-lavoro-2020-del-programma-isa2. Accessed 19 November 2021.

[174] Online: https://digital-strategy.ec.europa.eu/en/activities/digital-programme, accessed 19 November 2021.

[175] Communication from the Commission to the Parliament, the Council, the European Economic and Social Committee of the Regions of 19th February 2020, *Shaping Europe's digital future* – COM (2020)67.

[176] On this topic see S. ROSSA, *The Digitalisation of Public Administration and Born-Digital Functions: a Modern "Janus Bifrons"?,* in *Research Monograph "Smart Governments, Regions and Cities", Proceedings of the International Scientific Conference Economics of Digital Transformation (*EDT) DIGITOMICS 2019, (S. DREZGIC et al. eds.), University of Rijeka Edition, Rijeka, 2020, 207-221.

Italian Constitution).[177] An interesting example of how the digitalization and the implementation of digital platforms can impact the efficiency of local public administrations and its governance models can be identified in the ongoing reform of Italian E-procurement system. On March 9, 2022, the Italian Parliament approved the bill-draft for the adoption of the legislative decree introducing the new discipline of public contracts.[178] The aim is to concrete the implementation of e-procurement native digital platforms that overcome the mere adaptation from analogical to digital tools[179] and acquire information from public administration databases can enable the verification, in real time, of the qualification of economic operators[180], as well as programming, design, selection and monitoring.[181] This is

[177] Cf. G.M. RACCA, S. PONZIO, *La scelta del contraente come funzione pubblica: i modelli organizzativi per l'aggregazione dei contratti pubblici*, in *Diritto Amministrativo*, issue 1, 2019, 33 et seq.

[178] Bill-draft No. 2330-A, *Delega al Governo in materia di contratti pubblici*, March 9, 2022. Online: https://www.senato.it/service/PDF/PDFServer/DF/368148.pdf, accessed 19 November 2021.

[179] See F. FRATTINI, *Introduzione*, in *Contratti Pubblici e Innovazioni per l'Attuazione della legge delega* (R. CAVALLO PERIN, M. LIPARI, G.M. RACCA eds.), cit., 1-6; G.M. RACCA, *The digitization of contractspublic contracts: adequacy of public administrations and qualification of companies*, in *Il diritto dell'amministrazione pubblica digitale* (R.CAVALLO PERIN, D.U. GALETTA eds.), cit., 321-341.

[180] COMMISSION EU, Expert Group on eProcurement (EXEP), *Interoperability in end-to-end eProcurement, Publications Office*, Brussels, 2020. In this perspective, the Italian Interoperable eProcurement - IIeP (action No. 2015-IT-IA-0108), represents an important project funded by the European Commission for the integration of the Italian centralized certification system - SIMOG with e-Certis and the e-Procurement Central Purchasing Bodies under the European standardization program. AgID coordinates a group of Italian public institutions and private partners, ANAC, Consip, Intercent-ER, InVerso which was awarded funding under the CEF Telecom call (CEF-TC-2015-1) for the implementation of the project. The main result expected from the project is the updating of the Italian SIMOG certification system for the exchange of information regarding the admission criteria, in compliance with the European directives on public procurement 2014/25/EU, 2014/24/EU and 2014/23/EU requiring Member States to gradually adopt e-procurement, with the objective of improving the opportunities for economic operators to participate in procurement procedures throughout the internal market. Online: https://www.agid.gov.it/sites/default/files/repository_files/modello_evolutivo_iiep.pdf, accessed the 19 November 2021.

[181] G.M. RACCA, *Le innovazioni necessarie per la trasformazione digitale e sostenibile dei contratti pubblici*, in *Contratti Pubblici e Innovazioni per l'Attuazione della legge delega* (R. CAVALLO PERIN, M. LIPARI, G.M. RACCA eds.), *cit.*, 23.

particularly correlated to the need of adequate digitalization of the whole procurement circle (above all in local public administrations).[182]

Nonetheless, these topics concern not only local public procurement, but more generally all the fields related to local public services and functions, which are characterized by the principles of decentralization and local autonomy that underlie the organization and the functioning of local public administrations. The recognition of local government's right to self-administrate to identify and implement the optimal solutions for solving specific problems on behalf of the local interests (which they represent) is emerging in a new, innovative declination. From this blueprint comes out that the capability to guide local government's autonomy throughout the main challenges of Smart Cities and digital transformation of public administrations implies finding a new balance between subsidiarity and differentiation – on the one hand – and simplification, interoperability, once-only and digital trust – on the other hand.

Abstract. *Smart City-paradigm and the digital transformation of the public sector introduced new challenges for traditional local governance models, which need to understand, assimilate, and spread up innovation. This contribution aims to analyse how the implementation of the Government-as-a-Platform Approach (GaaP) impacts on local governance and innovation by focusing on a compared analysis of the ongoing "platformization" and on a critical perspective of the Italian GaaP implementation strategy.*

[182] G.M. RACCA, *La digitalizzazione necessaria dei contratti pubblici: per un'Amazon pubblica*, in *DPCE online*, 45, n. 4/2021, 4669-4706; P. MCKEEN, *The Pursuit of Streamlined Purchasing: Commercial Items, E-Portals, and Amazon*, in *Joint Public Procurement and Innovation. Lessons Across Borders* (G.M. RACCA, C.R. YUKINS eds.), cit., 373-387; C.R. YUKINS, *United States procurement and the COVID-19 pandemic*, in *Public Procurement Law Review*, n. 4/2020, 220-231; C.R. YUKINS, A. SUNDSTRAND, M. BOWSHER, *Tale of Three Regulatory Regimes - Dynamic, Distracted and acted and Dysfunctional: Sweden, the United Kingdom and the United States*, in *GWU Law School Public Law*, Research Paper no. 2018-08.

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FACIAL RECOGNITION AND PUBLIC SECURITY IN THE CITY OF RIO DE JANEIRO: A CRITICAL ANALYSIS IN THE PERSPECTIVE OF FEDERATIVE COMPETENCES AND FUNDAMENTAL RIGHTS

Eleonora MESQUITA CEIA - Chiara SPADACCINI DE TEFFÉ[1]

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1. INTRODUCTION

Since the first half of the 20th century, Brazil has experienced a rapid and poorly controlled urbanization process, which culminated in the emergence of megacities. They include São Paulo and Rio de Janeiro with more than 12 and 6 million inhabitants respectively[2]. Most Brazilian cities face pressures and demands regarding housing, public health, transport, environmental protection, poverty, and violence. Searching for solutions and answers to these issues, cities engage in projects and initiatives of innovation and mutual cooperation based on the notions of "sustainable cities", "solidarity cities" and "smart cities"[3].

Smart cities are those that implement new technologies to conduct and monitor urban life, with the purpose to solve their major challenges, such as urban violence. In fact, public security is identified as the third main problem of Brazilian cities, after health and education, in line with opinion polls carried out during the 2020 municipal elections[4].

Therefore, new technologies are more and more being used in combating crime by local authorities. One of these technologies is facial recognition, whose use for public security is controversial: due to some technical failures and false positives, it has reinforced discrimination against particular social groups and brought a series of questions concerning

[2] Instituto Brasileiro de Geografia e Estatística, *Cidades e Estados* (2020), https://www.ibge.gov.br/cidades-e-estados.

[3] R. HIRSCHL, *City, State*: *constitutionalism and the megacity*, 2020.

[4] F. VASCONCELLOS, *Em ano de pandemia, saúde bate recorde como principal problema apontado pelos eleitores nas capitais, segundo o Ibope*. G1 (Oct. 9) 2020, https://g1.globo.com/politica/eleicoes/2020/eleicao-em-numeros/noticia/2020/10/09/em-ano-de-pandemia-saude-bate-recorde-como-principal-problema-apontado-pelos-eleitores-nas-capitais-segundo-o-ibope.ghtml.

the protection of fundamental rights. It is also understood by many as an instrument of political and social control.

In this context, different institutions around the world, including some Brazilian organizations, presented in June 2021 an "open letter calling for a global ban on uses of facial recognition and remote biometric recognition technologies that enable mass and discriminatory surveillance"[5]. Up to the present time, in Brazil, the use of these technologies for public security purposes has not been yet regulated by a specific law, which should address their application, as well as the respective data treatment.

According to Brazilian General Data Protection Law – Lei Geral de Proteção de Dados, LGPD, in Portuguese – (Law n. 13,709/2018), the processing of personal data that is done exclusively for purposes of public security, national defense, state security, or activities of investigation and prosecution of criminal offenses should be regulated by specific legislation. In practice, however, the local authorities did not wait for the due regulation. In 2019, at least 37 Brazilian cities[6] were already making use of facial recognition technologies in the fight against urban violence. In addition, there are state and municipal laws in force which regulate facial recognition practices and draft bills on the same subject.

Considering the constitutional autonomy of cities under Brazilian law, the paper aims to analyze the main controversies on facial recognition technologies for public security purposes, namely the potential conflicts of competence between federated entities and the risks of violations of minorities' fundamental rights. To reach its goal and answer its central problems, the paper uses bibliographical and documentary research methods. As a case study, the paper assesses the experience of the city of Rio de Janeiro, where facial recognition has

[5] Accessnow, *Open letter calling for a global ban on biometric recognition technologies that enable mass and discriminatory surveillance*, 2021, https://www.accessnow.org/ban-biometric-surveillance/.

[6] Instituto Igarapé, *Tecnologias policiais no contexto brasileiro*, 2020, https://igarape.org.br/tecnologias-policiais-no-contexto-brasileiro/.

been increasingly implemented since the 2019 Carnival. It is organized as follows: in the next section, the principles, purposes, and risks of the use of facial recognition technology in smart cities will be examined, particularly regarding the provisions of the Brazilian General Data Protection Law. Subsequently, the analysis will turn to the legislative power division system among federative entities in Brazil, on the matter of facial recognition technology for public security purposes, with emphasis placed on the autonomous status of cities under the Brazilian Constitution. After, the recent developments in the application of facial recognition technology for public security purposes in Rio de Janeiro will be discussed.

2. FACIAL RECOGNITION TOOLS IN SMART CITIES: HOW TO PROTECT PERSONAL DATA AND PROMOTE PUBLIC SECURITY?

Technology expands the reach of human capabilities by accurately recording geographic locations, personal preferences, sensitive data, and people with whom we interact. Therefore, it is necessary to define, as well as a specific legal basis for the processing of data, when, where, how and for what purposes personal information may be processed. In addition, good practices, restrictions, and safeguards for the human person in all data-related activity must be established, bearing in mind the strategic, financial, and commercial values they hold. The crossings and inferences obtained from the treatment of personal information have significantly boosted sectors related to the economy, the market, and security (public and private), with an increase, as a result, in surveillance structures and data extraction.

The use of big data and artificial intelligence in the activities of the State is in line with a discourse on expanding the efficiency and digitization of Public Administration. It is understood that large databases accessible to a greater number of institutions allow an increase in the accuracy of diagnoses, planning, and the synergy of activities. The expansion of the State's capacity to handle information increases its power in front of citizens and asserts the asymmetry between the parties. In the field of public security, such tools make more precise and invasive identification, tracking, and surveillance mechanisms used both preventively and for criminal prosecution.

Systems endowed with Artificial Intelligence[7] have applications in various activities aimed at security and defense, for example, in platforms and applications related to smart cities and in facial recognition and intelligent policing structures. Some solutions allow the identification of objects and people in images, as well as audio analysis applications demonstrate the ability to detect, for example, the sounds of gunshots, car crashes, or agglomerations, with automatic alerts being sent to the authorities responsible.

In the current context, it can be seen how difficult it is to leave structures established by major technology agents and by the States, either because of the usefulness and quality of the services offered or because of their essentiality for the exercise of rights and duties as citizens. This can become even more difficult if people start to depend on the networks both to make a large part of their decisions and to use goods and services. The traceability of the person has been increasingly sophisticated, including the sharing of data between agents for control and security purposes in public and private spheres, such as airports, places of major events, and areas identified as demanding greater attention.

This dynamic is analyzed by Shoshana Zuboff[8], who developed the concept of surveillance capitalism: a framework that considers human experience as raw material, free, and available for hidden business practices of extracting, predicting, and selling data. By offering seemingly free services to billions of people, the providers responsible for these services monitor user behavior, obtaining surprising details, inferring, and even shaping behavior. Surveillance capitalists discovered that they could process data not only to know our behavior but also to shape it. This has become an economic imperative. It was no longer enough to automate the flow of information about us; the goal became to automate us. This

[7] Brasil, *Ordinance GM No. 4,617. Establishes the Brazilian Strategy for Artificial Intelligence and its thematic axes*, 2021, https://www.in.gov.br/en/web/dou/-/portaria-gm-n-4.617-de-6-de-abril-de-2021-*-313212172.

[8] S. ZUBOFF, *The Age of Surveillance Capitalism*: *The Fight for a Human Future at the New Frontier of Power*, 2019.

would be another phase in the evolution of capitalism: it would aim at exploiting behavioral predictions secretly derived from the surveillance imposed on users.[9]

In this way, almost every product or service that begins with the word "smart" or "custom", every internet-enabled device and every "digital assistant" represent part of the supply chain of behavioral data that is used to predict our futures in a surveillance economy. While some of this data is applied to service improvement, much of it feeds advanced processes known as machine intelligence and is important for building predictive products that anticipate what you will do now, soon, and later.

These prediction products are traded in a new kind of marketplace that Zuboff calls *behavioral futures markets*.[10] In this scenario, the agents of surveillance capitalism would have enriched immensely from these commercial operations, as many companies would be willing to bet on our future behavior. She claims that knowledge, authority, and power rest with surveillance capital, for which we are only "natural human resources".

Then, what Frank Pasquale called the "one way mirror"[11] was created, in which the personal data of citizens have been processed by governments and tech giants so that such agents know everything about people, while they do nothing or little about the first two. Your predictions are about us, but not for us. All this happens through constant and massive

[9] S. ZUBOFF, *'Surveillance capitalism' has gone rogue. We must curb its excesses*, in *The Washington Post*, Jan. 24, 2019, https://www.washingtonpost.com/opinions/surveillance-capitalism-has-gone-rogue-we-must-curb-its-excesses/2019/01/24/be463f48-1ffa-11e9-9145-3f74070bbdb9_story.html.

[10] S. ZUBOFF, *'The goal is to automate us': welcome to the age of surveillance capitalism*, in *The Guardian*, Jan. 20, 2019, https://www.theguardian.com/technology/2019/jan/20/shoshana-zuboff-age-of-surveillance-capitalism-google-facebook.

[11] "We do not live in a peaceable kingdom of private walled gardens; the contemporary world more closely resembles a one-way mirror. Important corporate actors have unprecedented knowledge of the minutiae of our daily lives, while we know little to nothing about how they use this knowledge to influence the important decisions that we—and they—make." See F. PASQUALE, *The black box society* (2015), at 9.

monitoring and vigilance about each step of our life, which leads to surveillance capitalism, whose main consequence is the consolidation of a surveillance society as well.[12]

In this environment, the Brazilian General Data Protection Law (Law No. 13,709/18 – *Lei Geral de Proteção de Dados*: LGPD) entered into force in the second half of 2020. Then, in February 2022, Constitutional Amendment No. 115 was enacted, which amended the 1988 Federal Constitution to include the protection of personal data among fundamental rights. Therefore, this protection explicitly became an indelible clause, being guaranteed to individuals and groups.

Considering the rules on this subject, the protection of personal data in Brazil is understood as a way of a) containing the harmful effects of surveillance capitalism and the manipulations arising from large platforms; b) removing the risks that certain applications with algorithms can pose to fundamental freedoms; and c) providing assurances to people in the face of opacity and lack of accountability of many political and economic structures.[13]

The LGPD (Brazilian Data Protection Law) brought a wide range of principles for the protection of personal data and mandatory compliance rules for all persons involved in the processing of personal data. It presents a normative structure that imposes that both a natural person and a legal entity of either public or private law conform to its commands.

[12] "The corporate strategists and governmental authorities of the future will deploy their massive resources to keep their one-way mirrors in place; the advantages conferred upon them by Big Data technologies are too great to give up without a fight. But black boxes are a signal that information imbalances have gone too far. We have come to rely on the titans of reputation, search, and finance to help us make sense of the world; it is time for policymakers to help us make sense of the sensemakers." *Id.*, at 17.

[13] "As more and more data flows from your body and brain to the smart machines via the biometric sensors, it will become easy for corporations and government agencies to know you, manipulate you, and make decisions on your behalf. Even more importantly, they could decipher the deep mechanisms of all bodies and brains, and thereby gain the power to engineer life. If we want to prevent a small elite from monopolizing such godlike powers, and if we want to prevent humankind from splitting into biological castes, the key question is: who owns the data? Does the data about my DNA, my brain and my life belong to me, to the government, to a corporation, or to the human collective?" See Y. NOAH HARARI, *21 Lessons for the 21st Century*, E-book, 2018.

