The Constitutionalisation of the Digital Ecosystem: Lessons from International Law

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Abstract A complex process of constitutionalisation is currently underway within contemporary society. A multiplicity of normative counteractions is emerging to address the challenges of the digital revolution. However, there is no single constitutional framer. In a globalised environment, constitutionalisation simultaneously occurs at different societal levels. Not only in the institutional perimeter of nation-states but also beyond: on the international plane, in the fiefs of the private actors, within the civil society. This chapter examines to what extent international law scholarship may offer a useful theoretical toolbox to understand the multilevel phenomenon of constitutionalisation of the digital ecosystem. International law theory indeed already projected the notion of constitution beyond the state dimension, helping explain how the emergence of globalised problems in the digital ecosystem necessarily engenders the materialisation of a plurality of constitutional responses. It will be argued that the sense of this Gordian knot can be deciphered only if these emerging constitutional fragments are interpreted as complementary tesserae of a single mosaic. Each one is surfacing with a precise mission within the constitutional dimension, each one compensating the shortcomings of the others to achieve a common aim: translating the core principles of contemporary constitutionalism in the context of the digital ecosystem. Constitutionalising the digital ecosystem is not synonymous with *en bloc* codification but rather represents a gradual process of translation of principles and values. Constitutionalisation does not merely imply the imposition of new constitutional rules but also includes a substantial bottom-up societal input. All the various scattered components of the process of constitutionalisation of the digital ecosystem equally contribute to substantiating the ideals and values of digital constitutionalism, which represents a new theoretical strand within contemporary constitutionalism aiming to adapt its core values to the needs of the digital ecosystem.

I. Introduction

There is a link between the constitutional dimension, both at the state level and beyond, and technological advancement.[1] Technology has always profoundly transformed society and the role of individuals within it. Over

1 This chapter draws on Chapter 4 of my doctoral thesis 'Digital Constitutionalism: The Role of Internet Bills of Rights' (University College Dublin, 2020), now published, with the same title, by Routledge (2022). I would like to thank the participants of the workshop 'International Law and the Internet' hosted by the Max Planck Institute for Comparative Public Law and International Law on 16th October 2020, and in particular Gunther Teubner, Chien-Huei Wu, Thiago Almeida, and the Editors of this Volume for their comments on this paper.

the past few centuries, new technologies have altered power relations, created new tools of societal control and generated socio-economic expectations. These changes have been reflected in major constitutional upheavals. The great constitutional revolutions that occurred in Europe and America at the end of the eighteenth century were the heir of two centuries of a scientific revolution.[2] Similarly, today, constitutional law both within and beyond the state is not remaining inert vis-à-vis the challenges of the digital revolution. It is true – in contemporary society, the constitutional dimension struggles on multiple fronts.[3] Its state-centric origin demands a conceptual rethinking when applied to the global digital ecosystem, where private multinational companies emerge as dominant actors beside nation-states. Yet, the constitutional dimension is slowly reacting, progressively changing and evolving through a series of targeted transformations.

These transformations take the form of normative responses, seeking to protect fundamental rights and to balance the relationship between powerful and weak actors in the mutated contest of the digital ecosystem. One can mention as examples new provisions added to national constitutions that aim to guarantee the right to participate in the information society, such as the new Article 5A of the Greek Constitution.[4] Judicial decisions affirming the right to Internet access: in 2009, the French *Conseil constitutionnel* explicitly recognised this right, followed in 2010 by the Costa Rican *Sala Constitucional*.[5] Sets of legislation detailing the guarantees for our 'digital body,' personal data: here, the compulsory reference is to the General Data Protection Regulation.[6] Dozens of declarations of rights for the Internet age issued by civil society groups around the globe: one example for all, the Charter of Human Rights and Principles

2 See Chris Thornhill, *A Sociology of Constitutions: Constitutions and State Legitimacy in Historical-Sociological Perspective* (Cambridge: Cambridge University Press 2013), 181 ff.; Thomas S Kuhn, *The Structure of Scientific Revolutions* (4th edn, Chicago, London: University of Chicago Press 2012).

3 See Petra Dobner and Martin Loughlin (eds), *The Twilight of Constitutionalism?* (Oxford: Oxford University Press 2010).

4 Greek Constitution, http://www.hellenicparliament.gr/UserFiles/f3c70a23-7696-49db-9148-f24dce6a27c8/001-156%20aggliko.pdf.

5 Conseil constitutionnel, décision n° 2009–580 DC du 10 juin 2009, https://www.conseil-constitutionnel.fr/decision/2009/2009580DC.htm; Sala Constitucional de la Corte Suprema de Justicia, sentencia n° 12790 de 30 de Julio de 2010, https://www.poder-judicial.go.cr/salaconstitucional/index.php/servicios-publicos/759-10-012790.

6 Regulation 2016/679/EU.

for the Internet, currently translated in more than ten languages.[7] New procedural safeguards instilled within internal governance mechanisms of private companies: there is still much work to do, but we can certainly refer to the new online content moderation principles and practices of social media companies like Facebook or Twitter.[8] And as the last, but certainly not least examples of normative response to the challenges of the digital revolution, one can list the emergence of case-law from sector-specific adjudicating mechanisms, such as the ICANN dispute resolution service providers,[9] as well as the institution by online private companies of semi-judicial internal bodies with the duty to decide issues related to the validity of content published on these platforms.[10]

By adopting a functional approach, looking beyond the formal character of norms, one can identify the emergence of these constitutional responses both within and beyond the state dimension, involving also private companies as main actors of constitutionalising trends.[11] The reaction of the constitutional dimension to the digital revolution does not only materialise in national constitutions, statutes and judicial decisions. Civil society groups affirm their digital rights in non-binding declarations. Multinational technology corporations are pushed to introduce individual rights safeguards in their internal rules. Private companies' decision-making bodies progressively establish principles to protect users' rights in their own case-law.

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7 Charter of Human Rights and Principles for the Internet https://internetrightsandprinciples.org/charter/.

8 See Edoardo Celeste, 'Terms of Service and Bills of Rights: New Mechanisms of Constitutionalisation in the Social Media Environment?,' International Review of Law, Computers & Technology 33 (2019), 122-138.

9 See Lars Viellechner, 'Constitutionalism as a Cipher: On the Convergence of Constitutionalist and Pluralist Approaches to the Globalization of Law,' Göttingen Journal of International Law 4 (2012), 599-623. See also Cäcilia Hermes, 'Cyberspace as an Example of Self-Organisation from a Network Perspective,' HJIL 81 (2021).