Considering the importance of information for power structures and the asymmetric structures often existing between controllers and data subjects, the LGPD seeks to guarantee legal and technical instruments that increase the power and control of the natural person over their data (understood as information relating to an identified or identifiable natural person).

Therefore, there are requirements such as, for example, the documental record of informational flows, contractual amendments that deal with the processing of personal data, updating of privacy policies and terms of use, expansion of the areas of information security and data protection (with the establishment of a data protection officer) and minimization of the risk of unauthorized access to data by third parties or unauthorized persons.

In article 5, item II, the LGPD details which data is considered sensitive, such as those dealing with racial or ethnic origin, religious conviction, political opinion, and membership in a union or organization of a religious, philosophical, or political nature. Data relating to health or sex life and genetic or biometric data are also sensitive. The expanded protection of sensitive data in legal norms represents the realization of the principles of free development of the personality and non-discrimination.[14] It is particularly relevant for guaranteeing the fundamental rights and freedoms of data subjects. This is because, due to the quality and nature of the information sensitive data brings, its treatment or possible leakage may generate significant risks to human beings and may be a source of prejudice and unlawful or abusive discrimination.

Thus, to avoid adverse effects for the data subject, the processing of sensitive data for legitimate purposes must be accompanied by adequate safeguards, which consider the

[14] The principle of non-discrimination – a relevant foundation for the expanded protection of sensitive data – appears in the LGPD twice: first, in item IX of article 6, which defines it as the "impossibility of carrying out the processing for unlawful or abusive discriminatory purposes", and in the second, paragraph 2 of Article 20, which provides for the possibility for the National Data Protection Authority to carry out an audit to verify discriminatory aspects in the automated processing of personal data. See A. FRAZÃO, *Fundamentos da proteção dos dados pessoais. Noções introdutórias para a compreensão da importância da Lei Geral de Proteção de dados*, in Lei geral de proteção de dados pessoais e suas repercussões no direito brasileiro v. 1, Gustavo Tepedino, Ana Frazão & Milena Donato Oliva org., 2019.

risks at stake and the rights to be protected, as specific and more restrictive legal bases for its treatment (such as Article 11 of the LGPD); obligation of professional secrecy; risk analysis; data protection impact assessment [15]; and organizational and technical security measures. Actions aligned with the privacy by design[16] logic — privacy and data protection must be considered from the beginning and throughout the life cycle of the project, system, service, product or process, that is, companies and organizations are encouraged to implement technical and organizational measures, at the earliest stages of the design of the processing operations, in such a way that safeguards privacy and data protection principles right from

[15] The LGPD uses the expression "relatório de impacto à proteção de dados pessoais" (impact report) instead of "impact assessment". However, considering that "Data Protection Impact Assessment" (DPIA) is more common in laws of data protection, we chose to translate the term as "data protection impact assessment". Although in Brazil developing a data protection impact assessment is not a mandatory rule for the processing of sensitive data, in addition to being good practice and instrument of compliance and accountability, it may be required by the National Data Protection Authority (article 38, LGPD). The impact assessment can be defined as documentation from the controller that contains the description concerning the proceedings of the personal data processing that could pose risks to civil liberties and fundamental rights, as well as measures, safeguards, and mechanisms to mitigate said risk. The document must be prepared before the institution starts processing data.

[16] A. CAVOUKIAN, *Operationalizing Privacy by Design: A Guide to Implementing Strong Privacy Practices*, 2012, http://www.ontla.on.ca/library/repository/mon/26012/320221.pdf. A. CAVOUKIAN, *Privacy by Design: The 7 Foundational Principles*, 2010, https://iapp.org/resources/article/privacy-by-design-the-7-foundational-principles/. European Data Protection Board, *Guidelines 4/2019 on Article 25 Data Protection by Design and by Default*, 2020, https://edpb.europa.eu/our-work-tools/our-documents/guidelines/guidelines-42019-article-25-data-protection-design-and_en. In turn, article 46 of LGPD states: "Processing agents shall adopt security, technical and administrative measures able to protect personal data from unauthorized accesses and accidental or unlawful situations of destruction, loss, alteration, communication or any type of improper or unlawful processing. §1 The national authority may provide minimum technical standards to make the provisions of the lead sentence of this article applicable, taking into account the nature of the processed information, the specific characteristics of the processing and the current state of technology, especially in the case of sensitive personal data, as well as the principles provided in the lead sentence of article 6 of this Law. §2 The measures mentioned in the lead sentence of this article shall be complied with as from the conception phase of the product or service until its execution". And article 49 of LGPD declares: "The systems used for processing personal data shall be structured in order to meet the security requirements, standards of good practices and governance, general principles provided in this Law and other regulatory rules". See R. LEMOS *ET AL*, *Brazilian General Data Protection Law* (2020), https://iapp.org/media/pdf/resource_center/Brazilian_General_Data_Protection_Law.pdf.

the start[17] — must always be taken in the development of surveillance and control technologies, including prior impact assessments and technical and organizational accountability measures.

In surveillance technologies, such as facial recognition, there is usually significant processing of biometric data, because they offer resources to identify and authenticate individuals reliably and quickly, based on a set of recognizable and verifiable data, which are unique and specific information about their holders. The body becomes the password, the unique and exclusive means of individualizing the person.

Biometrics is the science of establishing someone's identity by measuring and analyzing their physiological (can be either morphological or biological) or behavioral attributes.[18] In the first case, examples are fingerprints, iris recognition, retinal identification, the face's shape, dental arch, the hand's shape, and vein pattern. DNA, blood, saliva, or urine may be used by medical teams and police forensics. Physiological measures often offer the benefit of remaining more stable throughout an individual's lifetime.

In the second case (behavioral measurements), it is possible to mention the way the person types, how he walks, characteristic gestures, signature dynamics (speed of pen movement, accelerations, pressure, and inclination), the height that the individual usually holds the cell phone, the shape how he moves the computer mouse, the pressure he exerts on the keyboard or screen, and even how he corrects the words. It is understood that the concept of biometric data should be extracted both from studies published by specific groups[19] and

[17] European Commission, *What does data protection 'by design' and 'by default' mean?*, 2021, https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/obligations/what-does-data-protection-design-and-default-mean_en.

[18] See T. GROUP, *What is biometrics? Authentication & identification*, 2020, https://www.thalesgroup.com/en/markets/digital-identity-and-security/government/inspired/biometrics.

[19] European Union, *Article 29 Data Protection Working Party. Working document on biometrics*, 2003, https://ec.europa.eu/justice/article-29/documentation/opinion-recommendation/files/2003/wp80_en.pdf. European Union, *Article 29 Data Protection Working Party. Opinion 02/2012 on facial recognition in online and mobile*

from foreign standards.[20] Based on the General Data Protection Regulation[21], it is possible to understand biometric data as "personal data resulting from specific technical processing relating to the physical, physiological or behavioral characteristics of a natural person, which allow or confirm the unique identification of that natural person, such as facial images or dactyloscopic data".

As technology advances, the use of human characteristics as information will continue to present challenges to notions of privacy and the protection of personal data. The reliability of biometric data and systems has increased. Biometrics is generally considered strong and valuable for authentication systems. However, it is necessary to understand ways to better protect such data and avoid disproportionate processing. In addition to issues related to public security, criminal prosecution, and terrorism prevention, in recent times, there has been a growing debate about the establishment of biometric databases for the identification of citizens in identity validation processes and for granting financial benefits from the government.

Article 4 of the LGPD presents hypotheses in which this Law does not apply directly to the processing of personal data. The provision is particularly relevant for the present study

services (2012), https://ec.europa.eu/justice/article-29/documentation/opinion-recommendation/files/2012/wp192_en.pdf. European Union, *Article 29 Data Protection Working Party. Opinion 3/2012 on developments in biometric technologies* (2012), https://ec.europa.eu/justice/article-29/documentation/opinion-recommendation/files/2012/wp193_en.pdf.

[20] The California Consumer Privacy Act (CCPA) understands biometric information as "(…) an individual's physiological, biological or behavioral characteristics, including an individual's deoxyribonucleic acid (DNA), that can be used, singly or in combination with each other or with other identifying data, to establish individual identity. Biometric information includes, but is not limited to, imagery of the iris, retina, fingerprint, face, hand, palm, vein patterns, and voice recordings, from which an identifier template, such as a faceprint, a minutiae template, or a voiceprint, can be extracted, and keystroke patterns or rhythms, gait patterns or rhythms, and sleep, health, or exercise data that contain identifying information". See TERMSFEED, *Biometrics and the CCPA*, 2021, https://www.termsfeed.com/blog/ccpa-biometrics/.

[21] Eur-Lex, *Regulation (EU) 2016/679 of the European Parliament and of the Council*, 2016, https://eur-lex.europa.eu/legal-content/PT/TXT/?uri=celex%3A32016R0679.

since it exempts from the direct application of the LGPD the data processing done exclusively for purposes of a) public security; b) national defense; c) State security; or d) activities of investigation and prosecution of criminal offenses (article 4, III, of the LGPD). Even if the processed data is sensitive, if the situation is within the scope of article 4, III, as is the application of facial recognition technology for public security purposes, the LGPD will not be applied.

Paragraph 1 of article 4 of the LGPD provides that the processing of personal data established in item III shall be governed by *specific legislation*, which shall provide proportional and strictly necessary measures for fulfilling the public interest, subject to due legal process, the general principles of protection and the rights of the data subjects as provided in this Law. It is understood that such legislation must be of federal scope and present the general provisions on the matter, to directly guide the other entities. In addition, the National Data Protection Authority shall issue technical opinions or recommendations regarding the exceptions provided in item III of the lead sentence of this article and shall request of the responsible parties a data protection impact assessment (§3). This is a case of mandatory reporting, which highlights the protective nature of the rule.

Given the legal provision, a commission of jurists was created by the president of the Chamber at the time to prepare a draft of the specific legislation, which was released in November 2020 and became known as the "Criminal LGPD".[22] The text sought to provide specific and secure parameters for personal data processing operations within the scope of public security and criminal prosecution activities, balancing both the protection of the data subject against abuses and the access of authorities to the full potential of tools and platforms for public security and investigations.

[22] Brasil, *Explanatory Memorandum: initial text to compose the draft bill for Data Protection for public security and criminal prosecution*, 2020, https://static.poder360.com.br/2020/11/DADOS-Anteprojeto-comissao-protecao-dados-seguranca-persecucao-FINAL.pdf.

When published, this specific legislation will have a profound impact on public structures that make use of facial recognition and will be relevant to promoting a homogeneous and federal treatment of the subject. In Brazil, so far, there is significant use of facial recognition by both the public and private sectors, with little regulation and some state[23] and municipal norms[24]. In the selected cases, there is no detailed analysis on the part

[23] Federal District - Law No. 6,712/20 provides for the use of facial recognition technology in public security: "Article 2 For the purposes of this Law, the following are considered: I – Facial Recognition Technology: the technology that analyzes facial characteristics used for the exclusive personal identification of individuals in static images or videos; II - continuous surveillance: the use of FRT to engage in a continuous effort to track the physical movements of an identified individual in one or more public places where these movements occur, for a period of time exceeding 72 hours, either in real time or through the application of this technology to historical records. Article 3 The use of FRT for continuous surveillance of an individual or group of individuals is prohibited, under any circumstances. Article 4 The use of FRT in public security is restricted to public equipment located in public spaces. Single paragraph. In places where images are captured with FRT, visible plaques containing the respective information must be attached." Free translation of the original text in Portuguese.

There are also state laws on the application of facial recognition in football stadiums: a) Law No. 21,737/15 - State of Minas Gerais – "Article 4 The installation of facial recognition systems in football stadiums located in the State is authorized." b) Law No. 8,113/19 - State of Alagoas – "Article 5 The installation of facial recognition systems in stadiums located in the State is authorized." c) Law No. 16,873/19 - provides for the sale and consumption of alcoholic beverages in stadiums and sports arenas in the state of Ceará and defines penalties for non-compliance with the marketing rules. "Article 5 It is forbidden to enter stadiums and sports arenas for people carrying any type of drink. Single paragraph. Stadiums and sports arenas, which will be subject to the Public-Private Partnership or Concession, must have video surveillance equipment with facial recognition associated with the turnstiles, as well as the registration of fans". Free translation of the original text in Portuguese.

[24] Law No. 2,474, of July 3, 2019 - Manaus - provides for the incorporation of the Facial Biometric Identification System, in the inspection of the use of gratuity and half-ticket, in Collective Urban Passenger Transport through the Electronic Ticketing System, in the city of Manaus and other measures. See Prefeitura Manaus, *Prefeitura inicia instalação de câmeras de monitoramento para acelerar respostas à população* (2021), https://www.manaus.am.gov.br/noticia/prefeitura-inicia-instalacao-de-cameras-de-monitoramento-para-acelerar-respostas-a-populacao/.

Law No. 15,405 of April 9, 2019 – Creates and defines the Municipal Video Monitoring Policy of Curitiba and other measures. "Article 1 The Curitiba Municipal Video Monitoring Policy – is created to standardize the monitoring by images of public roads, including public places, areas, environments, vehicles, equipment, and public events in the Municipality." Free translation of the original text in Portuguese. It is observed that, in Curitiba, in an article published in 2020, it was stated that: "Almost 500 new video surveillance cameras will be installed in strategic points of the city by the end of the year. They are high-resolution full HD equipment that includes cameras with facial recognition and with license plate recognition, which are added to the approximately 700 cameras that already exist in streets and tube stations. The project, which marks the launch of the Digital Wall, is a partnership between the city Hall and the Institute of Smart Cities /*Instituto das Cidades Inteligentes* (ICI)". Free translation of the original text in Portuguese. See Prefeitura Curitiba, *Cidade terá câmeras com reconhecimento facial em pontos*

of the legislator about the purpose, proportionality, and the real need for the use of facial recognition and the processing of sensitive data.

The use of facial recognition technologies brings several controversies. Around the world, cities and private companies have been widely debating its application, limits, and eventual ban. Greater technology improvement and the development of specific legislation are also sought. In addition to questions relating to the protection of fundamental freedoms, there is a high concern that facial recognition systems are inaccurate and perpetuate racial discrimination. The relationship developed between facial recognition, public security, and policing creates deep concerns regarding the risks of a broad and general application of such a tool.

Differences in the accuracy rate in the recognition of people of different races (the false positives being more common in the face of black people), genders and ages have already been demonstrated, and the use of this technology may lead to possible scenarios of illicit or abusive discrimination. The bias is especially aggravated in the field of public security, due to historical relations of inequality and discrimination against socially vulnerable populations. Without proper care, algorithms can deepen inequalities and cause coercive measures to be taken wrongly. Given the expansion of this technology and the risks it can generate, it is necessary to promote public, multi-sectorial and informed debate on where, how, and when to apply it.[25]

estratégicos, 2020, https://servidor.curitiba.pr.gov.br/noticias/cidade-tera-cameras-com-reconhecimento-facial-em-pontos-estrategicos/56463.

[25] An interesting example is a test conducted by the US Civil Liberties Association (ACLU). The association conducted a "test with a facial recognition program used by Amazon called 'Rekognition'. Among deputies and senators, the system "identified" 28 representatives as criminals. The tool linked the politicians' images to photos in databases of people arrested. In addition to the error in recognition, the association indicated a discriminatory functioning in the case of black people. About 40% of politicians falsely identified as criminals belonged to this segment, although it represents only 20% of the members of Congress whose photos were submitted to the test". Free translation of the original text in Portuguese. See J. VALENTE, *Erros em sistema de reconhecimento facial geram polêmica nos EUA*. Agência brasil, July 28, 2018,

Undoubtedly, the use of facial recognition tools, in the state of the art in which they are found, is surrounded by controversies for affecting several issues related to fundamental freedoms and equality. However, completely prohibiting its use can undermine collective and public interest issues, such as those concerning the prevention of terrorism and the containment of urban violence. Therefore, measures such as regulatory impact analysis report, data protection impact assessment, prior judicial authorization, restrictions on the imposition of real-time surveillance and constant investment in technology improvement are suggested.

In April 2021, the European Commission unveiled a new proposal for an EU regulatory framework on artificial intelligence, which has been intensely debated by researchers worldwide:

The proposal sets harmonised rules for the development, placement on the market and use of AI systems in the Union following a proportionate risk-based approach. (…) Certain particularly harmful AI practices are prohibited as contravening Union values, while specific restrictions and safeguards are proposed in relation to certain uses of remote biometric identification systems for the purpose of law enforcement. The proposal lays down a solid risk methodology to define "high-risk" AI systems that pose significant risks to the health and safety or fundamental rights of persons. Those AI systems will have to comply with a set of horizontal mandatory requirements for trustworthy AI and follow conformity assessment procedures before those systems can be placed on the Union market. Predictable, proportionate, and clear obligations are also placed on providers and users of those systems to ensure safety and respect of existing legislation protecting fundamental rights throughout the whole AI systems' lifecycle. (…) Technical inaccuracies of AI systems intended for the remote biometric identification of natural persons can lead to biased results and entail discriminatory effects. This is particularly relevant when it comes to age, ethnicity, sex or

https://agenciabrasil.ebc.com.br/internacional/noticia/2018-07/erros-em-sistema-de-reconhecimento-facial-geram-polemica-nos-eua.

disabilities. Therefore, 'real-time' and 'post' remote biometric identification systems should be classified as high-risk. In view of the risks that they pose, both types of remote biometric identification systems should be subject to specific requirements on logging capabilities and human oversight.[26]

Facial recognition technologies (FRTs) are used by private or public actors for verification, identification, and categorization purposes. The proposal introduces rules for *biometric* technologies and differentiates them according to their risk levels and characteristics. According to the text, many FRTs would be considered "high risk" systems that would be prohibited or need to comply with strict requirements (being permitted only for specific exceptions). The use of real-time facial recognition[27] systems in publicly accessible spaces for the purpose of law enforcement would be prohibited unless Member States choose to authorize[28] them for important public security reasons and the appropriate judicial or administrative authorizations are granted.[29] Taking into account the text of the

[26] EUR-Lex, *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 union legislative acts*. *COM/2021/206 final* (2021), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021PC0206.

[27] For the purpose of this Regulation, the following definitions apply: "(36)'remote biometric identification system' means an AI system for the purpose of identifying natural persons at a distance through the comparison of a person's biometric data with the biometric data contained in a reference database, and without prior knowledge of the user of the AI system whether the person will be present and can be identified; (37)''real-time" remote biometric identification system' means a remote biometric identification system whereby the capturing of biometric data, the comparison and the identification all occur without a significant delay. This comprises not only instant identification, but also limited short delays in order to avoid circumvention. (38)''post' remote biometric identification system' means a remote biometric identification system other than a 'real-time' remote biometric identification system;". *Id*., at 42.

[28] "(22) Furthermore, it is appropriate to provide, within the exhaustive framework set by this Regulation that such use in the territory of a Member State in accordance with this Regulation should only be possible where and in as far as the Member State in question has decided to expressly provide for the possibility to authorise such use in its detailed rules of national law. Consequently, Member States remain free under this Regulation not to provide for such a possibility at all or to only provide for such a possibility in respect of some of the objectives capable of justifying authorised use identified in this Regulation." *Id*., at 22-23.

[29] "The use of AI systems for 'real-time' remote biometric identification of natural persons in publicly accessible spaces for the purpose of law enforcement is considered particularly intrusive in the rights and freedoms of the concerned persons, to the extent that it may affect the private life of a large part of the population, evoke a feeling

proposal, Madiega and Mildebrath[30] point out with concern that a range of facial recognition technologies used for purposes other than law enforcement (e.g., border control, market places, public transportation and schools) would be permitted, but subject to a conformity assessment and compliance with some safety requirements, before entering the EU market.

In June 2021 the European data protection board (EDPB) and the European Data Protection Supervisor (EDPS) published the Joint Opinion5/2021 on the proposal for an AI Regulation.[31] The EDPB and EDPS stressed:

Remote biometric identification of individuals in publicly accessible spaces poses a high-risk of intrusion into individuals' private lives, with severe effects on the populations' expectation of being anonymous in public spaces. For these reasons, the EDPB and the EDPS call for a general ban on any use of AI for an automated recognition of human features in publicly accessible spaces - such as of faces but also of gait, fingerprints, DNA, voice, keystrokes and other biometric or behavioural signals - in any context. A ban is equally recommended on AI systems categorizing individuals from biometrics into clusters according to ethnicity, gender, as well as political or sexual orientation, or other grounds for discrimination under Article 21 of the Charter. Furthermore, the EDPB and the EDPS

of constant surveillance and indirectly dissuade the exercise of the freedom of assembly and other fundamental rights. In addition, the immediacy of the impact and the limited opportunities for further checks or corrections in relation to the use of such systems operating in 'real-time' carry heightened risks for the rights and freedoms of the persons that are concerned by law enforcement activities." See EUR-Lex, *supra* note 27.

[30] T. ANDRÉ MADIEGA, H. ALEXANDER MILDEBRATH, *Regulating facial recognition in the EU*, 2021, https://www.europarl.europa.eu/thinktank/en/document/EPRS_IDA(2021)698021.

[31] European Data Protection Board, *EDPB & EDPS call for ban on use of AI for automated recognition of human features in publicly accessible spaces, and some other use of AI that can lead to unfair discrimination*, 2021, https://edpb.europa.eu/news/news/2021/edpb-edps-call-ban-use-ai-automated-recognition-human-features-publicly-accessible_en.

consider that the use of AI to infer emotions of a natural person is highly undesirable and should be prohibited.[32]

At the same time, the Council of Europe released Guidelines on facial recognition, which provide a set of reference measures that governments, facial recognition systems developers, manufacturers, service providers, and user organizations should apply to ensure that this technology does not adversely affect the human dignity.[33]

Later, the European Parliament resolution of 6 October 2021 on artificial intelligence in criminal law and its use by the police and judicial authorities in criminal matters highlighted that:

(...) strongly believes that the deployment of facial recognition systems by law enforcement should be limited to clearly warranted purposes in full respect of the principles of proportionality and necessity and the applicable law; reaffirms that as a minimum, the use of facial recognition technology must comply with the requirements of data minimisation, data accuracy, storage limitation, data security and accountability, as well as being lawful, fair and transparent, and following a specific, explicit and legitimate purpose that is clearly defined in Member State or Union law; is of the opinion verification and authentication systems can only continue to be deployed and used successfully if their adverse effects can be mitigated and the above criteria fulfilled; 26. Calls, furthermore, for the permanent prohibition of the use of automated analysis and/or recognition in publicly accessible spaces of other human features, such as gait, fingerprints, DNA, voice, and other biometric and behavioural signals; 27. Calls, however, for a moratorium on the deployment of facial

[32] European Data Protection Board, *EDPB-EDPS Joint Opinion 5/2021 on the proposal for a Regulation of the European Parliament and of the Council laying down harmonised rules on artificial intelligence (Artificial Intelligence Act)* (2021) at 2-3, https://edpb.europa.eu/system/files/2021-06/edpb-edps_joint_opinion_ai_regulation_en.pdf.

[33] Council of Europe, *Guidelines on facial recognition* (2021), https://edoc.coe.int/en/artificial-intelligence/9753-guidelines-on-facial-recognition.html.

recognition systems for law enforcement purposes that have the function of identification, unless strictly used for the purpose of identification of victims of crime, until the technical standards can be considered fully fundamental rights compliant, results derived are non-biased and non-discriminatory, the legal framework provides strict safeguards against misuse and strict democratic control and oversight, and there is empirical evidence of the necessity and proportionality for the deployment of such technologies; notes that where the above criteria are not fulfilled, the systems should not be used or deployed; 28. Expresses its great concern over the use of private facial recognition databases by law enforcement actors and intelligence services, such as Clearview AI (...).[34]

Outside Europe, we find binding rules applicable to FRTs even in countries that have a high concern about public safety, such as the USA and China. Policy and lawmakers around the world have the opportunity to discuss – in multilateral and bilateral contexts – how to put in place more or less strict controls on the use of these systems. Considering foreign experiences and current debates, Brazil should follow the most advanced AI strategies to develop laws that effectively protect human rights.

It is known that with the expansion of facial recognition for public security purposes, the State will be able to track its citizens, verify which places they frequent, and maintain databases with information on participants in political demonstrations or people with different political opinions. The collection of images of faces may end up being carried out without the effective knowledge of individuals, opening the door for collective, opaque, and non-transparent biometric surveillance. This imposes necessary care with the observance of legal norms and codes of ethics, being relevant also the continuous supervision and accountability by the agents responsible for the technology and its use. In fact, "political

[34] European Parliament, *Artificial Intelligence in criminal law and its use by the police and judicial authorities in criminal matters* (2021), https://www.europarl.europa.eu/doceo/document/TA-9-2021-0405_EN.html.

manifestations, social interaction, basic freedom and the equal treatment of individuals will remain in check if specific parameters for the use of such technology are not drawn up."[35]

3. THE AUTONOMY AND RELEVANCE OF CITIES IN BRAZILIAN FEDERATION: A STUDY OF THE LEGISLATIVE POWERS ON THE TECHNOLOGIES OF FACIAL RECOGNITION APPLIED TO PUBLIC SECURITY

The Brazilian Federation comprises the Union, the states, the municipalities, and the Federal District, all of them endowed with autonomy, as stated in article 18 of the Constitution. It adopts the cooperative model[36] that lay down, together with matters of exclusive and private competences of the Union, areas in which the federative entities act and legislate side by side as follows: the Union enacts general rules, principles, and standards, whereas the subnational units (states, municipalities, and the Federal District) legislate and execute public policies according to the federal guidelines defined by the Union.

Cooperative federalism has a democratic nature. In Brazil, it is to primarily support the equalization of structural inequalities in the Federation. For instance, the Constitution of 1988 provides for mechanisms of cooperation among the federal entities, within the wide range of common administrative powers, which embrace the fundamental objectives of the Republic, such as poverty and discrimination eradication and the promotion of national development.

[35] C. SPADACCINI DE TEFFÉ, ELORA FERNANDES, *Tratamento de dados sensíveis por tecnologias de reconhecimento facial: proteção e limites*, in O direito civil na era da inteligência artific, ial v. 1, Gustavo Tepedino & Rodrigo da Guia Silva org., 2020.

[36] M. PIANCASTELLI, *Federal Republic of Brazil*, in *Distribution of powers and responsibilities in federal countries. A global dialogue on federalism* v. II, Akhtar Majeed *et al* eds., 2006.

This cooperative character of Brazilian federalism does not prevent the arise of disputes or even conflicts between its entities. In fact, in addition to cooperation, they are stimulated to formulate practices and public policies to compete among themselves for citizens, investments, political influence, and better responses to global challenges. The COVID-19 pandemic in Brazil serves to illustrate this argument. Since the beginning of the sanitary crisis, there weren't enough measures to prevent and combat the disease by the federal government. In this context, the Federal Supreme Court recognized the power of states and municipalities to act and adopt legal measures to control and minimize the harmful impact of coronavirus on their territories. As consequence, new crisis management public policies have emerged, as well as competition among the states for a faster and more efficient vaccination of the respective populations[37].

The Federation is a space of coexistence among autonomous spheres of government. It is the Federal Constitution that guarantees the harmonious unity between the federative entities, by introducing effective mechanisms for resolving conflicts and a solid power distribution system. The model of division of competences of any Federation is based on the premise that there is no hierarchy between the federal units. The Brazilian Constitution presents a complex system of power division, which combines the explicit enumeration of administrative, legislative and tax competences to the federative entities and fields of shared competences between them. The allocation of powers among the Union, states, municipalities, and Federal District is grounded in the principle of predominant interest, according to which the federative unit that has the predominant interest in a certain matter, will the competent entity to handle it.

The matters reserved to the Union's private legislative competences in article 22 of the Constitution are extremely broad, as they cover a significant part of subjects related to

[37] E. MESQUITA CEIA, *Subsidiariedade, poder local e crises globais*, in C*adernos adenauer: eleições municipais e os desafions de 2020*, v. XXI 2. ed. (Fundação Konrad Adenauer org., 2020). M. PEREIRA JORGE, *Gincana da vacina*. *Folha de são paulo* (June 15, 2021), www1.folha.uol.com.br/colunas/marilizpereirajorge/2021/06/gincana-da-vacina.shtml.

the Law. The Constitution allows the Union, through federal complementary legislation, to delegate to the states and the Federal District legislative power to regulate specific issues regarding the matters enumerated by article 22. In this respect, the Brazilian Federation is centralized, since there is a larger number of competences conferred on the central than on the subnational entities, "what to a great extent erodes the cooperative nature of the Brazilian federalism"[38]. To the states the Constitution allocates the following powers: the private legislative competence[39]; the concurrent and supplementary competences on the subjects listed in article 24; and the residual competences[40]. To the municipalities are conferred private and supplementary competences on matters of local interest[41] and, to the Federal District, in turn, are reserved the powers attributed to the states and the municipalities by its hybrid nature[42].

The Brazilian Constitution assigns also to the Union legislative powers next to the other federative unities. In the matters that fall within this domain (listed in article 24) the entities have the competence to legislate but under different conditions. In the area of concurrent legislative competence, the states, and the Federal District "shall exercise full legislative competence to provide for their peculiarities, if there is no federal law on general

[38] Free translation of the original text in Portuguese. See V. AFONSO DA SILVA, *Direito Constitucional Brasileiro* 2021, p. 354.

[39] Article 25, paragraph 2, of the Constitution, declares: "The states shall have the power to operate, directly or by means of con- cession, the local services of piped gas, as provided by law; governors are forbidden to issue any provisional decree for its regulation (CA 5, 1995)". See Brazil, *Constitution of the Federative Republic of Brazil of 1988* (2020) at 34, http://www.stf.jus.br/arquivo/cms/legislacaoConstituicao/anexo/brazil_federal_constitution.pdf.

[40] Article 25, paragraph 1, of the Constitution, states: "All powers that this Constitution does not prohibit the states from exercising shall be conferred upon them". *Id.*

[41] Article 30 I and II of the Constitution declares: "The municipalities have the power to: I – legislate upon matters of local interest; II – supplement federal and state legislation where pertinent". *Id.*, at 40.

[42] J. DOLINGER, L. ROBERTO BARROSO, *Federalism and Legal Unification in Brazil*, in *Federalism and legal unification: a comparative empirical investigation of twenty systems*, Daniel Halberstam & Mathias Reimann eds., 2014.

rules"[43]. The later issue of a federal law on general rules suspends the effectiveness of a state or district law to the extent they are contrary to it.[44] In turn, in supplementary legislative competence, the Union sets up general rules, guidelines and principles that orientate and uniform the legal system, whereas the states, the Federal District and the municipalities enact specific rules in order to supplement federal legislation. It is worth underlining that the municipalities have only supplementary competences on matters listed in article 24, pursuant the clause of local interest as foreseen in article 30 I of the Constitution.

Therefore, states and municipalities must have priority in enacting specific rules, to respond to the demands of their population, which vary according to socioeconomic factors, provided that federal legislation is observed. State, district, and municipal rules contrary to federal legislation are unconstitutional and, consequently, must have their effects suspended. Likewise, article 24 of the Constitution constrains the performance of the Union:

If the central authority oversteps the limits of its legislative competence, the resulting law will be unconstitutional and, as a consequence, void. (...) in areas of concurrent jurisdiction, the Union shall only enact general rules. The enactment of specific rules – invading the states' jurisdiction – violates the allocation of legislative jurisdiction set forth in the Constitution.[45]

Given the above considerations, it is important to analyze the fact that cities have been becoming more relevant over the last decades, by emerging as significant actors in decision-making processes on diverse topics. The urbanization process has caused the relocation of political and economic power in favor of local governments responsible for managing these urban areas. Some cities have become a true metropolis, where new identities

[43] Article 24, paragraph 3. See Brasil, *supra* note 40.

[44] Article 24, paragraph 4. *Id*.

[45] Dolinger & Barroso, *supra* note 43, at 157-158.

and centers of power arise[46]. It is in this context that cities can reveal themselves as spaces of democracy, efficiency, and innovation. The central power, increasingly seen as bureaucratic and distant from the citizens, has been losing ground to the local power. The cities start experimenting successfully with welfare, environmental, and minority protection programs and, consequently, play an active role in global governance[47].

However, constitutional law did not follow this trend. Not only in theory but also in constitutional practice there is a "fundamental void"[48] characterized by the lack of studies and debates on the massive process of urbanization and the appearance of the so-called megacities[49]. In general, cities do not have the constitutional status as autonomous federated units. In most Federations, they are mere decentralizations dependent on the states.

Most constitutional orders currently in existence treat cities, including some of the world's most significant urban centers, as "creatures of the state", fully submerged within a Westphalian constitutional framework, and assigned limited administrative local governance authority. Their *constitutional* statuses range anywhere from secondary to nonexistent.[50]

[46] G. DILL, *O município em tempos de globalização*, in Federalismo na alemanha e no brasil. Série debates n. 22, Wilhelm Hofmeister & José Mário Brasiliense Carneiro org., 2001.