10 See Matthias C. Kettemann and Wolfgang Schulz, 'Setting Rules for 2.7 Billion. A (First) Look into Facebook's Norm-Making System: Results of a Pilot Study,' Working Papers of the Hans-Bredow-Institut, January 2020, https://www.hans-bredow-institut.de/uploads/media/default/cms/media/k0gjxdi_AP_WiP001InsideFacebook.pdf.

11 For an analysis that focuses on the digital context see Edoardo Celeste, 'Digital Constitutionalism: A New Systematic Theorisation,' International Review of Law, Computers & Technology 33 (2019), 76-99; more generally on the point, see Gunther Teubner, *Constitutional Fragments: Societal Constitutionalism and Globalization* (Oxford: Oxford University Press 2012).

The panorama of constitutional counteractions to the challenges of the digital revolution appears fragmented, plural, polycentric. Constitutional patterns emerge both in legally binding and non-binding legal sources, through democratic and institutionalised processes, and through spontaneous deliberation of non-organised groups. Counteractions developing in the national dimension address the relationship between the state and individuals and apply within circumscribed territories, while transnational constitutional instruments focus on the power that private corporations exercise on their users on a global scale. The constitutional discourse is no longer uniform and unitary. Nor is it possible to refer to single legal orders. Each constitutional instrument is a 'fragment,'[12] a 'partial constitution,'[13] We face a scenario of constitutional pluralism, a complex mosaic not only combining multiple sources but also intersecting different legal orders.[14] If one were able to gain an aerial view of this phenomenon in motion, one would not simply see the static image of a set of constitutional fragments but would observe a lively and effervescent scenario: what this chapter calls a process of constitutionalisation.

The image of the medieval feudal system, where the power is layered and fragmented, where kings are such in one territory but subjects in others, and the distinction between private and public blurs, once again comes to mind. However, it is not necessary to go back to the Middle Ages to retrace an analogous phenomenon.[15] Interestingly, in international law, there is a long-standing tradition of scholars embracing a constitutionalist approach. Recent studies explain that constitutional pluralism is a general phenomenon of our age, a consequence of a specific contemporary trend: globalisation. This chapter does not aim to advance a normative call in favour of the emergence of these constitutional counteractions but rather seeks to investigate to what extent international law can offer a useful theoretical toolbox to analyse this multifaceted trend as a single phenomenon of constitutionalisation of the digital ecosystem.

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12 See Teubner, *Constitutional Fragments* (n. 11).

13 See Viellechner (n. 9); Anne Peters, 'The Globalization of State Constitutions' in: Janne E. Nijman and André Nollkaemper (eds), *New Perspectives on the Divide Between National and International Law* (Oxford: Oxford University Press 2007), 251-308.

14 See the extremely accurate overview provided in Matthias C. Kettemann, *The Normative Order of the Internet: A Theory of Rule and Regulation Online* (Oxford: Oxford University Press 2020); on the notion of 'constitutional pluralism,' see Neil Walker, 'The Idea of Constitutional Pluralism,' MLR 65 (2002), 317-359.

15 See Viellechner (n. 9).

This contribution is divided into two main sections. Section 2 analyses the conceptual instruments that international law offers to interpret the current phenomenon of constitutionalisation of the digital ecosystem. It will start by explaining how international law theory projected the notion of constitution beyond the state dimension and will argue that the emergence of globalised problems necessarily engenders the materialisation of a plurality of constitutional responses (II.1). Such a process, which will be denoted as constitutionalisation, may take different forms. Section II.2 will present a notorious example focusing on the constitutionalisation of the European Union. This context will not be used as a model of the process of constitutionalisation of the digital ecosystem but will be analysed from a theoretical standpoint to show that the appearance of constitutional patterns beyond the nation-state does not neuter but rather complement parallel constitutionalising processes at multiple levels (II.3). This argument will be finally supported by referring to the socio-legal scholarship on the topic (II.4).

Section III will investigate how the conceptual framework analysed in Section II can be applied to interpret the process of constitutionalisation of the digital ecosystem. Such process, too, is engendered by the globalised issues generated by the digital revolution and consequently comprises a plurality of fragmented constitutional counteractions (III.1). Constitutionalising the digital ecosystem is not synonymous with *en bloc* codification but rather represents a gradual process of translation of principles and values (III.2). Constitutionalisation does not merely imply the imposition of new constitutional rules but also includes a substantial bottom-up societal input (III.3). All the various scattered components of the process of constitutionalisation of the digital ecosystem equally contribute to substantiating the ideals and values of digital constitutionalism, which represents a new theoretical strand within contemporary constitutionalism aiming to adapt its core values to the needs of the digital ecosystem (III.4).

II. The International Law Toolbox on the Concept of Constitutionalisation

1. Globalisation and Pluralism: The Legacy of International Constitutional Law

Interestingly, in international law, there is a long-standing tradition of scholars embracing a constitutionalist approach.[16] In fact, the roots of what has been called 'international constitutional law' date back to the first half of the past century.[17] In 1926, Alfred Verdross wrote a book entitled *The Constitution of the International Legal Community*, in which he argued that the norms regulating the sources, scope, and jurisdiction of international law represent its 'constitution.'[18] For the sake of simplification, a first strand of the international constitutional law doctrine insisted on this analogic and hierarchical approach.[19] According to this vision, the meta-rules of international law, i.e. the rules which regulate international rule-making, would present some characters similar to domestic constitutions.[20] On the one hand, they would represent 'higher' norms establishing procedural constraints, as, for example, the Charter of the United Nations does by setting the rules related to the sources, scope and jurisdiction of international law.[21] On the other hand, they would provide substantive limitations in relation to primary values worthy of protection, such as, for

16 For a general overview, see Andrea Bianchi, *International Law Theories: An Inquiry into Different Ways of Thinking* (Oxford: Oxford University Press 2016), 44-71; for a critique on the use of a constitutionalist approach in international law, see Martti Koskenniemi, 'Constitutionalism as Mindset: Reflections on Kantian Themes About International Law and Globalization,' Theoretical Inquiries in Law 8 (2006), 9-35.

17 This expression first appeared in Wolfgang Friedmann, *The Changing Structure of International Law* (New York: Columbia University Press 1964).

18 Alfred Verdross, *Die Verfassung der Völkerrechtsgemeinschaft* (Wien: Springer 1926); see Bardo Fassbender, 'The Meaning of International Constitutional Law' in: Ronald St. John Macdonald and Douglas M. Johnston (eds), *Towards World Constitutionalism: Issues in the Legal Ordering of the World Community* (Leiden: Nijhoff 2005), 837-851.

19 See, in particular, Bardo Fassbender, 'The United Nations Charter as the Constitution of the International Community,' Colum. J. Transnat'l L.36 (1998), 529-619; Fassbender, 'The Meaning of International Constitutional Law' (n. 18).

20 See Verdross (n. 18); Fassbender, 'The Meaning of International Constitutional Law' (n. 18).

21 See Fassbender, 'The United Nations Charter as the Constitution of the International Community' (n. 19).

instance, in the case of the principles of *jus cogens* or *erga omnes* obligations prohibiting slavery and genocide.[22]

Starting from these premises, a stream of scholars went even further. They argued that core international values and principles would not be merely *analogically* constitutional, as the fundamental rules of an autonomous legal order – that of interstate relationships – that is deemed to be distinct from domestic systems. These norms would really perform a constitutional function *in conjunction with* domestic constitutional law.[23] The international legal order is no longer seen as an interstate, state-centric normative architecture. According to this vision, the weathercock of international law would have turned towards the individual dimension.[24] The entirety of constitutional law, both on an international and domestic plane, would share its primary aim. International constitutional norms, too, become inviolable principles seeking to protect individual rights, a series of norms that would be even superior to the will of the states.[25] States would still be the chief characters but would act 'in a play written and directed by the international community.'[26]

Such a novel reading of the role of international law was explained in the context of the globalisation phenomenon. Globalisation is the process of progressive 'appearance of global, de-territorialised problems.'[27] Issues such as climate change, international terrorism, or mass migration cannot be addressed on the international plane by single nation-states but would require the cooperation of a multiplicity of actors.[28] Such enhanced inter-

22 See Fassbender, 'The Meaning of International Constitutional Law' (n. 18).

23 See, in particular, Christian Tomuschat, 'International Law: Ensuring the Survival of Mankind on the Eve of a New Century: General Course on Public International Law,' Collected Courses of The Hague Academy of International Law 281 (1999), 9-438; further on Tomuschat's vision, see Armin von Bogdandy, 'Constitutionalism in International Law: Comment on a Proposal from Germany,' Harv. Int'l. L.J. 47 (2006), 223-242.

24 See Anne Peters, 'Humanity as the A and Ω of Sovereignty,' EJIL 20 (2009), 513-544.

25 Christian Tomuschat, 'Obligations Arising for States without or against Their Will,' Collected Courses of The Hague Academy of International Law 241 (1993), 195-374; cf. Fassbender, 'The Meaning of International Constitutional Law' (n. 18).

26 Von Bogdandy (n. 23), 228.

27 Anne Peters, 'Compensatory Constitutionalism: The Function and Potential of Fundamental International Norms and Structures,' LJIL 19 (2006), 579-610 (580).

28 See Jost Delbrück, 'Structural Changes in the International System and Its Legal Order: International Law in the Era of Globalization,' Swiss Review of International and European Law 11 (2001), 1-36; Anne Peters, 'The Refinement of Inter-

dependence concretely manifests itself in a double, vertical shift of power. Part of nation-states' functions are, on the one hand, absorbed by higher level, supranational entities; on the other hand, entrusted to a lower level, multinational non-state actors.[29] Dobner and Loughlin talk of an 'erosion of statehood.'[30] The nation-state is no longer the monopolist of power. A series of dominant actors emerge beyond the state dimension, creating new transnational contexts in which individual rights need to be protected and the powers of the players involved balanced.

This novel circumstance generates a new constitutional question.[31] Domestic constitutions, only binding single nation-states, cannot address this issue alone. Global problems ultimately require constitutional pluralism.[32] The dispersion of power among various actors engenders the emergence of new constitutional mechanisms beyond the state: a series of phenomena that have been called 'constitutionalisation.'

2. *Forms of Constitutionalisation: The EU as a Case Study*

The European Union is one of the transnational contexts in which the scholarship has more extensively analysed and vigorously debated the effective existence of a process of constitutionalisation. This context will not be used as an example of the process of constitutionalisation of the digital ecosystem but will be analysed from a theoretical standpoint to demonstrate that the appearance of constitutional patterns beyond the nation-state does not neuter but rather complement parallel constitutionalising processes at multiple levels.

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national Law: From Fragmentation to Regime Interaction and Politicization,' I CON 15 (2017), 671-704.

29 Peters, 'Compensatory Constitutionalism' (n. 27).

30 Dobner and Loughlin (n. 3), pt. 1.

31 See Gunther Teubner, 'Societal Constitutionalism: Alternatives to State-centred Constitutional Theory?' in: Christian Joerges, Inger-Johanne Sand and Gunther Teubner (eds), *Transnational Governance and Constitutionalism. International Studies in the Theory of Private Law* (Oxford: Hart Publishing 2004), 3-28.

32 Cf. Daniel Halberstam, 'Constitutional Heterarchy: The Centrality of Conflict in the European Union and the United States' in: Jeffrey L. Dunoff and Joel P. Trachtman (eds), *Ruling the World?: Constitutionalism, International Law, and Global Governance* (Cambridge: Cambridge University Press 2009), 326-355.

In 1951, six European countries created the European Coal and Steel Community.[33] In 1957, the same founding states established the European Economic Community (EEC) and the European Atomic Energy Community (Euratom). From a formal point of view, these three entities, which only in 1967 merged together to become the European Communities, were nothing but new international organisations established by a series of classical multilateral treaties. International agreements that were really called 'treaties,' and not charged with a constitutional flavour, as in the case of the statutes of the International Labour Organisation (ILO), the Food and Agriculture Organisation (FAO), or the United Nations Educational, Scientific and Cultural Organization (UNESCO), which had been formally denominated as 'constitutions.'[34]

Yet, in less than four decades, the very peculiarities of these apparently ordinary multilateral agreements would have allowed a seemingly conventional interstate organisation to become autonomous, 'constitutional legal order.'[35] Indeed, the scholarship soon acknowledged that precisely the power conferred by the treaties to the European Court of Justice had been the key factor of this transformation.[36] In 1963, in the *Van Gend en Loos* case, the court recognised the right of individuals to rely on the provisions of what at the time was Community law before national jurisdictions (so-called 'direct effect'), even if technically the treaty had been signed by, and therefore only bound, Member States.[37] The following year, in the

33 On the history of the European Union, see Wim F. V. Vanthoor, *A Chronological History of the European Union 1946-1998* (Cheltenham: Edward Elgar Publishing 1999).