[47] Y. BLANK, *Federalism, Subsidiarity, and the role of local governments in an age of global multilevel governance*, Fordham urban law journal, 2010, 37.

[48] Hirschl, *supra* note 4, at 1.

[49] Megacities are cities with 5 million inhabitants or more or cities whose metropolitan zone has at least 10 million people. *Id*., at 6.

[50] *Id*., at 10.

In this perspective, the Brazilian federalism is an exception[51], since it is a case of "*deep federalism*" that takes the role of municipalities seriously[52]. The Brazilian Constitution assigns cities a prominent position compared with other federative constitutions. It provides for the implementation of an urban development policy that prioritizes the social function of cities and the public welfare[53]. Indeed, the recognition of municipal constitutional autonomy took over core relevance in the constituent and redemocratization process of 1988.[54]

Nonetheless, in accordance with the constitutional rules that govern the Brazilian Federation, the municipal autonomy is more limited than the state one. In contrast to the states, the Brazilian municipalities do not have a constitution, but rather are organized by ordinary organic laws. They do not have a strong political representation in federal level as states do. Then, municipalities do not participate in the constitutional reform process nor in the system of abstract constitutional review before the Federal Supreme Court. Furthermore, the exercise of municipal competences is subject to the Federal Constitutional as well as to the state constitution and the Brazilian municipalities are financially dependent on the

[51] Silva, *supra* note 39.

[52] L. KING, *Cities, subsidiarity, and federalism*, in Federalism and subsidiarity, James E. Fleming & Jacob T. Levy eds., 2014.

[53] Article 182 of the Brazilian Constitution: "The urban development policy carried out by the municipal government, according to general guidelines set forth by law, is aimed at ordaining the full development of the social functions of cities and ensuring the wellbeing of its inhabitants." See Brazil, *supra* note 40, at 149. The implementation of article 182 is regulated by the so-called City Statute (Law No. 10,275/2011) which defines binding guidelines to federal, state, and local governments towards the realization of a sustainable and democratic municipal administration with the active participation of civil society.

[54] "As has been the case throughout Brazil's constitutional history, tensions between the different orders of government have persisted, and what occurred after the 1988 constitutional reform has been no exception. These tensions became more evident as the municipalities were granted full autonomy by the new Constitution. The drafters, mainly from opposition parties, emphasized a decentralization process with the major aim of bringing power closer to the people in the ultimate hope of enhancing democratic institutions". See Piancastelli, *supra* note 37, at 75.

resources distributed by the Union and the states[55]. In practice, the funding for urban development projects depends to a large extent on the political alignment between federal, state, and municipal governments[56].

Article 29 of the Brazilian Constitution sets forth the municipal self-government and legislative and administrative prerogatives, including financial management. Cities have the supplementary legislative power under the matters enumerated in article 24, to address local demands and needs through the enactment of specific rules in line with the existing federal and state legislations. Moreover, cities legislate on matters of local interest, for instance, garbage collection and opening hours of commercial businesses and establishments[57]. Some doctrines defend a broad interpretation of the term "local interest" to ensure the effectiveness of constitutional attributions to the municipalities and the constitutional value of decentralization. Otherwise, few competences would remain to the municipalities, given the extensive competences of the Union and the residual powers reserved to the states. Hence, the term "local interest" is not restricted to subjects of exclusive interest of a certain city, without any effect on other federated units, but rather encompasses any subject that proves necessary to establish local policies, even though it indirectly affects other federated units[58].

Within this hermeneutic perspective, the principle of subsidiarity is of fundamental importance. Subsidiarity is a notion present in federation structures that acknowledge the cities a special status[59], such as the Brazilian federalism. The principle of subsidiarity

[55] Dolinger & Barroso, *supra* note 43.

[56] Hirschl, *supra* note 4.

[57] Dolinger & Barroso, *supra* note 43.

[58] R. HERMANY, *(Re)Discutindo as políticas públicas no espaço local: interconexões entre federalismo, subsidiariedade e direito social no Brasil*, in Federalismo e constituição: estudos comparados, Antonio Moreira Maués org., 2012.

[59] Blank, *supra* note 48.

declares that the central government shall exercise its powers only to support the subnational entities, in other words, shall act only if subnational governments are unable to perform on their own the task to be carried out[60]. When applied in the context of allocation of powers between federated entities, the principle of subsidiarity serves to conciliate uniformity and flexibility regarding regional and local realities, "emphasizing a more pluralistic and spatially-consciousness view of public law"[61]. Concerning municipal legislative competence, the notion of subsidiarity gives precedence to the achievement of local interest in accordance with the existing federal and state legislation[62].

At times, difficulties of interpretation arise by defining the competences of each entity. A subject of civil law – which falls under the private legislative power of the Union – can be, at the same time, a matter of local interest of a certain municipality. The Brazilian Federal Supreme Court plays an important role in solving conflicts between the jurisdictions of the federated entities. The Court is criticized by some legal experts for not having developed clear criteria regarding the resolution of conflicts among federative entities[63].

In any case, by analyzing its jurisprudence, one can note that the Court usually rules in favor of the Union on controversies related to matters that fall within the federal private legislative powers[64]. With respect to concurrent and supplementary competences, the Federal Supreme Court "rarely declares a federal law unconstitutional based on the allegation that its

[60] D. HALBERSTAM, *Federal powers and the principle of subsidiarity*, in Global perspectives on constitutional law, Vikram David Amar & Mark V. Tushnet eds., 2009.

[61] Hirschl, *supra* note 4, at 15.

[62] M. MONT'ALVERNE BARRETO LIMA, *Art. 29*, in Comentários à constituição do brasil, J. J. Gomes Canotilho *et al* coords., 2013.

[63] Silva, *supra* note 39.

[64] Dolinger & Barroso, *supra* note 43, at 159.

provisions are not general"[65]. However, in certain cases, the Court applies the principles of subsidiarity and cooperation and thus guarantees the exercise of competences by the municipalities considering their respective realities. The ruling on Direct Action of Unconstitutionality No. 3,921 is a good example.

In this judgment of 2020 the Federal Supreme Court, by the majority of votes, declared Law No. 10,501/1997 of the state of Santa Catarina constitutional with *erga omnes* effects. The law obliges banks and financial institutions located in this state to install security systems, such as guards, security doors and alarms. The rapporteur, Justice Edson Fachin, in his vote, followed by most judges, dismissed the action and declared the state law constitutional based on the legislative power of the states, Federal District and municipalities on the subject of public security.

The Constitution uses the phrase "is duty of the state" to deal with specific themes, namely public security[66], health[67], education[68] and sports[69]. Health, education, and sports are listed as matters which fall under the concurrent and supplementary legislative competences

[65] Free translation of the original text in Portuguese. See Silva, *supra* note 39, at 371.

[66] Article 144 of the Constitution states: "Public security, the **duty of the State** and the right and responsibility of all, is exercised to preserve public order and the safety of people and property, by means of the following agencies […]" [our emphasis]. See Brazil, *supra* note 40, at 120.

[67] Article 196 of the Constitution states: "Health is a right of all and a **duty of the State** and shall be guaranteed by means of social and economic policies aimed at reducing the risk of illness and other hazards and at the universal and equal access to actions and services for its promotion, protection and recovery" [our emphasis]. *Id*., at 157.

[68] Article 205 of the Constitution states: "Education, which is the right of all and **duty of the State** and the family, shall be promoted and fostered with the cooperation of society, with a view to the full development of people, their preparation for the exercise of citizenship and their qualification for work" [our emphasis]. And article 208 declares: "The **duty of the State** towards education shall be fulfilled by ensuring the following: […]" [our emphasis]. *Id*., at 163-164.

[69] Article 217 of the Constitution states: "**The State has the duty** to foster the practice of formal and informal sports, as a right of each person, with due regard for: […]" [our emphasis]. *Id*., at 170.

of the states, Federal District, and municipalities[70]. In line with this consideration, the Court understands that the Constitution likewise grants the subject of public security the qualification of a matter that falls within the legislative competences of the states, Federal District, and municipalities[71].

Justice Fachin clarifies that the state law of Santa Catarina covers two main topics, specifically financial institutions and public security. On one hand, the Union has private competence to legislate on financial institutions[72] and, on the other hand, the states have concurrent and supplementary power to legislate on public security (article 24, IX and XII). In such cases, Justice Fachin warns that doubts about the exercise of legislative competences by the federative entities can emerge and the principle of predominant interest does not always offer a satisfactory solution. As a result, the interpreter must invoke other principles of Brazilian federalism, namely the subsidiarity and the cooperation, to resolve the conflict of competence.

Therefore, the Brazilian Constitution of 1988 is a historic milestone regarding the political decentralization in favor of cities. Based on the system of division of federative competences entrenched in the Constitution, cities became responsible for the implementation of most social policies and services, aside from exercising new legislative powers related to matters of local interest. Nevertheless, the Brazilian Federation continues to be characterized as centralized not only because of the financial dependency of most municipalities on the federal transfers of revenues – to respond to the needs of the population

[70] Article 24 IX and XII of the Constitution states: "The Union, states and Federal District have the power to legislate concurrently on: […] IX – **education**, culture, teaching, **sports**, science, technology, research, development, and innovation; (CA 85, 2015) […] XII – social security, **protection, and defense of health**; [our emphasis]". *Id*., at 34.

[71] Brazil, *Direct Action of Unconstitutionality No. 3,921/Santa Catarina. Vote Rapporteur Justice Edson Fachin*, 2020.

[72] Article 22 VI and VII of the Constitution states: "The Union has the exclusive power to legislate on: […] VI – the monetary and measures systems, metal certificates and guarantees; VII – policies for credit, foreign exchange, insurance, and transfer of values". See Brazil, *supra* note 40, at 32.

– but also because of the large legislative competences of the Union in defining general rules and guidelines to be observed by the municipalities in the execution of social policies and services[73].

As discussed in section 1, there are several concerns about the use of facial recognition systems in cities, for example, the dangers of mass surveillance and the violation of individual freedoms as well as the lack of transparency on the technology implementation and the methods applied to deal with sensitive data. Accordingly, specific regulation on the use of facial recognition technologies is essential, which should combine the harnessing of the potential of this new technology with the protection of fundamental rights.

In the context of Brazilian federalism, the following question arises: which is the federated entity responsible for legislating the use of systems of facial recognition for the purpose of public security? This issue has not been discussed by the Federal Supreme Court yet, nor has received special attention from constitutional scholars. Despite the Union has not enacted general rules on the subject, some states and municipalities have been at the forefront of passing specific legislation to meet their demands.

In any event, the answer to the question must be justified by constitutional rules concerning the distribution of federative competences and core principles that guide the application of those rules, namely the principles of predominant interest and subsidiarity. The first step is identifying the dominant subject in the specific matter of the use of facial recognition technologies for the purpose of public security. This is important, at the next stage, to point out which federated unit has a predominant interest in the subject based on the federative constitutional rules and principles.

The difficulty resides in the identification of the dominant subject related to the use of facial recognition technologies for the purpose of public security. It is possible to spot two

[73] Piancastelli, *supra* note 37.

major themes in this matter: a) civil law, since it relates to a technology whose operation depends on personal data treatment and, consequently, deals with personality Rights foreseen in the Brazilian Civil Code; and b) public security, because the prevention and combat of crimes are the specific intended purposes by the systems of facial recognition through personal data treatment.

If civil law is the dominant subject, the Union will have the power to legislate on the use of facial recognition technologies for the purpose of public security in accordance with article 22, I, of the Constitution. In this scenario, states and the Federal District could only legislate on specific issues regarding the use of facial recognition technologies for the purpose of public security, when authorized by the Union by means of a supplementary law[74]. At present, there is no current supplementary law of this kind. In turn, to the municipalities is not assigned any competence on the matters enumerated in article 22, including civil law, and hence to them would not be recognized legislative powers on the use of facial recognition technologies for the purpose of public security.

In February 2022, Constitutional Amendment No. 115 entered into force and added item XXX to article 22 to establish the private competence of the Union to legislate on the protection and treatment of personal data. The goal is to uniform the legislation due to the existence of various state and municipal draft bills on the subject and, consequently, to prevent normative fragmentation and multiplicity of criteria defined by each region and city[75].

[74] Article 22, sole paragraph, of the Brazilian Constitution: "*A supplementary law may authorize the states to legislate upon specific topics related to the matters listed in this Article*". See Brazil, *supra* note 40, at 33.

[75] The Constitutional Amendment No. 115/22 has also included the item XXVI to article 21, to determine the exclusive competence of the Union to organize and supervise the protection and treatment of personal data, under the terms of the law. Câmara dos Deputados, *Promulgada PEC que inclui a proteção de dados pessoais entre direitos fundamentais do cidadão* (2022), https://www.camara.leg.br/noticias/850028-promulgada-pec-que-inclui-a-protecao-de-dados-pessoais-entre-direitos-fundamentais-do-cidadao/.

However, the present work follows the position of the Federal Supreme Court laid out in the above outlined ruling on Direct Action of Unconstitutionality No. 3,921: "In cases where there is doubt about identifying the legislative competence, because more than one subject falls under the legal provision in question, the court must choose the interpretation which does not impair the competence that smaller entities have to legislate on a particular matter"[76].

We argue that the dominant subject related to the use of facial recognition technologies for the purpose of public security shall be, indeed, public security. On this matter states, the Federal District and municipalities have concurrent and supplementary powers to legislate next to the Union, as decided by Federal Supreme Court. In his vote, Justice Alexandre de Moraes stressed that:

When applied in the context of the Brazilian Federation the principle of subsidiarity (...) must enhance the preponderant action of the federated entity within its sphere of competence in proportion to its greater capacity to solve matters of public concern, considering the regional peculiarities. The greater state autonomy to legislate on subjects related to public and prison security will enable a better observance of regional peculiarities and efficiency in fighting organized crime, including inside penitentiary facilities[77].

Before the National Congress is currently running the Proposal of Constitutional Amendment No. 33/2014, which intends to amend articles 23 and 24, to textually insert the subject of public security within the scope of common, concurrent, and supplementary competences of the federative entities. In the justification of the proposal, the authors explain that the amendment serves the purpose of only rectifying the omission of the original

[76] Free translation of the original text in Portuguese. See Brazil, *Direct Action of Unconstitutionality No. 3,921/Santa Catarina. Full text of the decision. Rapporteur Justice Edson Fachin* (2020), at 3.

[77] Free translation of the original text in Portuguese. See Brazil, *Direct Action of Unconstitutionality No. 3,921/Santa Catarina. Vote Justice Alexandre de Moraes* (2020), at 11.

constituent[78]. Likewise, Justice Fachin emphasizes in his vote that the Proposal of Constitutional Amendment No. 33/2014 "thus seeks to make explicit what already derives from a systematic interpretation of the Constitution"[79], namely the legislative power of subnational entities besides the Union on the subject of public security.

In conclusion, we argue that all entities of Brazilian Federation have the competence to legislate on the specific matter of the use of facial recognition technologies for the purpose of public security. On the one hand, the Union will be responsible for establishing by law principles, limits, and general rules on the subject according to article 4, paragraph 1, of Brazilian General Data Protection Law, and, on the other hand, states, the Federal District, and municipalities may supplement federal legislation through the enactment of specific rules to meet regional and local needs in the area of public security.

4. FACIAL RECOGNITION AND PUBLIC SECURITY IN THE CITY OF RIO DE JANEIRO

In addition to the risks and ethical concerns associated with the use of facial recognition technology, the high rate of misunderstandings undermines its reliability and effectiveness in reducing crime. The literature exemplifies this problem in cases of application of this technology in several cities around the world, mainly reaching traditionally discriminated and more vulnerable groups.[80] As a case study, this paper examines the

[78] Brazil, *Proposal of Constitutional Amendment No. 33* (2014), https://www25.senado.leg.br/web/atividade/materias/-/materia/144585.

[79] Free translation of the original text in Portuguese. See Brazil, *supra* note 72, at 6.

[80] B. DIAS FRANQUEIRA, I. A. HARTMANN, L. ABBAS DA SILVA, *O que os olhos não veem, as câmeras monitoram: reconhecimento facial para segurança pública e regulação na América Latina*, 8 Revista digital de direito administrativo 1, 2021. F. TAUTE, *Reconhecimento facial e suas controvérsias*, Heinrich böll stiftung, 2020, https://br.boell.org/pt-br/2020/02/05/reconhecimento-facial-e-suas-controversias#_ednref1.

experience of the city of Rio de Janeiro (capital of the state of Rio de Janeiro, Brazil) with the use of facial recognition systems in the field of public security.

On the one hand, few Brazilian cities have legislation to regulate the use of facial recognition technology, on the other hand, many cities have been using such technology for various purposes: to promote public security, control entrances into the territory, control access to restricted areas and curb the misuse of gratuities and crime in public transport, football stadiums, toll booths and public spaces. In some cases, the application of this technology takes place based on the regulations of the respective state in which the municipality is located.

The state of Rio de Janeiro presents some bills, under analysis in its Legislative Assembly, on the use of facial recognition systems in different applications. The bills deal with the installation of surveillance cameras with facial recognition technology in the subway, bus, train, and ferry stations, as well as in toll booths, with the following purposes: to identify suspects and wanted by the courts; curb the illegal sale of products; and control the undue use of gratuities and tariff benefits.

Besides this, there are two laws in force in the state of Rio de Janeiro related to the topic of the use of technologies in public security. Law No. 4,291/04 (amended by Law No. 7,123/2015) determines the control of gratuities and tariff benefits in public transport services, through biometrics, but without specifically mentioning facial recognition technology[81]. Also, in the state of Rio de Janeiro, Law No. 9,167/21 provides that the

[81] "Paragraphs 1 and 2 of Article 9 of Law No. 4,291/04 (amended by Law No. 7,123/2015) of the state of Rio de Janeiro establishes: "(...) Paragraph 1 - The control of gratuities and tariff benefits will use technologically adequate means, including biometrics, obligatorily paid by concessionaires and licensees of public passenger transport services by bus, to ensure its legitimate exercise, prohibiting, in any event, the cost of implementing the technology to be transferred to the public service tariff or to the Granting Authority in the form of economic and financial rebalancing. Paragraph 2 - The implementation of biometric control, preferably facial or other technologically appropriate, will be carried out through means of registration or re-registration of users, considering the definition of validity periods of the electronic card at the discretion of the Grantor." Free translation of the original text in Portuguese.

Executive Branch may establish the Database for Facial and Digital Recognition of Missing Children and Adolescents, linked to Detran/RJ[82]. None of these documents specifically address the guarantee of rights and accountability of agents for possible abuses in the handling of facial recognition systems.

Facial recognition technology began to be used more intensively in the city of Rio de Janeiro in 2019 when a cooperation agreement was signed between the State Secretariat of Military Police of the state of Rio de Janeiro and the telephone company Oi. The objective was to implement facial recognition technologies in activities related to public security. The program worked in connection with the Command and Control Center of the Military Police of the state of Rio de Janeiro, which received the images in real-time and performed their cross-referencing with the state's Civil Police database, which gathers data from fugitives from justice. The pilot project was applied during the Carnival of the same year, with the installation of 34 cameras and specific training for police officers. During this period, in Copacabana, three arrest warrants and five arrest warrants for teenagers were served, as well as three stolen vehicles were recovered. The use of facial recognition technology during Carnival in Rio showed an error rate of 90%. Later, the project was expanded in the city and the number of cameras increased significantly. The use of such technology resulted in the arrest of people, against whom there were open arrest warrants, but also in the occurrence of false positives. In the Copacabana neighborhood, for example, a woman was wrongly identified as a criminal who was already in prison. The woman was taken to the police station, as she did not have an identity document at the time of the police approach. After verifying

[82] Departamento de Trânsito do Estado do Rio de Janeiro – DETRAN. Traffic Department of the State of Rio de Janeiro.

her identity at the police station, the woman was released. This case exposes another problem related to the use of the system in the city of Rio de Janeiro: the use of outdated databases.[83]

In 2019, 184 arrests were made using facial recognition technology. In 90% of them, the people arrested were black and were detained for crimes of low violence, such as petty theft and robbery.[84] Even though facial recognition has been increased, some questions concern us: how is monitoring carried out? What is the location of the cameras? Do they work 24 hours a day? Is the data analyzed in real-time? Where does the data processed by the devices go? What is the retention time? Who can access the information? How are people identified? Which database is used to identify people? Creating more diverse databases to train machines and artificial intelligence, seeking diversity in teams, working inclusive codes, auditing technologies, and avoiding discriminatory practices are essential practices for the development of more inclusive, fair, and ethical technologies.

In January 2020, the city of Rio de Janeiro announced the signing of an agreement with the Ministry of Justice, which establishes the sharing of images captured by individual cameras installed in the uniform of Municipal Guard agents with facial recognition technology, to identify fugitives from justice and stolen vehicles.[85] The initiative of R$ 3.8 million in total will be funded by the Special Fund for Public Order, created by Municipal Law No. 6,235 of 2017, whose objective is to provide resources for activities in the interest of public order in the city of Rio de Janeiro. It is worth mentioning that, in 2019, the Ministry of Justice and Public Security issued Ordinance No. 793, which encourages the

[83] Taute, *supra* note 81. A. LUIZA ALBUQUERQUE, *Em fase de testes, reconhecimento facial no Rio falha no 2º dia*, Folha de são paulo, July 17, 2019, https://www1.folha.uol.com.br/cotidiano/2019/07/em-fase-de-testes-reconhecimento-facial-no-rio-falha-no-2o-dia.shtml.

[84] Câmara Rio, *Identificação facial é tema de audiência de Comissão Especial*, 2021, http://www.camara.rio/comunicacao/noticias/394-identificacao-facial-e-tema-de-audiencia-de-comissao-especial.

[85] Rio Prefeitura, *Município estende Rio+Seguro à Zona Oeste com câmeras de reconhecimento facial*, 2020, https://prefeitura.rio/cidade/municipio-estende-rioseguro-a-zona-oeste-com-cameras-de-reconhecimento-facial/.

implementation of video surveillance systems with facial recognition in territories with high crime rates in the country.[86]

In June 2021, a public hearing was held at the City Council to discuss a public-private partnership for the modernization of public lighting and connectivity in the city in the years to come. This is the *Luz Maravilha* Program, through *Rioluz*, a municipal energy and lighting company, and the Municipal Infrastructure. The project foresees the installation of 10,002 cameras, 40% of which are equipped with facial recognition technology. On that occasion, councilors and civil society representatives expressed concern about the impact of the use of this technology, especially on the black population.[87]

Also in June 2021, the City of Rio announced that it will start a project to expand and modernize the Rio Operations Center (*Centro de Operações Rio* - COR), the largest urban monitoring center in Latin America. The expansion of the agency, located in Cidade Nova, in the central region of the city, will cover 1,400 square meters – which represents an increase of about 50% to the total area currently built. The project is one of the results of the Public-Private Partnership for public lighting in the city of Rio de Janeiro, mentioned above. The program also provides for 5,000 Wi-Fi points and around 9,000 georeferenced sensors, among other gains for the municipality.

With the expansion, COR will have more human and technological resources capable of developing solutions related to the Internet of Things and smart cities. According to institutional information, these points will work with intelligent sensors capable of generating data that will be processed by a technical team to transform them into service for

[86] As a reaction to the mass implementation of facial recognition, it is worth mentioning Federal Bill 604/2021, which amends Decree-Law No. 3689/41 (Code of Criminal Procedure) and Law No. 7,960/89, to prohibit preventive detention based exclusively on recognition by photographic identification.

[87] Câmara Rio, *supra* note 85.

the citizen. The aim is to use technology to make the operation increasingly predictive and less reactive, anticipating crisis and improving the prompt response to occurrences.[88]

5. CONCLUDING REMARKS

The urbanization process has led cities to occupy a prominent position in the global scenario. The central government, increasingly seen as bureaucratic and distant from the citizens, has been losing ground to the local power, which is closer to individuals. Through responsive leadership and good practices, cities start experimenting successfully with economic, social, and environmental programs. Hence, cities can reveal themselves as spaces of democracy, efficiency, and innovation. From this perspective, it is of great importance the concept of smart cities, which use new technologies to implement public policies and boost processes that guarantee the quality of life for citizens, sustainability, greater efficiency in services, and competitiveness.

Urban violence is a common problem in megacities, especially in those situated in the Global South. For this reason, is more and more frequent the use of new technologies in the fight against crime by local authorities, for instance, facial recognition technologies. As highlighted in this work there are several concerns associated with the use of facial recognition systems, such as mass surveillance, undue treatment of sensitive personal data, violation and inhibitory effects on the exercise of fundamental rights (like freedom of speech and assembly), high rates of error (particularly against certain groups and minorities) and lack of transparency. These risks are exacerbated in societies characterized by social inequality and racial discrimination, such as Brazilian society. Therefore, facial recognition technologies need, apart from in-depth multisectoral discussions and more refined

[88] Rio Prefeitura, *Com expansão do COR, Rio avança no conceito de cidades inteligentes*, 2021, https://prefeitura.rio/cidade/com-expansao-do-cor-rio-avanca-no-conceito-de-cidades-inteligentes/.

development and analysis, a framework regulation that carefully observes the protection of fundamental rights, international human rights norms, and ethical considerations.

The report on the experience of the city of Rio de Janeiro exposes the dangers and problems directly related to the use of facial recognition technologies in the context of public security. Rio is more and more committed to initiatives that involve these technologies but needs to implement greater attention and specific criteria for their responsible use.

Based on the constitutional norms in force and on the recent jurisprudence of the Federal Supreme Court, we conclude that all entities of the Brazilian Federation have the competence to legislate on the specific matter of the use of facial recognition technologies for public security. The Union will be responsible for establishing by Law principles and general rules on the subject, whereas states, the Federal District, and municipalities may supplement federal legislation through the enactment of specific rules to respond to their peculiar demands.

As explained before there is no federal law on the use of facial recognition systems in force in Brazil yet. Within this legal vacuum states and municipalities have enacted specific laws to regulate the matter. We argue that these laws are constitutional since they fall under the lawful exercise of legislative powers on the matter of public security in accordance with articles 24 and 30, I, of the Constitution. If posteriorly federal law over general rules on the subject enters in force, state or municipal legislation will have their effectiveness suspended to the extent they are contrary to the federal law.

For the harmonic coexistence among the different legislations, it will be essential that, on the one hand, the Union issues only general rules on the subject – and not usurp the competence of subnational entities through the enactment of specific rules – and, on the other hand, states, the Federal District, and municipalities enforce specific laws respecting the federal general rules. The municipalities shall also observe the existing state legislation. The position in favor of the legislative competence of all Brazilian federative entities on the use of facial recognition technologies for the purpose of public security reflects the will of the

Constitution of 1988 to fulfill political decentralization and, consequently, the democratic exercise of political power, especially on a matter intrinsically related to civil liberties.

A legal landmark on the use of facial recognition technologies for the purpose of public security is urgent in Brazil. The absence of specific legislation on the use of facial recognition systems is common in several countries in Latin America. According to the cooperative model of Brazilian federalism, it is possible to conciliate local autonomy – with special attention to the peculiarities of cities – with the need for action coordination between all federative units based on general guidelines defined by the Union. Thus, it is imperative the enactment of federal legislation that provides a general regulatory model based on the principles of Brazilian General Data Protection Law and the constitutional principles of presumption of innocence and broad defense, in addition to liability rules for cases of fundamental rights abuses and violations. Such a regulatory model would ensure the necessary legal uniformization and, as a result, mitigate eventual divergences between the central and subnational entities that could create legal uncertainty among individuals, public authorities, and enterprises.

Abstract. *Cities have effectively become spaces for democracy and innovation. In this context, it is of great importance the concept of smart cities, which use new technologies to implement public policies and boost processes that guarantee the citizens a better quality of life, sustainability, greater efficiency in services, and competitiveness. Urban violence is one of the major challenges faced by Brazilian big cities. Therefore, new technologies are more and more being used in combating crime by local authorities. One of these technologies is facial recognition, whose use for public security is controversial, especially because of the risk of reinforcing discrimination and the absence of regulation by a specific law. According to Brazilian General Data Protection Law, the processing of personal data that is done exclusively for purposes of public safety, national defense, state security or activities of investigation and prosecution of criminal offenses should be regulated by specific legislation, probably enacted by the Union. In practice, however, the local authorities did not wait for the due regulation. Several Brazilian cities are already making use of facial recognition technologies in the fight against urban violence. Considering the constitutional autonomy of cities under Brazilian law, the paper aims to analyze the main controversies on facial recognition technologies for public security purposes, namely the potential conflicts of competence between federated entities and the risks of violations of minorities' fundamental rights. As a case study, the paper assesses the experience of the city of Rio de Janeiro, where facial recognition has been increasingly implemented since the 2019 Carnival.*

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DIGITALIZATION OF JUSTICE: APPLICATIONS AND OPEN ISSUES

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INDEX

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1. INTRODUCING E-JUSTICE, ARTIFICIAL INTELLIGENCE AND LAW

The digitalization of justice and legislation is coming regularly under the spotlight[2] in various field of research, involving complex interdisciplinary issues, related both to computer science and (public) law[3]. Many are the words and the concepts used to express this topic that today is recognized as a proper field of research. A common word to identify the digitalization of justice is *e-justice*[4], intended as a trend for judicial agencies to create their websites with different levels of technological sophistication and functionality, often to open their processes and interact with multiple stakeholders[5].

[2] G. SARTOR, *Intelligenza Artificiale e Diritto. Un'introduzione.*, in *Informatica e Ordinamento Giuridico*, n. 12, Milano, Giuffrè, 1996.

[3] R. CAVALLO PERIN – D. U. GALETTA, *Il diritto dell'amministrazione pubblica digitale*, Torino, Giappichelli, 2020.

[4] https://e-justice.europa.eu/home?action=home&plang=en, accessed in June 2022.

[5] R. SANDOVAL-ALMAZAN, J. RAMON GIL-GARCIA, *Understanding E-Justice and Open Justice Through the Assessment of Judicial Websites: Toward a Conceptual Framework*, in *Social Science Computer Review* 38, n. 3, 334–53.

Differently, *digital justice*[6] is a concept to name the new technological tools introduced to resolve and prevent litigation in cyberspace. In particular, digital justice is intended as the set of technical and legal solutions where those who would never go before a court for assistance can find easy and direct help digitally, via a smartphone or pc. Recently, the words *online courts* and *online judging* have been used to express a new digital trend in the justice system. In particular, firstly, considering that nowadays more people have access to the internet than access to justice, *online courts* are words used to intend the so-called *extended courts*, where access to justice is guaranteed by tools that permit users to understand their rights and duties[7]. Secondly, *online judging* is a concept used to intend all the cases where judges and parties do not gather together arguments in a courtroom, but instead, evidence and arguments are presented to judges through an online platform[8].

From different perspectives, all these topics address the interaction between law and technology, but there is a main topic that is particularly popular at the moment, and this is artificial intelligence (AI)[9]. We are in the 3rd wave of the AI boom[10] and this wave is followed

[6] E. KATSH, O. RABINOVICH-EINY, *Digital Justice: Technology and the Internet of Disputes, Digital Justice*, Oxford University Press, 2021.

[7] R. SUSSKIND, *Online Courts and the Future of Justice*, Oxford University Press, 2019.

[8] R. SUSSKIND, *ibidem.*

[9] https://www.liquid-legal-institute.com/workinggroups/legal-text-analytics/

[10] D.H. CHAU, *Data Science Buzzwords*, in *CSE6242: Data & Visual Analytics*, 2019. https://poloclub.github.io/cse6242-2019fall-campus/slides/CSE6242-015-BuzzWords.pdf, accessed in June 2022.

by the ethical topics related to AI, namely, transparency [11], non-discrimination [12], accountability [13] and fairness. These topics are discussed from several perspectives and disciplines, such as sociological causes, legal argumentations, economic models, statistical techniques, computational issues[14], and also justice. For example, access to justice and the future challenges of artificial intelligence and justice[15]. Today, the field of research named *Artificial Intelligence and Law (AI and Law)* appears mature and composed of several sub-fields, but before the access to large legal *corpora* was permitted, many approaches in the AI and Law during the '90 were devoted to realise expert system applications[16] or to elaborate knowledge representation techniques [17], both aiming the making law processable by a

[11] In terms of transparency, the risk is to develop processes and algorithms that are unclear, incomprehensible and unrepeatable. M. TURILLI, L. FLORIDI, *The ethics of information transparency*, in *Ethics and Information Technology* 11, n. 2, 2009, 105–12.

[12] S. BAROCAS, A.D. SELBST, *Big data's disparate impact*, in *California Law Review* 104, n. 3, 2016, 671–732.

[13] R. RODRIGUES, *Legal and Human Rights Issues of AI: Gaps, Challenges and Vulnerabilities*, in *Journal of Responsible Technology*, n. 4, 2016.

[14] A. ROMEI, S. RUGGIERI, *A multidisciplinary survey on discrimination analysis*, in *The Knowledge Engineering Review* 29, n. 5, 2014, 582–638.

[15] Predictive Justice and Artificial Intelligence, European Commission for the Efficiency of Justice (CEPEJ), https://www.coe.int/en/web/cepej/justice-of-the-future-predictive-justice-and-artificial-intelligence. Accessed in June 2022.