34 See ILO, 'International Labour Organisation Constitution,' (1919), https://www.ilo.org/dyn/normlex/en/f?p=1000:62:0::NO:62:P62_LIST_ENTRIE_ID:2453907:NO; FAO, 'Constitution of the Food and Agriculture Organization of the United Nations,' (16 October 1945), http://www.fao.org/3/x5584e/x5584e0i.htm; UNESCO, 'Constitution of the United Nations Educational, Scientific, and Cultural Organization,' (16 November 1945), http://portal.unesco.org/en/ev.php-URL_ID=15244&URL_DO=DO_TOPIC&URL_SECTION=201.html.

35 See Paul Craig, 'Constitutions, Constitutionalism, and the European Union,' ELJ 7 (2001), 125-150; J.H.H. Weiler and Ulrich R. Haltern, 'The Autonomy of the Community Legal Order - Through the Looking Glass,' Harv. Int'l L.J. 37 (1996), 411-448 37.

36 See Eric Stein, 'Lawyers, Judges, and the Making of a Transnational Constitution,' The American Journal of International Law 75 (1981), 1-27; G. Federico Mancini, 'The Making of A Constitution For Europe,' CML Rev. 26 (1989), 595-614.

37 ECJ, *NV Algemene Transport- en Expeditie Onderneming van Gend & Loos v. Netherlands Inland Revenue Administration,* judgment of 5 February 1963, case no. 26/62, ECLI:EU:C:1963:1.

case *Costa v. Enel*, the European judges held that Community law prevails on national law, even if the latter is adopted subsequently (so-called 'supremacy of EU law').[38] In a series of cases from the early 1970s, the Court distinguished areas of exclusive Community competence and areas in which Member States were prevented from legislating unless the Community had not taken any positive action (so-called principles of 'exclusivity' and 'preemption').[39] In *Nold v. Commission*, the Luxembourg judges affirmed to be bound by fundamental rights, as recognised by Member States' constitutions and by international human rights treaties.[40] In *Les Verts*, the court, by acknowledging that the European Economic Community is founded on the rule of law, asserted that the treaty is the Community's 'basic constitutional charter.'[41] Last but certainly not least, in *Kadi,* the Court affirmed the need to protect EU fundamental rights also when giving effect to UN Security Council measures, *de facto* subjecting the latter to a sort of control of constitutionality against EU internal standards.[42]

This selection of examples provides an idea of how the European Court of Justice *constitutionalised* the European legal order. The Luxembourg judges, to use the words of Judge Mancini, read 'an unwritten bill of rights into Community law.' They elaborated a European constitution to complement a conventional international treaty. Weiler compares the set of rules elaborated by the Court with Microsoft Windows: they would be the operating system created to 'overlay' the European Community's Disk Operating System (DOS), public international law.[43] The European Court of Justice would have transformed an interstate organisation into a *sui generis* regime where *both* individuals *and* Member States are subject

38 ECJ, *Flaminio Costa v. ENEL*, judgment of 15 July 1964, case no. 6/64, ECLI:EU:C:1964:66.

39 Mancini (n. 36); J.H.H. Weiler, *The Constitution of Europe: 'Do the New Clothes Have An Emperor?' and Other Essays on European Integration* (Cambridge: Cambridge University Press 1999), 10-101.

40 ECJ, *J. Nold, Kohlen- und Baustoffgroßhandlung v. Commission of the European Communities*, judgment of 14 May 1974, case no. 4/73, ECLI:EU:C:1974:51.

41 ECJ, *Parti écologiste 'Les Verts' v. European Parliament*, judgment of 23 April 1986, case no. 294/83, ECLI:EU:C:1986:166.

42 ECJ (Grand Chamber), Yassin Abdullah Kadi and Al Barakaat International Foundation v. Council of the European Union and Commission of the European Communities, judgment of 3 September 2008, case no. C-402/05 P and C-415/05 P, ECLI:EU:C:2008:461.

43 J.H.H. Weiler and Joel P. Trachtman, 'European Constitutionalism and Its Discontents,' Nw. J. Int'l L. & Bus. 17 (1996-1997), 354-397 (357). The acronym 'DOS' refers to the basic Disk Operating System for personal computer.

to a common set of rules.[44] Constitutionalisation would mean not only a 'horizontal,' infra-institutional, re-distribution of power but also the configuration of a 'vertically integrated' legal order.[45]

In one of his papers, Francis Snyder investigated to what extent the EU has a 'constitution,' and observed that the answer to this question depends on what one means by such a term.[46] He recognised that, while the EU can be said to have a constitution in an empirical and material sense, respectively meaning a factual organisation and a set of norms ordering the polity, it is arguable that the EU has a formal constitution, and it is certain that the EU still lacks a subjective constitution, intended as a fundamental law approved by its people.[47] This observation allows us to better understand why the scholarly debate about the constitutionalisation of the EU did not confine itself to the analysis of the judicial activism that led the Court of Justice to distil a set of constitutional principles from an apparently conventional multilateral treaty, what in Snyder's terms would be the EU 'material' constitution. Indeed, the notion of constitutionalisation was also used to refer to the process of adoption of a 'formal' constitution of the EU and to the progressive democratisation of the European constitutional architecture, Snyder's 'subjective' constitution. Ingolf Pernice wrote: 'If we talk about the 'constitutionalisation' of the EU, in my view, this means talking about the citizens of the Union taking ownership of the Union […].'[48]

However, the problem for many authors is: who are the citizens of the Union? Can we have a European constitution without European *demos*?[49] These questions highlight one of the major difficulties that characterise

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44 Weiler and Trachtman (n. 43).

45 Ibid., 356; see also Koen Lenaerts, 'Constitutionalism and the Many Faces of Federalism,' Am. J. Comp. L. 38 (1990), 205-264.

46 Francis Snyder, 'The Unfinished Constitution of the European Union: Principles, Processes and Culture' in: J.H.H. Weiler and Marlene Wind (eds), *European Constitutionalism Beyond the State* (Cambridge: Cambridge University Press 2003), 55-73.

47 See also Craig (n. 35).

48 Ingolf E. A. Pernice, 'The Treaty of Lisbon: Multilevel Constitutionalism in Action,' Columbia Journal of European Law 15 (2009), 349-407 (369).