[16] G. SARTOR, *ibidem.*

[17] D. SCHMIDT, C. TROJAHN DOS SANTOS, R. VIEIRA, *Analysing top-level and domain ontology alignments from matching systems*, in *Proc. of the 11th int. Workshop on ontology matching co-located with the 15th int. Semantic web conf. (ISWC2016)*, Kobe, Japan, 2016.

machine. These topics are still discussed today, confirming that the field of study, even if mature, is far to be outlived. Indeed, a recent literature review[18] identified two main streams in this field of research, namely i) computational models of legal reasoning[19] and ii) legal text analytics[20].

1.1. Intelligent applications and the legal domain: an overview

In the first set, we can find approaches, devoted to designing computational models of legal reasoning, concerning both i) *modeling statutory reasoning*[21], where legal rules are expressed logically and computers can reason deductively and ii) *modeling case-based legal reasoning*[22], where computational models are designed for interpreting terms and concepts

[18] K. D. ASHLEY, *Artificial Intelligence and Legal Analytics. New Tools for Law Practice in the Digital Age*, Cambridge University Press, 2017.

[19] H. PRAKKEN, G. SARTOR, *The Role of Logic in Computational Models of Legal Argument: A Critical Survey*, in A.C. KAKAS, F. SADRI, (eds) *Computational Logic: Logic Programming and Beyond. Lecture Notes in Computer Science*, 2002, vol 2408. Springer, Berlin, Heidelberg.

[20] J.G., CONRAD, L.K. BRANTING, *Introduction to the special issue on legal text analytics*, in *Artificial Intelligence and Law*, 26**,** 99–102 (2018).

[21] The first approaches recognized the problem of coding the ambiguity of the law. E. A. LAYMAN, C. S. SAXON, *Some problems in designing expert systems to aid legal reasoning*, in *Proceedings of the 1st international conference on Artificial intelligence and law* (*ICAIL1987*), New York, USA, 1987, 94–103.

[22] For example, HYPO (a computer program that models reasoning with cases and hypotheticals in the legal domain, 1987) and CATO (a computer program which employs artificial intelligence techniques to teach first-year law students how to make basic legal arguments with cases, 2000), operating in the domain of US Trade Secrets Law, K. D. ASHLEY, *Reasoning with cases and hypotheticals in HYPO*, *International Journal of Man-machine Studies.*,

through analogical reasoning. Since early 2000, also the speed and ability to query data streams have encouraged the development of knowledge-based approaches. Legal Knowledge-Based System (LKBS) and Judicial Decision-Support Systems (JDSS) devoted to judgment support and justice prediction have been intended as efficient solutions for the jurisdiction.[23]

In the second set, we can find approaches devoted to developing techniques for legal text analytics concerning *extracting information from statutory and regulatory texts*[24], where the aim is to automatically extract information about rules' requirements from legislation texts, electronically stored, and *extracting argument-related information from legal case text*[25], where the aim is to use machine learning (ML), Natural Language Processing (NLP) techniques[26] or manually constructed rules, for extracting information from case law, or other

1991, 753–96. V. ALEVEN, *Using background knowledge in case-based legal reasoning: A computational model and an intelligent learning environmen*t, in *Artificial Intelligence*, 2003, 183–237.

[23] P.L.M. LUCATUORTO, *Teorie e modelli del diritto per il ragionamento giuridico automatico*, LED, Milano, 2009.

[24] J. SAVELKA, M. GRABMAIR, K. D. ASHLEY, *Mining information from statutory texts in multi-jurisdictional settings*, in *Proc. of the 27th int. Conf. on legal knowledge and information systems (JURIX2014)*, Krakow, Poland, 2014, 133–42.

[25] M. GRABMAIR, *Predicting trade secret case outcomes using argument schemes and learned quantitative value effect tradeoffs*, in *Proc. of the 16th int. Conference on Artificial Intelligence and Law (ICAIL2017)*, London, UK, 2017, 89–98.

[26] Machine learning (ML) is a subfield of artificial intelligence, which is broadly defined as the capability of a machine to imitate intelligent human behavior, in https://mitsloan.mit.edu/ideas-made-to-matter/machine-learning-explained, accessed June 2022. Natural Language Processing (NLP) strives to build machines that understand and respond to text or voice data, in https://www.ibm.com/cloud/learn/natural-language-processing, accessed June 2022.

sorts of legal case decisions. Case studies and practical approaches have been tested in and outside Europe[27]. For instance, possible litigation outcomes are assessed by Artificial Intelligence (AI) tools in China[28] and NLP techniques have been tested on the ECHR proceedings to automatically predict (future) judicial decisions[29] or violations of the Convention, with promising results.[30] Such data-driven systems have shorter development timing and permit the ability to discover new information[31] but have highlighted the need for data completeness and transparency of the algorithms[32]. However, even if many approaches appear promising, some issues are still unresolved. The first concerns data completeness, intended as access to case law, and in general, access to any (legal) decisions. In fact, at the

[27] In Europe, for example T. NOVOTNA et al. *Topic Modelling of the Czech Supreme Court Decisions*, in *Proceedings of Automated Semantic Analysis of Information in Legal Text* 2020 and GLASER et al. *Classification of German Court Rulings: Detecting the Area of Law*, in *Proceedings of Automated Semantic Analysis of Information in Legal Text*, 2020. Outside Europe, for example, H. ZHONG, Z. GUO, C. TU, C. XIAO, Z. LIU, AND M. SUN. *Legal Judgment Prediction via Topological Learning*, in *Proc. of the 2018 Conference on Empirical Methods in Natural Language Processing*, pages 3540–3549, Brussels, Belgium. Association for Computational Linguistics or BRANTING et al., *Predictive Features of Persuasive Legal Texts*, in *Proceedings of Automated Semantic Analysis of Information in Legal Text*, ASAIL, 2020.

[28] R. SUSSKIND, *Online Courts and the Future of Justice*, Oxford University Press, 2019.

[29] M. MEDVEDEVA, M. VOLS, M. WIELING, *Using Machine Learning to Predict Decisions of the European Court of Human Rights*, in *Artificial Intelligence and Law* 28, n. 2, 2019.

[30] N. ALETRAS et al., *Predicting Judicial Decisions of the European Court of Human Rights: A Natural Language Processing Perspective*, in *PeerJ Computer Science*, n. 2, 2016, 93.

[31] A. ALZGHOUL et al., *Comparing a Knowledge-Based and a Data-Driven Method in Querying Data Streams for System Fault Detection: A Hydraulic Drive System Application*, in *Computers in Industry* 65, n. 8, 2014, 1126–35.

[32] E. VINCENTI, *Il "problema" del giudice-robot*, in A. CARLEO (ed. by), *Decisione Robotica*, Mulino 2019.

moment, court decisions are only partially accessible, meaning that only few databases permit the download of bulk data, stored in processable forms and enriched with metadata[33]. A similar approach is followed by other decisions written by other institutions, such as independent administrative authorities. Datasets with the decisions produced by these entities are not publicly open nor digitally stored or completely accessible. However, even if desirable, full access to all decisions is not sufficient for legal analytics approaches. Thus, ML and NLP techniques require a sufficient level of quality of data, in order to avoid the first problem of data analysis, the so-called *garbage in, garbage out.* However, permitting full access to high-quality legal data is not yet enough, as demonstrated in real case scenario[34]. The language expressed in legal texts is a particular sub-language, with its unique rules[35]. When accessible, court decisions are usually not annotated or report few useful metadata. Moreover, contrarily to other text analysis domains, such as social media text analysis[36] and

[33] M. FALDUTI, *Court Decisions and Data Analysis: a Survey Among 22 Member States of the European Union on Access to Case Law and Legal Prediction*, in *Journal of Law, Cognitive Science and Artificial Intelligence*, n. 13, 2020.

[34] M.T. SAGRI, T. AGNOLONI, L. BACCI, *Legal Keyword Extraction and Decision Categorization: a Case Study on Italian Civil Case Law*, in *Proc. of the 5th Workshop on Semantic Processing of Legal Texts (SPLeT2014)*, Reykjavik, Iceland, 2014, 1–7.

[35] M. CECI, A. GANGEMI, *An OWL Ontology Library Representing Judicial Interpretations*, in *Semantic Web Journal* 7, n. 3, 2016, 229–53.

[36] I. RIZWANA et al. *A survey on text mining in social networks*, in *The Knowledge Engineering Review*, 2015, p. 157-170.

biomedical text mining[37], researchers in the legal domain can rely only on a few international resources.

1.2. Intelligent applications and the legal domain in practice

From a European perspective, many projects addressed the justice system and the legal matters following an ontological approach[38]. A statute-specific legal ontology of the Polish Commercial Companies Code (PCCC)[39] has been developed for defining concepts, properties and axioms of the commercial law domain. The authors of this work point out that a problem with all legal knowledge is the fuzziness of reality compared with the restricted language of the law.[40] A second example, again for the application of civil law, is an ontological model aimed at formalising the Croatian Family Legislation with the design of a

[37] A. M. COHEN, W. R. HERSH, *A survey of current work in biomedical text mining*, in *Briefings in bioinformatics*, 2005, p. 57-71.

[38] Studies about legal ontologies are discussed in C. GRIFFO et al., *A Systematic Mapping of the Literature on Legal Core Ontologies*, in *Ontobras*. 2015 and in M. FALDUTI, *Law and Data Science: Knowledge Modeling and Extraction from Court Decision*s, 2021, https://air.unimi.it/handle/2434/799875.

[39] P. STOLARSKI, T. TOMASZEWSKI, *Modeling and Using Polish Legal Knowledge - Commercial Companies Code Ontology*, in W. ABRAMOWICZ, AND D. FENSEL, (eds) *Business Information Systems*, 2008, vol 7. Springer, Berlin, Heidelberg.

[40] P. STOLARSKI, T. TOMASZEWSKI, *Modeling and Using Polish Legal Knowledge - Commercial Companies Code Ontology*, in *Proc. of the 11th int. Conf. on Business Information Systems (BIS2008)*, Innsbruck, Austria, 2008, 83–94.

legal expert and a family law judge[41]. Furthermore, the Consumer Protection law has been also the object of various approaches. An ontology developed within the DALOS (Drafting Legislation with Ontology-based Support) [42] project has been realised for supporting legislative drafting by providing legal drafters and decision-makers control over the legal language at the European level[43]. Furthermore, the DALOS KOS has been presented as a middle-out legal ontology and another type of lexical relationship, the so–called *fuzzynym*, has been developed in *two layers*, namely, the Ontological Layer, containing the conceptual modelling at a language independent level, and the Lexical Layer, containing multi-lingual terminology conveying the concepts represented at the Ontological layer. Classes and properties have been implemented on the basis of the terminological knowledge extracted from the chosen European Directives on consumer protection law[44]. Moreover, in civil law, the Dutch tort law has been formalised within an ontology capable to capture the knowledge

[41] S. LOVRENCIC, I. J. TOMAC, *Managing Understatements in Legislation Acts When Developing Legal Ontologies*, in *Proc. of the 10th int. Conf. on Intelligent Engineering Systems (INES2006)*, London, UK, 2006, 69–73.

[42] The Italian Research Council clarifies that, in a multilingual environment, and in particular in EU regulations, only the awareness of the subtleties of legal lexicon, in the different languages, can enable drafters to maintain coherence among the different linguistic version of the same text. To this end, DALOS – Drafting Legislation with Ontology-based Support Project - intends to provide law-makers and European citizens with linguistic and knowledge management tools to be used respectively in the phase of legislative drafting and in the retrieval procedures. http://www.ittig.cnr.it/progetti/dalos/

[43] T. AGNOLONI et al., *Building an Ontological Support for Multilingual Legislative Drafting*, in *Proc. of the 20th Annual Conference on Legal Knowledge and Information Systems (JURIX 2007)*, Leiden, The Netherlands, 2007, 9–18.

[44] E. FRANCESCONI et al., *Integrating a Bottom–Up and Top–Down Methodology for Building Semantic Resources for the Multilingual Legal Domain*, in *Semantic Processing of Legal Texts: Where the language of law meets the law of language*, Springer, 2010, 95–121.

of entities subject to the law (a legal person, a natural person) and objects in tort law (motor vehicles, animals, product).[45]

On the topic of data protection, many works have been proposed. For instance, the Spanish data protection law has been formalised with an ontology called LegLOPD (Legal Ontology Domain)[46], composed of five top concepts directly extracted from a model named LRI-Core ontology[47], a core ontology that covers the main concepts that are common to all legal domains[48]. This project has been followed by another one, again on Spanish law, where the legal knowledge has been formalised as a modular ontology based on the knowledge acquired and organised by legal experts, with the aim of modeling data protection concepts for a reasoning system[49]. More recently, the General Data Protection Regulation (GDPR) constituents and relationships among them have been described in a bottom-up ontology[50].

[45] R. LAARSCHOT et al., *The Legal Concepts and The Layman's Terms Bridging the Gap Through Ontology-Based Reasoning about Liability*, in *Proc. of the 18th int. Conf. on Legal Knowledge and Information Systems (JURIX2005)*, Brussels, Belgium, 2005, 115–25.

[46] H. A. MITRE et al., *A Legal Ontology to Support Privacy Preservation in Location-Based Services*, in *Proc. of int. Workshop on Web Semantics (SWWS2006)*, Montpellier, France, 2006, 1755–64.

[47] http://www.leibnizcenter.org/previous-projects/lricore

[48] J. BREUKER et al., *Law and the Semantic Web: Legal Ontologies, Methodologies, Legal Information Retrieval, and Applications*, in *Law and the Semantic Web*, Springer, 2005, 36–64.

[49] N. CASELLAS et al., *Ontological Semantics for Data Privacy Compliance: The NEURONA Project*, in AAAI Press Technical Reports Series, 2010.

[50] C. BARTOLINI et al., *Using Ontologies to Model Data Protection Requirements in Workflows*, in *New frontiers in Artificial Intelligence*, ed. by M. OTAKE et al., Springer 2017, 233–48.

Then, using Simple Knowledge Organisation System SKOS[51], concepts and obligations of GDPR have been formalised with the set of attributes and terms provided by European Legislation Identifier (ELI) metadata[52]. Finally, the PrOnto ontology presented the GDPR main concepts (data types, documents, processing purposes, legal bases, processing operations) with the aim of supporting legal reasoning and compliance checking[53].

1.3. Risks and side effects

The described projects are mostly knowledge-based. Usually, the advantages of such approaches are the following: i) full control over the system, based on the ontology, usually built (and updated) with the help of a legal domain expert, ii) explainability of the system and, iii) portability, because such system do not require necessarily big datasets. This is particularly relevant to the legal domain, where the available datasets are language-based, difficult to be shared, and are mostly concerning law instead of case law. In fact, in the era of big data, research activity on data science focuses on the collection, processing, and interpretation of large datasets to produce knowledge for decision-making processes in

[51] https://www.w3.org/TR/skos-primer/ Accessed June 2022.

[52] H. J. PANDIT et al., *GDPR as a Linked Data Resource*, in *The European Semantic Web Conference*, Springer 2018, 481–95.

[53] M. PALMIRANI et al., *Pronto: Privacy Ontology for Legal Reasoning*, in A. KŐ - E. FRANCESCONI (ed. by), *Electronic Government and the Information Systems Perspective*, Springer 2018, 139–52.

different application domains and contexts, such as finance[54], healthcare[55] and social science[56].

The legal domain is one of these different domains and contexts where data science approaches can be applied.[57]

However, the development of data-driven approaches may imply side effects and risks, in some cases. For instance, there are already evidences of human rights violations in EU and in the US, with regard to discrimination within the context of AI, such as banks using postcodes to predict problems for repaying the loan;[58] or premium car insurances asking for men to pay more than women for the same type of insurance as statistics showed women are

[54] C. LONGBING et al., *Data Science and AI in FinTech: an overview*, in *International Journal of Data Science and Analytics*, 2021, Springer, p. 81-99.

[55] J. ARCHENAA et al., *A Survey of Big Data Analytics in Healthcare and Government*, in *Procedia Computer Science*, 2015, p. 408-413.

[56] N. CARLO LAURO et al., *Data Science and Social Research, Epistemology, Methods, Technology and Applications*, Springer Cham, 2017.

[57] M. FALDUTI, *Law and Data Science: Knowledge Modeling and Extraction from Court Decisions*, Ph.D. thesis, Università degli studi di Milano, Dipartimento di Informatica Giovanni Degli Antoni, 2021.

[58] F. ZUIDERVEEN BORGESIUS, *Discrimination, Artificial Intelligence, and Algorithmic Decision-Making*, Technical Report, Council of Europe, 2018. https://rm.coe.int/discrimination-artificial-intelligence-and-algorithmic-decision-making/1680925d73, accessed in June 2022.

more careful drivers,[59] or risk assessments predicting recidivism in US courts,[60] or an algorithm used by the Dutch government to predict who is likely to wrongly child benefits,[61] or an AI-system used for recruitment showing bias against women,[62] or a racial bias in the facial recognition process.[63]

2. DATA-DRIVEN APPROACHES FOR THE JUSTICE SYSTEM

The development of algorithms able to judge a case would implies choosing, through the available legal interpretation theories, the one (and the best) to use for the case. Such a decision sounds more political than technical[64]. A way to overcome this obstacle is to

[59] Case C-236/09, *Association des Consommateurs Test-Achats ABSL, Yann van Vugt, Charles Basselier v. Conseil des ministres*, 2011 E.CR. I-00773: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A62009CA0236&qid=1612293472333#ntr1-C_2011130EN.01000401-E0001, accessed on 2 February 2021.

[60] J. ANGWIN et al., *Machine Bias. There's Software Used Across The Country to Predict Future Criminals. And It's Biased Against Blacks*, ProPublica, 23 May 2016: Machine Bias — ProPublica, accessed in May 2021.

[61] For more details: https://www.politico.eu/article/europe-artificial-intelligence-blindspot-race-algorithmic-harm/amp/, accessed on May 2021.

[62] J. DASTIN, *Amazon Scraps Secret AI Recruiting Tool That Showed Bias Against Women*, Reuters, October 2018.

[63] C. GARVIE, J. FRANKLE, *Facial-Recognition Software Might Have a Racial Bias Problem*, The Atlantic, the 7th April 2016.

[64] M. LUCIANI, *La decisione giudiziaria robotica*, in A. CARLEO (ed. by), *Decisione Robotica*, Mulino 2019.

include, inside the justice prediction system, the knowledge inferred by caselaw datasets.[65] However, once again the limit of such inclusion appears more political than technical. For instance, if the caselaw datasets, used to predict new outcomes, should be populated with past decisions, the issue here is how old these decisions should be and who has the power to determine the timeframe. Furthermore, the risk of deciding a case and basing the argumentation on statistical analysis might standardise the judgments, compromising the peculiarities of both the cases and the involved individuals.[66] Additionally, intelligent systems based on standardised judgments appear not capable to deal with open texture concepts and the vagueness of the law.[67]

Differently, with respect to criminal law, scholars analysed the legal implications of softwares for law enforcement authorities[68] aim at predictive policing with data analysis and profiling techniques.[69] Examples of such systems are *Key-crime* and *XLAW* tested with the

[65] C. CASTELLI, D. PIANA, *Giustizia Predittiva, La qualità della giustizia in due tempi*, in Questione Giustizia, 2018.

[66] L. DE RENZI, *Primi passi nel mondo della giustizia "high tech": la decisione in un corpo a copro virtuale tra tecnologia e umanità*, in A. CARLEO (ed. by), *Decisione Robotica*, Mulino, 2019.

[67] F. PATRONI GRIFFI, *La decisione robotica e il giudice amministrativo*, in A. CARLEO (ed. by), *Decisione Robotica*, Mulino, 2019.

[68] G. CONTISSA et al., *Quando a decidere in materia penale sono (anche) algoritmi e AI: alla ricerca di un rimedio effettivo*, in Riv. Trim. diritto di internet, 2019, 4. 610.

[69] F. BASILE, *Intelligence artificiale e diritto penale*: *quattro possibili percorsi di indagine*, in Diritto Penale e Uomo, 2019.

police department of Milan and Naples, respectively.[70] On the other hand, software for judgment prediction or support have been addressed only from a theoretical point of view. Someone pointed out that the error rate would decrease[71], whereas others suggest that intelligent systems would resolve the sentencing disparity[72] or maybe reach the perfect justice.[73] A very famous example of an intelligent system tested in the criminal court is COMPAS (Correction Offender Management Profiling for Alternative Sanctions) used for calculating the defendant's recidivism risk index.[74] This system is usually recalled in the literature as an example of a system with a discrimination and racial/gender bias[75].

[70] C. PARODI, V. SELLARODI, *Sistema penale e intelligenza artificiale*, in Diritto Penale Contemporaneo - Rivista Trimestrale, 2019.

[71] C. BONA, *Sentenze imperfette, gli errori cognitivi nei giudizi civili*, Mulino, 2010.

[72] V. MANES, *L'oracolo algoritmico e la giustiza penale: al bivio tra tecnologia e tecnocrazia*, in U. RUFFOLO, *Intelligenza artificiale, il diritto, i diritti, l'etica.* Giuffrè 2020.

[73] M. LUCIANI, *La decisione giudiziaria robotica*, in Rivista AIC, 2018, 872.

[74] T. BRENNAN, et al., *Correctional offender management profiles for alternative sanctions (COMPAS)*, in *Handbook of recidivism risk/need assessment tools*, 2018, 49-76.

[75] A. M. PIERSON. *Validation of the Correctional Offender Management and Profiling Alternative Sanctions (COMPAS)*. Fordham University, 2018.

The depicted scenario has not discouraged the development of justice predictive systems. On the contrary, the discussion around the issues of discrimination[76], transparency[77], privacy[78] and explainability[79] has positively impacted the whole AI and Law community, both in the US[80] as well as in Europe. For instance, in Italy, today the discussion reached a sufficient level of maturity, as demonstrated by the dense literature[81] on the topic of AI and Law and all the projects that are under development in academia, in the judiciary and in the government. This multilateral approach confirms the hybrid nature of the justice system, partly administrative and partly judiciary. In this sense, the role of the public administration is a key factor in pursuing and achieving EU goals.[82]

[76] S. WACHTER et al., *Why Fairness Cannot Be Automated: Bridging the Gap Between EU Non-Discrimination Law and AI*, in *Computer Law & Security Review*, n. 41, 2021.

[77] P. KSIĘŻAK, S. WOJTCZAK. *Causation in Civil Law and the Problems of Transparency in AI*, in *European Review of Private Law* n. 29, 2021.

[78] M. FALDUTI, *Court Decisions and Data Analysis: a Survey Among 22 Member States of the European Union on Access to Case Law and Legal Prediction*, in *Journal of Law, Cognitive Science and Artificial Intelligence*, n. 13, 2020.

[79] A. BIBAL et al. *Legal Requirements on Explainability in Machine Learning*, in *Artificial Intelligence and Law* n. 29, 2021.

[80] https://ainowinstitute.org, Accessed June 2022.

[81] A. CARLEO, *Decisione robotica*, il Mulino, 2019; U. RUFFOLO, *Intelligenza artificiale, il diritto, i diritti, l'etica. Tech e-Law*, Giuffrè, 2020.

[82] R. CAVALLO PERIN, G. M. RACCA, *The Plurality and Diversity of Integration Models: the Italian Unification of 1865 and the European Union Ongoing Integration Process*, in *The Changing Administrative Law Of An EU Member State*, Springer, Torino, Giappichelli, 2021.

3. DIGITALIZATION OF JUSTICE: NEXT STEPS

From a European perspective, the first tangible result of the political commitment to making domestic and European e-justice more accessible was the adoption of the first multi-annual e-Justice Action Plan 2009-2013.[83] A few years passed after this Action Plan, and today the topics concerning digital transformation, deployment of innovative technologies and big data have been crucial on the EU's agenda. The e-justice strategy and the action plan for the 2019-2023[84] period are active. In this context, the European Commission published the final report of the study on the use of innovative technologies in the justice field identifying the priority areas of the use of AI in the justice field.[85]

The aims of this work are several. Firstly, it presents the relevant existing EU legal and policy framework. Secondly, it summarizes all the aspects that need to be taken into account in terms of innovative technologies in the justice field, presented in a coherent and narrative way. The focus is on the business problems tackled during the implementation of the projects carried out by public authorities and the judiciary in the Member States, and by legal professional organisations. From this analysis, the following eight categories of problems have been identified.

[83] Multi-Annual European E-Justice Action Plan 2009-2013, https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:075:0001:0012:en:PDF. Accessed in June 2022.

[84] The European e-Justice Strategy https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XG0313(02)&rid=6. Accessed in June 2022.

[85] European Commission, Study on the use of innovative technologies in the justice field - Final Report, April 2020, ISBN 978-92-76-21347-5, https://op.europa.eu/en/publication-detail/-/publication/4fb8e194-f634-11ea-991b-01aa75ed71a1/language-en. Accessed in June 2022.

(1) Processing high volume of data, such as high volumes of structured and unstructured data and documents manually or with simple digital tools, in order to find relevant information for the case, deduct patterns, search for specific words or cases.

(2) Processing high volume of video, audio and images, such as high volume of video files, audio files and/or images in order to make an analysis of the content, for tasks such as identification of persons/victims, or monitoring of behaviour, detecting illegal activities or transcription to text.

(3) Linking information across different sources, in other terms extracting and analysing information from multiple sources usually because they are not centralised or connected.

(4) Access to justice/public services, intended as making judicial information or public services available to the citizens/the general public in a user-friendly and easily accessible way. Access to case law, case information, legislation, treatment of citizens' questions are included topics.

(5) Data protection compliance, it means making documents (usually court judgments and decisions) compliant with the personal data protection legislation with the aim of making those documents publicly available.

(6) Preparing high volume of data, treating data manually, or with simple digital tools, in order to obtain a final output. This involves tasks such as translation of documents, typing of protocols in court hearings or interviews, preparation of contracts, judicial decisions.

(7) Administrative/facilities management. The issue of managing the court administration processes performed by the judicial personnel (clerks, judges, lawyers, etc.), with tasks such as planning the agendas, court hearings, booking and allocation of courtrooms and infrastructure, organising interviews and doing the facility management.

(8) Lack of authenticity and traceability. An insufficient level of traceability imposes actions to ensure a sufficient level of authenticity, trust and integrity of data and documents during their process flows.

From this study emerged that in the EU, Italy reports the highest number of projects (35) followed by Sweden (13). However, the majority of the other European countries, reported only three or less projects. Moreover, the final report confirms that only 46% of the EU member states defined a strategy/policy addressing the use of AI in the justice field. In Italy, institutions are conducting few projects devoted to justice prediction, where both Faculties of Law and Courts are involved.

4. DIGITALIZATION OF JUSTICE IN ITALY

As pointed out, in the last three years, in Italy there are several projects under development, running not only in the judiciary, but also in conjunction with universities or with the government institutions, such as the bar associations[86].

4.1. Projects in the Judiciary

[86] https://www.altalex.com/documents/news/2021/11/04/giustizia-predittiva-progetti-italiani-sentenza-cds. Accessed in June 2022.

The Court of Florence is developing a project called "*the city of simple justice*" aiming to simplify and reduce the administrative burdens in the context of the resolution of civil disputes[87]. One of the key objectives of the project is the creation of models or algorithms capable to incorporate the preventive assessments of mediators, as well as the ability to assess disputes in order to anticipate the probability of successful mediation for the benefit of the parties and/or the judge. From a technical point of view, this project will combine not only expert systems and rule-based systems (manually defined rules in a knowledge-based) but also machine learning, NLP and speech recognition techniques.

A project devoted to criminal justice is conducted by the prosecutor's office at the Court of Cosenza, where since December 2019 a project focused on conceptual modelling of justice data is performed. The aim is to develop a taxonomy of the previous procedures and to design an IT system to support these procedures based on raw data. Moreover, a definition of similarity metrics among the same procedures, together with the design of a dashboard to monitor the interpretative behaviour of real-time changes are planned. The Court of Cosenza aims to automate the legal workflow using data mining and ML techniques to identify similarities among the recalled procedures. The case study will be the emergency of gender violence[88].

Court of Appeal of Reggio Calabria together with the Mediterranean University of Reggio Calabria and other institutions presented *JustitIA*[89] a joint research project with a

[87] https://www.cittametropolitana.fi.it/wp-content/uploads/report.pdf. Accessed in June 2022.

[88] European Commission, Study on the use of innovative technologies in the justice field - Final Report, April 2020, ISBN 978-92-76-21347-5, https://op.europa.eu/en/publication-detail/-/publication/4fb8e194-f634-11ea-991b-01aa75ed71a1/language-en. Accessed in June 2022, p. 57.

[89] http://www.iustit-ia.it. Accessed in June 2022.

twofold aim. Firstly, using NLP techniques they aim at reducing the duration and the costs of the trials. Secondly, using data science and text mining approaches will be applied to open and big data, presumably large corpora of courts decisions. Unfortunately, further technical details are not presented yet.

Furthermore, the Court of Appeal of Milan is conducting a project called "*Milan Antitrust Justice*" on competition law. The project is focused not only on collecting case law in the competition law field and automating case law reviews in the field of competition law, but also on digitalising civil and criminal proceedings as well as administrative requests to fund justice expenses. The final goal of this project is to reduce the length of court proceedings and also to ensure that a larger number of cases can be handled, increasing both efficiency and productivity. A positive effect is the opportunity to acquire insights from the processed data and monitor the results. Again, it is indicated that to achieve these results, both expert and rule-based systems, combined with NLP techniques, will be applied to the data[90].

The Court of Appeal in Bologna is conducting a project devoted to tort law and to family law. The aim is to identify the criteria for quantifying personal injury in tort cases, as well as quantifying maintenance allowances in divorce cases. Moreover, the project aims at automating and facilitating the processes related to the quantification of harm and damages. The final goal is to reduce the length of court proceedings and to ensure that a larger number

[90] European Commission, *Study on the use of innovative technologies in the justice field - Final Report*, April 2020, ISBN 978-92-76-21347-5, https://op.europa.eu/en/publication-detail/-/publication/4fb8e194-f634-11ea-991b-01aa75ed71a1/language-en. Accessed in June 2022, p. 123.

of cases could be handled, increasing consistency, in terms of repeatability and reproducibility of court decisions[91].

Moreover, the Court of Appeal of Salerno is developing a management system of courtrooms using AI approaches, such as expert systems and rule-based systems with the aim to improve both the efficiency of the management of courtrooms and the organisation of court hearings[92].

Since (year) the Court of Appeal in Brescia, the faculty of law and the faculty of statistics of the University of Brescia have been conducting a project with the aim of sharing a public database with court argumentations, case study and all the details that can be of interest not only for legal practitioners about labour law[93]. The final goal is to ensure consistency (predictability) in the decisions taken. Moreover, the data collected would encourage the sharing of the court decisions between the courts of first and second instance.

The University of Pisa and the Court of Pisa, together with the Court of Genova, are developing practices for anonymizing the decisions, with additional techniques and solutions across disciplines. The aim is threefold. Firstly, the system aims to create innovative tools

[91] European Commission, *Study on the use of innovative technologies in the justice field - Final Report*, April 2020, ISBN 978-92-76-21347-5, https://op.europa.eu/en/publication-detail/-/publication/4fb8e194-f634-11ea-991b-01aa75ed71a1/language-en. Accessed in June 2022, p. 206.

[92] European Commission, *Study on the use of innovative technologies in the justice field - Final Report*, April 2020, ISBN 978-92-76-21347-5, https://op.europa.eu/en/publication-detail/-/publication/4fb8e194-f634-11ea-991b-01aa75ed71a1/language-en. Accessed in June 2022, p. 207.

[93] https://giustiziapredittiva.unibs.it. Accessed in June 2022.

for querying legal materials through their automatic annotation. Secondly, the construction of predictive tools based on data science and artificial intelligence[94]. The third goal is to ensure the necessary knowledge of the algorithm. In other words, the organisation intends to develop not only a few tools for legal analytics, but also to explain how these tools work. For instance, many of the data science tools that can be used to extract knowledge from data produce results whose logic is difficult for humans to understand given the number of variables used. The project intends to construct analytical algorithms for suitable tools, capable to explain their operating logic.

The University of Bologna is conducting the LAILA Project, namely, Legal Analytics for Italian Law.[95] Their aims are several. Firstly, they aim to apply analytics technologies—including supervised, semi-supervised, and unsupervised learning—for building an ontology, classifying legal documents, analysing both legislation and case law, extracting "*massime*" (*rationes*) and principles, question-answering, and predicting trends in court decisions. Moreover, they aim also at providing methodological analyses and guidelines for the efficient and ethical deployment of LA technologies and at expanding the understanding of the structure, logic, and dynamic of Italian law in its connection with EU law, using LA tools.[96]Furthermore, the University of Bologna and the AI4Justice laboratory[97]

[94] https://www.predictivejurisprudence.eu. Accessed in June 2022.

[95] https://site.unibo.it/laila/en/people. Accessed in June 2022.

[96] https://site.unibo.it/laila/en/project. Accessed in June 2022.