49 See Dieter Grimm, 'Does Europe Need a Constitution?,' ELJ 1 (1995), 282-302; Jürgen Habermas, 'Remarks on Dieter Grimm's 'Does Europe Need a Constitution?'', ELJ 1 (1995), 303-307; see also Craig (n. 35); J.H.H. Weiler, 'In Defence of the Status Quo: Europe's Constitutional Sonderweg' in: J.H.H. Weiler and Marlene Wind (eds), *European Constitutionalism Beyond the State* (Cambridge: Cambridge University Press 2003), 7-24.

the constitutional discourse in the transnational context: translating the concept of the constitution beyond the state dimension.[50] This issue is currently one of the main subjects of investigation of the scholarly stream that studies phenomena of 'global constitutionalism.'[51] As is evident from those who support the idea that the EU should have a subjective constitution, the objective of analysing processes of constitutionalisation is not only to identify the emergence of constitutional patterns at the transnational level but also to normatively suggest potential avenues to instil constitutional values and mechanisms beyond the state. To this purpose, an exercise of translation is needed. One cannot simply reason with categories belonging to domestic constitutional theory. One would need a 'post-national' concept of the constitution.[52] It is in this way that, for example, Pernice salvages the idea of a European constitution without a homogenous European people.[53] A post-national constitution would differ from a domestic constitution, firstly, because it would *not* be an 'exclusive,' total constitution, comprehensively regulating the exercise of power within a territory, and, secondly, because it would not presuppose the pre-existence of a people living in a specific territory, given the fact that a post-national constitution does not necessarily need to 'constitute' a state. Transnational constitutions, such as the European one, would not aim to annihilate domestic constitutions but rather to integrate and/or compliment them within a 'multilevel' constitutional order.

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50 Specifically on the issue of transferring democracy in transnational constitutions, see Gunther Teubner, 'Quod Omnes Tangit: Transnational Constitutions Without Democracy?,' J. L. & Soc. 45 (2018), 5-29; cf. Armin von Bogdandy and Sergio Dellavalle, 'The Lex Mercatoria of Systems Theory: Localisation, Reconstruction and Criticism from a Public Law Perspective,' Transnational Legal Theory 4 (2013), 59-82.

51 See Anne Peters, 'Global Constitutionalism' in: Michael T. Gibbons (ed), *The Encyclopedia of Political Thought* (Chichester: Wiley-Blackwell 2014), 1484-1487; Christine E. J. Schwöbel, 'Situating the Debate on Global Constitutionalism,' I.CON 8 (2010), 611-635; Antje Wiener et al., 'Global Constitutionalism: Human Rights, Democracy and the Rule of Law,' Global Constitutionalism 1 (2012), 1-15.

52 See Neil Walker, 'Postnational Constitutionalism and the Problem of Translation' in: J.H.H. Weiler and Marlene Wind (eds), *European Constitutionalism Beyond the State* (Cambridge: Cambridge University Press 2003), 27-54.

53 Pernice, 'The Treaty of Lisbon' (n. 48), 365 ff.

3. Multilevel Theory: Reconciling Constitutional Dimensions

Interestingly, in the study of phenomena of constitutionalisation, constitutional principles, the existence of which is identified or advocated at the transnational level, are not examined in isolation. The scholarship also investigated the nature of the link between domestic and transnational constitutional dimensions. These two constitutional levels would not amount to watertight legal orders but could rather be seen as two communicating vessels. Working in tandem, when the domestic constitutional law vessel reaches its point of saturation due to the materialisation of global challenges beyond its reach, the inner fluid would start flowing in the international constitutional law container.

This relationship has been described by the scholarship in different ways. Christian Tomuschat analysed the role of international treaties in terms of 'völkerrechtliche Nebenverfassungen,' literally translated as international law supplementary (or auxiliary) constitutions.[54] According to this vision, international and domestic law would no longer have different aims but would both share the goal of protecting individual rights.[55] International law's focus would be on human rights rather than on interstate relations. Therefore, one can conceive one single integrated 'individual-oriented' system composed of multiple levels.[56] In this way, international law acquires a new constitutional function, supplementing domestic law vis-à-vis global challenges and even imposing a series of principles superior to the will of the states.[57] In this way, Tomuschat eventually postulated a new hierarchy of legal sources, where international law acquires a foundational value for domestic constitutional law.[58]

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54 Christian Tomuschat et al. (eds), *Veröffentlichungen der Vereinigung der Deutschen Staatsrechtslehrer, Heft 36: Der Verfassungsstaat im Geflecht der internationalen Beziehungen. Gemeinden und Kreise vor den öffentlichen Aufgaben der Gegenwart: Berichte und Diskussionen auf der Tagung der Vereinigung der Deutschen Staatsrechtslehrer in Basel vom 5. bis 8. Oktober 1977* (eBook, Berlin: De Gruyter 2013), 51; see von Bogdandy (n. 23).

55 For a comprehensive outline of Tomuschat's position, see von Bogdandy (n. 23); see also Anne Peters, *Beyond Human Rights: The Legal Status of the Individual in International Law* (Cambridge: Cambridge University Press 2016); Peters, 'Humanity as the A and Ω of Sovereignty' (n. 24).

56 Tomuschat, 'International Law: Ensuring the Survival of Mankind' (n. 23), 237.

57 See Tomuschat, 'Obligations Arising for States without or against Their Will' (n. 25).

58 Tomuschat, 'International Law: Ensuring the Survival of Mankind' (n. 23).

Other scholars, although sharing similar premises, did not support the view of a hierarchical relationship between transnational and domestic constitutional law. In the context of the European Union, for example, EU law and Member States' constitutions have rather been seen as complementary sources. According to Pernice, EU and national law would represent two 'formally autonomous systems,' which, however, in contrast to what happens in federal states, would mutually affect each other without implying the existence of a hierarchy.[59] For Pernice, both these sources would aim to protect citizens' rights and, as such, would form a *Verfassungsverbund*, a composed 'constitutional unit,' though being 'in permanent interdependency.'[60] Pernice baptises this complex architecture 'multilevel constitutionalism,' stressing that the presence of multiple layers does not necessarily imply the existence of a hierarchy.[61] Complementation between EU and national law would be a form of symbiotic interdependence.[62]

Lastly, Anne Peters further characterises the relationship between transnational and domestic law in a different way. Globalisation would have put national constitutions under pressure.[63] Principles of national constitutional law appear 'dysfunctional' or 'empty' vis-à-vis phenomena which transcend the territory of the state.[64] A significant portion of state power is progressively transferred to the transnational level. Both supranational