[97] https://centri.unibo.it/alma-ai/en/news/ai4justice-a-new-lab-for-applied-research-on-ai-and-the-judiciary-system. Accessed in June 2022.

started to create a *corpus* of decisions of the Court of Audit, administrative acts and decisions of the Constitutional Court to discover valuable legal information. However, the aim of this project is to ensure the explainability[98] of the AI systems and the so-called "right of auditability" intended as the right to access code.

4.2. Projects with other Public Entities

The Italian Bar Council is completing a project named *Avvocatura dello Stato 2020*[99] focused on the recognition and classification of documents. The aim is to increase the productivity and the efficiency of the bar council tasks. The approach is devoted to, firstly, rebuilding the organisation processes and human resources (both employees and lawyers) and secondly, simplifying the communication between administrations and stakeholders.

Since September 2017, the Ministry of Justice has been conducting a project titled *Aut Dedere Aut Judicare*[100] from September 2017 concerning criminal law enforcement. The main aim of this project is to detect certain data in different documents (such as arrest warrants, transfers, and extraditions) by applying data analysis and statistics to the field of international judicial cooperation for criminal matters. The Italian Ministry of Justice

[98] I. SHEIKH RABIUL et al. *Explainable Artificial Intelligence Approaches: A Survey*. In *ArXiv Preprint*, n. 2101.09429, 2021.

[99] https://performance.gov.it/performance/piani-performance/documento/1247. Accessed in June 2022.

[100] https://www.camera.it/leg18/410?idSeduta=0278&tipo=stenografico. Accessed in June 2022.

addressed recently an important issue for the AI and Law community, i.e. the semi-automated anonymisation of particular data, named entities in text documents in both civil and criminal legal documents, as well as criminal proceedings. This project focuses on automatically identifying named entities (both physical persons and legal entities) and related information, candidates to be anonymised, by utilising innovative NLP and AI techniques. The ambitious final goal is to solve the common and traditional problem of manual identification and deletion of personal data through legal workflow automation.[101]

5. THE OPEN ISSUES IN THE DIGITALIZATION PROCESS

As described above, today the process of the digitalization of the justice system includes technical and administrative solutions, both crucial for moving from paper-based document flow to a machine-readable document flow, where administrations and private entities can communicate information and share documents in a more efficient way. The achievement of this stage would imply several positive side effects. For instance, it would permit the general public to access a public dataset of legal documents, acts, claims and judgments, in the best scenario, also annotated with keywords and other useful metadata. Thus, these annotated datasets would permit the application of AI and ML techniques, as shown by the literature, where several techniques have been applied for predicting court

[101] The Italian Ministry of Justice participated at the seminar titled: *Finnish Project on the Anonymization of Court Judgments with Language Technology and Machine Learning Apps*, https://www.coe.int/en/web/freedom-expression/finnish-project-on-the-anonymization-of-court-judgments-with-language-technology-and-machine-learning-apps as reported by Prof. Giorgis, https://www.camera.it/leg18/410?idSeduta=0278&tipo=stenografico. Accessed in June 2022.

outcomes and legal argumentation. Besides these innovative approaches, e-justice traditional tasks are only partially completed.

5.1. Data: Access to Caselaw

Indeed, the importance of these tasks in the justice systems of the EU Member States is confirmed by the Justice Scoreboard 2020 of the European Commission.[102] This report is an annual comparative information tool for improving the effectiveness of national justice systems by providing objective, reliable and comparable data on a number of indicators relevant for the assessment of the efficiency, quality and independence of justice systems in all Member States.

One of these indicators is the *online access to published judgments by the general public* is intended as the availability, for each court instance, of all judgments for civil/commercial and administrative and criminal cases online. In particular, accessibility is required throughout the whole justice chain to enable people to obtain relevant information so that the judgment can be swiftly accessed online.

Moreover, the same document intends the *arrangements for producing machine-readable judicial decisions* as to the permission to download judgments and their associated metadata free of charge in the form of a database or by other automated means. Furthermore, in this document are mentioned, not only the approaches for anonymization and

[102] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020DC0306&from=EN. Accessed June 2022.

pseudonymization assisted by algorithms, but also the urgency of putting in place rules to determine whether or not personal data are revealed in online published judgments.

Finally, the study considers if metadata, such as citations, references to national or EU law, keywords, date of the decision are associated with judgments, or if the European Case Law Identifier (ECLI) is assigned. The accessibility to all judgment and the creation of machine-readable judicial decisions (completed with the recalled meta-data) can be seen as two parameters of the efficiency of the justice systems.

5.2. Tech: Communication and Document Management

The urgency for improving traditional tasks in the justice field is confirmed by the Council of the European Union. For instance, the Council adopts new rules to modernize judicial cooperation in taking evidence and service of documents.[103] The position of the Council confirms that it is necessary to further improve and expedite the transmission and service of judicial and extrajudicial documents between the Member States while ensuring a high level of security and protection in the transmission of such documents.[104] Thus, the council points out that efficiency and speed in judicial proceedings in civil matters require that judicial and extrajudicial documents be transmitted directly and by rapid means, and in

[103] https://www.consilium.europa.eu/en/press/press-releases/2020/11/04/digital-europe-council-adopts-new-rules-to-modernise-judicial-cooperation-in-taking-of-evidence-and-service-of-documents/. Accessed in June 2022.

[104] https://data.consilium.europa.eu/doc/document/ST-9890-2020-INIT/en/pdf. Accessed June 2022.

order to enhance electronic cross-border transmission of documents through the decentralized IT-system, such documents should not be denied legal effect and should not be considered inadmissible as evidence in the proceedings solely on the grounds that they are in electronic form.

The issues concerning digitalization of justice are under the spotlight also outside the EU borders. A team within the General Services Administration (GSA), carried out an 11-week path analysis on the federal judiciary's Case Management and Electronic Case Files (CM/ECF) system.[105] The research focuses on user needs, business agility, organization and processes, and the Administrative Office of the U.S. Courts' (AO) culture and legal mandates.

From a user experience, the team observed several instances of application crashes and sluggish response times and gathered several participants' reports about similar issues. Incidents diminish user experience and create distrust and dissatisfaction with the system. Moreover, the same team observed several places throughout the CM/ECF interface that are difficult to use, and some tasks that require repetitive clicking or that may be inaccessible to users with disabilities. More in particular, from this analysis, it emerged that issues, difficulties and questions are similar to every (digital) justice system indeed, judges want to be able to see where they need to be next, and understand the context of a case quickly, all while potentially managing multiple cases, hearings, and appointments each day. Literally,

[105] https://aboutblaw.com/XFW. Accessed June 2022.

this report confirms that "*a white whale for the US judiciary over the last several years has been CM/ECF calendaring*"[106].

Finally, the Law Society presented recently a project called the Future Worlds 2050[107], where also the scenarios of the future of the legal sector are addressed. In this work, it is confirmed again that technology is currently expected to deliver the greatest changes in the legal sector. The involved experts declare that impact of technology on the legal profession particularly the rise of automated self-service legal tools and the implications around global data usage and ownership will tremendously impact the legal sector in the near future.

6. CONCLUSION

To conclude, as described, the digitalization of justice is (and most probably will remain) an enormous ongoing project. Considering the addressed problematics emerged by the mapping of all the projects, it is possible to isolate three main streams, one theoretical and two more technical. Firstly, many difficulties and legal questions about the future of AI and Law are still under the spotlight. Administration of justice needs innovation as same as the judiciary, and the discussion on the topic is still open[108]. The discussion on privacy,

[106] A. BIELEN et al, *Administrative Office of the U.S. Courts CM/ECF, Path Analysis*, Report, 2021, https://www.uscourts.gov/sites/default/files/18f_path_analysis_on_us_courts_cmecf_march_2021_opa_0.pdf

[107] https://www.lawsociety.org.uk/topics/research/future-worlds-2050-images-of-the-future-worlds-facing-the-legal-profession-2020-2030. Accessed June 2022.

[108] R. CAVALLO PERIN, *L'amministrazione pubblica con i big data: da Torino un dibattito sull'intelligenza artificiale*, in *Quaderni del Dipartimento di Giurisprudenza dell'Università di Torino*, 2021, R. CAVALLO PERIN, *Ragionando come se la digitalizzazione fosse data*, in *Dir. Amm.*, 2/2020, 305-328.

explainability, control, access and human-based judicial decision is mature but yet animated. The two technical streams concern more the administrative daily need of the justice system. The first one is the transition from a paper-based process to a (full) machine-readable process. The main aim for the next future may be the disappearance of paper forms and documents and the completion of public platforms for legal practitioners to deposit (digital) acts, instances and requests. This goal would enhance the second stream, which is the collection, storage and publication of data. Court decision details, such as norms, outcomes and parties are shared in dedicated databases, where not only legal practitioners can access this information. Even if many tasks and procedures will be fully digitalized, a full digital justice system has not been realized yet and it may be a long-term process yet. The authors of *Giustizia 2030* precise that a digitalized justice system is a system that can improve legal analytics and justice prediction, in terms of court outcomes. Such a system would provide judges and prosecutors with informative tools capable to assist legal professionals in their decisional process by providing updated trends in case law, based on the (justice) big data analytics[109]. The depicted state-of-the-art confirms that a complete and generalized digital transition in the justice system is complex and needs a common strategy of each involved stakeholder and the strong impulse of the policymakers.

Abstract. *The digitalization of justice and legislation is coming regularly under the spotlight. Many are the words and the concepts used to express this topic, but today, during the third Artificial Intelligence boom, the field of research named Artificial Intelligence and Law*

[109] During the sharp shock of the first Covid-19 wave in 2020, professionals, members of the judiciary, lawyers and scholars shared the need for a strategy for the entire Italian justice system. Their aim was to develop a general perspective for real solutions capable to transform justice and support the public recovery after the emergency. To this end, they elaborated a white paper, presenting for pillars for the future of justice, that should be, i) (inter) connected, ii) technologically built-in, iii) organized and innovative, and iv) accessible, simple, sustainable. VV.AA. GIUSTIZIA2030, *Un libro bianco per la giustizia e il suo futuro*, 2020. https://irp.cdn-website.com/458fa343/files/uploaded/Giustizia-2030.pdf. Accessed June 2022.

gained attention and relevance. This field of study appears mature and composed of several sub-fields, from legal ontologies for modeling the legal knowledge and expert systems for legal reasoning and arguments to legal analytics and data science approaches. In particular, intelligent tools for assisting the judiciary are currently based on text analysis techniques, which are constantly under development. To test these techniques on real cases, there are promising projects on going, where academia and courts work together for improving the innovation of the entire justice system. In this work, I present the state-of-the-art of the AI and Law approaches, considering lessons learned, weak points and future lines of research, by presenting an overview of the Italian projects and the goals drafted for the justice system for the next decade.

iUS PUBLICUM NETWORK REVIEW
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"CORRUPTION FROM A REGULATORY PERSPECTIVE"
MARIA DE BENEDETTO
HART PUBLISHING, UK, 2021

BOOK REVIEW

Jean-Bernard AUBY[1]

Maria de Benedetto explains what her book is about in its very first sentence[2].

Its central idea, she writes, '*is that administrative corruption, loke other kinds of illicit behaviour, presupposes both the existence and the ineffectiveness of rules, and it follows that a regulatory perspective may therefore help in preventing both corruption and infringements'*.

The project of the book is therefore to examine the problem of corruption through the lens of regulatory theory. It is original and the reading of the book shows that it is quite relevant.

The theory of regulation (of which, in my opinion, the most efficient presentation can be found in the classic book by Anthony Ogus, '*Regulation: Legal Form and Economic Theory'*, Hart, 2003) is, as is well known, fundamentally a theory of public intervention, an

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[2] M. DE BENEDETTO, Corruption from a Regulatory Perspective, Hart Publishing, UK, 2021.

analysis of the reasons that justify it, of the forms that it takes, and of the way in which it produces or does not produce effects.

A significant part of regulation theory is indeed about legal rules, about what triggers their emergence, about their formulation, and the mechanisms that condition their application, including the degree of flexibility that it entails (on this subject there is a no less classic article by Julia Black: Regulatory Conversations, Journal of Law and Society, March 2002).

It is immediately clear what this approach can contribute to the analysis of corruption and the means to fight it. In essence, corruption is a game with the rules, and even doubly so in general. Corruption is both a game with the rules that seek to prevent and sanction corruption, and a game with the rules that frame what the briber tries to get from the bribed. A person who bribes a public official in order to obtain a public contract is playing both with the rules that seek to prevent and sanction corruption in public procurement and with the rules that govern the award of public contracts.

Based on this theory, Maria de Benedetto succeeds in demonstrating very effectively what corruption owes to the weakness of the rules, which may be due to their excessive complexity, to shortcomings in the mechanisms for monitoring compliance, as well as to those that may affect the sanctioning mechanisms. It also makes several recommendations, which are presented in the last chapter (*'Combating Corruption via Regulation and Controls: Which Formula?'*).

The book is particularly interesting, and not only for its analysis of the basic equation: to limit corruption, one must make good rules and monitor them well. For, beneath this basic equation, in fact, lie various aspects of complexity, which the book encounters on its way.

One is that corruption can only be effectively combated with a combination of good rules and good institutions. This requirement naturally concerns first and foremost the

specialised institutions responsible for preventing and punishing corruption (they are analyzed in Chapter 2 of the book), but it also concerns more broadly the quality of public institutions in general and of the people - elected officials, civil servants - who run them. This is an aspect of the issue which, however, is less a matter of regulatory theory than one of political science and public management.

The second element of complexity is that, while bribery is an exercise in choreography with rules, not all rules play the same role in the ballet. Of paramount importance are those surrounding the sanctions for corruption, especially criminal sanctions. There is probably no legal system in which corruption is not sanctioned at all. And the level of corruption in a given context is a function of a classical equation: corruption occurs when the expected gain of the briber (G) exceeds the product of the sanction's weigh (S) by the probability of its implementation (P): so, where G > S x P.

But the choreography is even more complicated, because, in all corruption arrangements, there are two basic protagonists: the briber and the bribed. If one of them is prosecuted and the corruption pact is demonstrated, then the other one will normally not get away with the sanction. Therefore, every corruption arrangement potentially contains a prisoner dilemma in the sense of game theory.

A third complement to be added to the pure regulatory approach – the book touches upon it on page 42- is related to what causes the corruption to happen in the public sphere. One essential factor, here, is the fact that public institutions are, in a vast amount of situations, in position to distribute scarce resources (two recommended readings on this: Paul Adriaanse and al. , eds, '*Scarcity and the State, Intersentia'*, 2016 – Luis Arroyo and Dolores Utrilla, eds., '*La administracion de la escasez'*, Marcial Pons, 2015); funds, contracts, permissions, and so on. This is probably particularly true in the contemporary era, because of the flourishing of privatizations and of the various public-private partnerships (see e.g. Irma E. Sandoval-Ballesteros, *'From "Institutional" to "Structural" Corruption: Rethinking Accountability in a World of Public-Private Partnerships'*, Harvard University, Edmond J. Safra Working Papers, No. 33, 2013: http://www.ethics.harvard.edu/lab).

In that perspective, some rules appear as having a particular importance in limiting corruption: the ones which govern the granting of the various scarce resources the administration is entitled to allocate. Some of these rules are procedural, they regulate the administrative processes through which the allocation is decided: here, the transparency requirements are of a special importance. Others are material, they frame the legal criteria according to which the allocating decision must be made: there, the issue of discretion is crucial.

A fourth element of complexity – considered in the book around the pages 29 and 92, notably- is the fact that the frequency of corruption in one system is largely function of the level of the trust citizens have in public institutions. And in the production of this trust, good regulation has a limited role: it has certainly one, in the sense that a system in which rules are poorly designed, not well respected, and so on, will normally not attract a high degree of trust, but the latter depends on other conditions, of a social, cultural, and political nature. Most of us are probably confident in the fact that democracy is the best political protection against corruption, and it is probably true. But, as Tocqueville, for example, explained, democracies have also their share of vulnerability to it (in "De la démocratie en Amérique": see Pierre Manent, Tocqueville et la nature de la démocratie, Gallimard, 2006).

Lastly, as Maria de Benedetto notices (around pages 116 and 136), there are two adjacent issues to the one of corruption which are difficult to deal with, whose regulation is not easy at all: it is lobbying, and conflicts of interest. They are not an internal aspect of the corruption problem since both can perfectly exist without being associated to any corrupt practice. But they also often are avenues to corruption. And they are always difficult to regulate, because their adequate level of limitation or prohibition is always difficult to determine (See, for example, Susan Rose-Ackerman, Corruption and conflicts of interest, in Jean-Bernard Auby, Emmanuel Breen and Thomas Perroud, eds., Corruption and Conflicts of Interest: A Comparative Law Approach, Edward Elgar, 2014, p.3).

While keeping the strong line of the regulatory perspective, Maria de Benedetto is aware of all this complexity, and this makes her book all the more penetrating and effective.