59 Pernice, 'The Treaty of Lisbon' (n. 48), 383.

60 Ibid., 352, 373, 379.

61 Ibid.; see also Ingolf Pernice, 'Multilevel Constitutionalism and the Treaty of Amsterdam: European Constitution-Making Revisited,' CML Rev. 36 (1999), 703-750. Pernice will subsequently apply the theory of multilevel constitutionalism to the broader context of the contemporary society amidst the challenges of the digital revolution: see Ingolf Pernice, 'Global Constitutionalism and the Internet. Taking People Seriously' in: Stefan Kadelbach and Rainer Hofmann (eds), *Law Beyond the State: Pasts and Futures* (Frankfurt a.M/New York: Campus Verlag 2016), 151-206; Ingolf Pernice, 'Risk Management in the Digital Constellation – A Constitutional Perspective,' October 2017, HIIG Discussion Paper Series No 2017-07.

62 See Weiler and Trachtman (n. 43).

63 Peters, 'Global Constitutionalism' (n. 51).

64 Jan Klabbers, Anne Peters and Geir Ulfstein, *The Constitutionalization of International Law* (Oxford: Oxford University Press 2009), 347; see also Peters, 'The Globalization of State Constitutions' (n. 13); cf. also Anneli Albi and Samo Bardutzky (eds), *National Constitutions in European and Global Governance: Democracy, Rights, the Rule of Law. National Reports* (The Hague/Berlin: Asser Press/Springer Open 2019), taking Peter's analysis as a starting point for an in-depth analysis focusing on the national constitutions of EU Member States.

organisations and multinational private actors emerge as new dominant players, but at the same time, domestic constitutions are no longer 'total constitutions,' capable of facing this mutated transnational scenario.[65] According to Peters, globalisation would not alter the assumption that the 'achievements of constitutionalism are to be preserved.'[66] She, therefore, affirms that this 'de-constitutionalisation' at the domestic level normatively requires a 'compensatory constitutionalisation on the international plane.'[67] The final result, as in the previous case, is always a constitutional conglomerate composed of *both* domestic and transnational constitutional instruments. However, the rationale behind the symbiosis between these two sources of law changes: national constitutional law has lost its centrality, it is no longer effective, and consequently needs to be compensated by a series of normative instruments emerging at the transnational level.

4. Double Reflexivity: A Socio-legal Perspective

In the first act of Rossini's *The Barber of Seville*, Figaro, the hairdresser of the title, enters the stage on the notes of the famous aria 'Largo al factotum della città.' Cesare Sterbini, the libretto's author, writes 'make the way for the factotum of the city' because effectively, in the eighteenth century, the barber was a man of all work: coiffeur, clock repairer, dentist and even surgeon. A role with a wide-ranging set of competencies that today – luckily – are exercised by several other professionals.

The nation-state, before the advent of globalisation, somehow resembled Figaro: it was like the eighteenth century's barber, the factotum of both domestic and interstate affairs. Interestingly, similarly to what has happened to the one-time multifaceted profession of the barber, the state, too, has progressively lost its societal centrality. Functions once exclusively exercised by the state are today delegated to transnational entities. Consequently, constitutional law is no longer exclusively national, rooted in a territory, linked to a specific people. Conversely, it is necessarily plural, and it appears as a complex conglomerate of several legal sources also emerging beyond the state dimension.

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65 Peters, 'Compensatory Constitutionalism' (n. 27), 580.

66 Peters, 'Global Constitutionalism' (n. 51), 2.

67 Peters, 'Compensatory Constitutionalism' (n. 27), 580; see also Peters, 'The Refinement of International Law' (n. 28), 688 ff. on 'rapprochement' techniques in international norms.

The explanation of such a phenomenon provided by legal sociologists reflects the dynamics underlying the evolution of the role of the barber in the last three centuries. In the globalised society, boundaries no longer follow national frontiers but are defined according to functional specialisation.[68] One can identify 'a multiplicity of autonomous sub-systems.'[69] The economy, media, health, science: each one represents an independent regime. The barber is no longer, at the same time, the clock repairer, dentist and surgeon because these figures have emerged as autonomous, specialised professions. In the same way, vis-à-vis global phenomena which engender a sectoral differentiation, some prerogatives once concentrated in the hands of the state are today assumed by specialised transnational entities.

Such displacement of power at the transnational level generates a series of constitutional questions to which national constitutional law cannot, alone, provide an answer. Niklas Luhmann argued that the emergence of a 'world society' is not compensated by the emergence of world politics, and this circumstance would generate a twilight of constitutionalism at a global level.[70] Conversely, David Sciulli contended that in spite of rampant authoritarianism at the societal level, a constitutionalising trend was emerging in a plurality of societal institutions, such as those setting norms for specific professions in a collegial way.[71] Following this line, Gunther Teubner insisted that the functional differentiation of society would generate a 'societal' constitutionalisation: each societal sub-system would be able to develop its own constitutional norms.[72] According to this vision, constitutional law-making would not only involve traditional centres of

68 See Niklas Luhmann, *Theory of Society*, *Volume 1* (Stanford: Stanford University Press 2012); Teubner, 'Societal Constitutionalism: Alternatives to State-centred Constitutional Theory?' (n. 31).

69 Ibid., 8; for an overview of Teubner's position, see also Bianchi (n. 16), 44-71.

70 Niklas Luhmann, *Law as a Social System* (Oxford: Oxford University Press 2004).

71 See David Sciulli, *Theory of Societal Constitutionalism: Foundations of a Non-Marxist Critical Theory* (Cambridge: Cambridge University Press 1992); David Sciulli, *Corporate Power in Civil Society: An Application of Societal Constitutionalism* (New York: NYU Press 2001).

72 See Teubner, 'Societal Constitutionalism: Alternatives to State-centred Constitutional Theory?' (n. 31); Teubner, *Constitutional Fragments* (n. 11); Angelo Golia and Gunther Teubner, 'Societal Constitutionalism (Theory Of),' Max Planck Institute for Comparative Public Law & International Law Research Paper No. 2021-08, 15 March 2021, https://www.ssrn.com/index.cfm/en/; cf. Karl-Heinz Ladeur, 'The evolution of the law and the possibility of a 'global law' extending beyond the sphere of the state – simultaneously, a critique of the 'self-constitutionalisation' thesis,' Ancilla Iuris (2012), 220-255.

power but would flood into the 'peripheries of law.'[73] Constitutional law would no longer be relegated to the state dimension. On the contrary, domestic constitutions would become 'a sub-constitution among others.'[74]

A socio-legal perspective allows us to understand that the 'fragments' of this plural constitutional scenario are not only represented by norms developed in a state-centric dimension, be they at the national or supranational level, but also by principles shaped in the social context.[75] Teubner talks of the emergence of 'civil constitutions.'[76] A world unitary constitution is a utopia, as is to think that the activities of states and supranational organisations exhaust the potential articulations of global society's constitutionalisation. Such a process would be incremental, but, above all, hybrid and composite: 'a mix of autonomous and heteronomous law-making.'[77] Constitutionalisation is therefore understood as a legal *and* social process.[78] Teubner articulates it into several steps.[79]

The constitutional norms self-produced by autonomous sub-systems of society, such as the economy, media, health or science, would be initially only of 'constitutive,' and not 'limitative,' nature: they would amount to the fundamental rules which do not limit, but articulate the power of the dominant actors (e.g. private corporations), what Teubner calls the 'organised-professional' sphere of the society.[80] This situation triggers a reaction from its societal counterpart, the 'spontaneous' sector, which includes governmental agencies, civil society groups, trade unions, consumer protection organisations and alike. The latter generates 'constitutional learning impulses' by manifesting its expectations.[81] In a variety of ways,

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73 Teubner, 'Societal Constitutionalism: Alternatives to State-centred Constitutional Theory?' (n. 31), 17.

74 Ibid., 15.

75 See Teubner, *Constitutional Fragments* (n. 11).

76 Teubner, 'Societal Constitutionalism: Alternatives to State-centred Constitutional Theory?' (n. 31).

77 Ibid., 17.

78 Teubner even argues that constitutionalisation is 'primarily a social process,' see Teubner, *Constitutional Fragments* (n. 11), 104.

79 See ibid.; for a clear schematisation of Teubner's conception of constitutionalisation, see Christoph B. Graber, 'Bottom-up Constitutionalism: The Case of Net Neutrality,' Transnational Legal Theory 7 (2016), 524-552.

80 Teubner, *Constitutional Fragments* (n. 11), 75 ff.; see also Gunther Teubner, 'Self-Constitutionalizing TNCs? On the Linkage of 'Private' and 'Public' Corporate Codes of Conduct,' Ind. J. Global Legal Stud. 18 (2011), 617-638; cf. Nicolas Suzor, *Lawless. The Secret Rules That Govern Our Digital Lives* (Cambridge: Cambridge University Press 2019).

81 Teubner, *Constitutional Fragments* (n. 11), 94 ff.

the spontaneous societal sphere exercises pressure on the organised-professional sector until those impulses are 'reflected,' translated in 'limitative' constitutional norms, rules which aim to restrict the power of dominant actors.[82]

Subsequently, the constitutional principles generated at the societal level are progressively 'juridified' under the form of secondary norms, rules about rule-making.[83] They become an integral part of the legal system through a process that Teubner defines as 'reflexive' due to a 'structural coupling' between law and society.[84] In other words, legal norms start to mirror societal rules, which, at their turn, reflect societal expectations. Lastly, legal rules within their own legal system can surge to the level of constitutional norms.[85] Either by directly being inserted in the text of the constitution or by testing in court their compatibility with the constitution.

Teubner's reconstruction, therefore, reveals that the process of constitutionalisation is characterised by a 'double reflexivity.'[86] The social and legal systems are mutually interwoven: their interaction could be metaphorically illustrated as 'an exchange of fluids between porous and permeable materials,' at the same time bottom-up and top-down.[87] Not only the national and transnational dimensions but also the social and legal planes are part of a unique set of 'communicating vessels.'[88] In contrast to natural law theory, one realises that constitutional principles are the product of a process of societal elaboration and, at the same time, that social norms are shaped and oriented by legal rules.[89]

82 Ibid., 94 ff.; cf. the concept of 'inclusionary pressures' in Thornhill (n. 2).
83 Teubner, *Constitutional Fragments* (n. 11), 105 ff.
84 Ibid., 102 ff.
85 Ibid., 110 ff.
86 Ibid., 102 ff.
87 Celeste, 'Digital Constitutionalism' (n. 11), 87; see Gunther Teubner, *Law as an Autopoietic System* (Oxford/Cambridge: Blackwell Publishers 1993); Graber (n. 79).
88 See Graber (n. 79), 551.
89 See Teubner, *Constitutional Fragments* (n. 11), 112; on the same line, see also Norberto Bobbio, *The Age of Rights* (Cambridge: Polity Press 1996).

III. Conceptualising the Process of Constitutionalisation of the Digital Ecosystem

This brief overview of how international law scholars have conceptualised phenomena of constitutionalisation helps us contextualise the emergence of constitutional counteractions to the challenges of digital technology. Recent technological advancements are an integral part of the process of globalisation, not to say that they represent one of its main triggers.[90] The incessant development of digital technology generates a series of challenges that are no longer confined to a specific territorial dimension but involve global realities. In this context, nation-states do not hold the monopoly of power anymore because global issues require forms of cooperation with a multiplicity of transnational actors, both supranational organisations and multinational private entities.

This complex, layered governance system is reflected at the constitutional level. National constitutions are no longer able, alone, to face the challenges of the digital revolution. The dispersion of power in the transnational dimension triggers the emergence of constitutional mechanisms beyond the state. Constitutional pluralism is a direct consequence of the phenomenon of globalisation. There is no single constitution for the digital ecosystem. The constitutional discourse is necessarily composite because no constitutional fragment, singularly taken, is able to address all the different portions of power. However, precisely this fragmentation becomes a new technique to provide a constitutional response to the issues of the global digital ecosystem.[91] The multifarious constitutional counteractions which are emerging to face the challenges of the digital revolution can eventually be regarded as the miscellaneous tesserae of a single mosaic. The different levels of this complex constitutional picture complement each other: like in a puzzle, the holes and bulges of each piece.

If one were able to gain an aerial view of this phenomenon in motion, one would not simply see the static image of a set of constitutional fragments, but one would observe a lively and effervescent phenomenon of constitutionalisation, intended, as seen in the previous sections, as

90 See Manuel Castells, *The Rise of the Network Society* (2nd edn, Oxford; Malden, MA: Blackwell Publishers 2000), 77-162; Manuel Castells, *The Power of Identity* (2nd edn, Chichester: Wiley-Blackwell 2010), 303-366.

91 See Andrzej Jakubowski and Karolina Wierczyńska (eds), *Fragmentation vs the Constitutionalisation of International Law: A Practical Inquiry* (London: Routledge 2016), pt. 3 who talk of 'constitutionalisation through fragmentation' in the context of international law.

the progressive introduction of constitutional values and principles in a dimension which formerly did not possess them.[92] Let us explore its main characteristics.

1. *Plurality and Fragmentation*

Firstly, such a phenomenon would not be uniform and unitary but articulated, plural and fragmented. The series of constitutional counteractions which have so far emerged to address the challenges of the digital revolution does not share the same level of elaboration. They materialise in a variety of contexts, adopting a multiplicity of forms and involving different actors, including private companies. Constitutional pluralism in the digital ecosystem goes beyond the scenario of interaction between national and supranational entities denoted with this name in the context of the EU.[93] Constitutional plurality in the Internet age involves also, and especially, non-state actors, such as the powerful multinational companies producing, managing and selling online products and services.[94]

However, notwithstanding this plurality, one cannot ignore that this composite scenario rotates around a common aim. All these different constitutional counteractions seek to instil basic constitutional principles and values in the mutated context of the digital ecosystem. In light of this observation, more accurate analysis of this phenomenon reveals that these constitutional counteractions do not simply emerge spontaneously in different contexts, as in an extemporaneous mushrooming phenomenon. One can argue that they are all necessary components of a single, coordinated system. Indeed, drawing inspiration from the multilevel theory developed in international law and EU law, one could claim that each of these constitutional fragments is needed to complement the action of the

92 Cf. Anne-Claire Jamart, 'Internet Freedom and the Constitutionalization of Internet Governance' in: Roxana Radu, Jean-Marie Chenou and Rolf H. Weber (eds), *The Evolution of Global Internet Governance* (Berlin/Heidelberg: Springer 2014), 57-76; for a critical analysis see Kettemann (n. 14).

93 See Armin von Bogdandy, 'Common Principles for a Plurality of Orders: A Study on Public Authority in the European Legal Area,' I.CON 12 (2014), 980-1007; for a succint overview of Weiler's position see J.H.H. Weiler, 'Prologue: Global and Pluralist Constitutionalism – Some Doubts' in: Gráinne de Búrca and J.H.H. Weiler (eds), *The Worlds of European Constitutionalism* (Cambridge: Cambridge University Press 2011), 8-18.

94 Following this line, see Teubner, *Constitutional Fragments* (n. 11).

other constitutional instruments.[95] They would represent the pieces of a single puzzle, in which each one interacts with, informs and complements the others.[96]

The existing scholarship analysed many of these counteractions singularly, sometimes normatively claiming in favour of their allegedly pivotal role in constitutionalising the digital ecosystem.[97] For instance, Berman advocated the importance of national constitutions in this context;[98] Fitzgerald and Suzor recognised the significance of private law as a way to instil constitutional values in the rules of private actors;[99] Karavas praised the ability of digital communities to self-constitutionalise themselves;[100] and Redeker, Gill and Gasser, lastly, underlined the potential constitutionalising function of Internet bills of rights.[101] Conversely, the reconstruction presented in this paper does not support any hierarchical vision.[102] The constitutional counteractions to the challenges of the digital revolution would work in tandem. Their ultimate value could only be appreciated if globally assessed in conjunction with the achievements of the other constitutional counteractions involved.

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95 On the same line, see Pernice, 'Global Constitutionalism and the Internet. Taking People Seriously' (n. 61); Pernice, 'Risk Management in the Digital Constellation – A Constitutional Perspective' (n. 61).

96 This position would reflect what in international law has been presented as 'pluralisme ordonné': see Mireille Delmas-Marty, *Le Pluralisme Ordonné. Les Forces Imaginantes Du Droit (II)* (Paris: Éditions du Seuil 2006); see also Peters, 'The Refinement of International Law' (n. 28); further on the point, see Kettemann (n. 14).

97 See Celeste, 'Digital Constitutionalism' (n. 11).

98 Paul Berman, 'Cyberspace and the State Action Debate: The Cultural Value of Applying Constitutional Norms to 'Private' Regulation,' U. Colo. L. Rev. 71 (2000), 1263-1310.

99 Brian Fitzgerald, 'Software as Discourse? The Challenge for Information Law,' European Intellectual Property Review 22 (2000), 47-50; Nicolas Suzor, 'The Role of the Rule of Law in Virtual Communities,' Berkeley Technology Law Journal 25 (2010), 1817-1886.

100 Vaios Karavas, 'Governance of Virtual Worlds and the Quest for a Digital Constitution' in: Christoph B. Graber and Mira Burri-Nenova (eds), *Governance of Digital Game Environments and Cultural Diversity: Transdisciplinary Enquiries* (Cheltenham: Edward Elgar Publishing 2010), 153-169.

101 Dennis Redeker, Lex Gill and Urs Gasser, 'Towards Digital Constitutionalism? Mapping Attempts to Craft an Internet Bill of Rights,' International Communication Gazette 80 (2018), 302-319.

102 See Celeste, 'Digital Constitutionalism' (n. 11).

2. Progressive Translation

Secondly, the phenomenon of constitutionalisation of the digital ecosystem would not merely consist in a transfer of constitutional values and principles from one context to another. Such a process would unavoidably presuppose a progressive adaptation, translation of those values and principles in light of the characteristics of their context of destination – Teubner talks of a process of 'generalisation' and 're-specification.'[103] Key principles of contemporary constitutionalism cannot be simply transplanted in the transnational, global context to address the challenges of the digital revolution. One first needs to identify their quintessence and then implement it in the context of the digital ecosystem.

It is, therefore, apparent that the phenomenon of constitutionalisation does not temporally denote a *fait accompli* but rather describes – as the suffix -isation shows – a process. As an example, one could mention the introduction of rules about the protection of personal data, a set of legislation that in the past fifty years has evolved and is still evolving today. More generally, constitutional counteractions do not end with their conceptual spring but constantly ripe, develop, and change themselves. Consequently, the process of constitutionalisation does not merely correspond to the phase of formal codification of legal principles. It encompasses a broader process, which does not necessarily end with a codification in a formal constitution but could involve the stabilisation of a norm within different sets of rules, such as, for instance, at the level of corporate policy.

3. Societal Input

Finally, the process of constitutionalisation of the digital ecosystem is not uniquely top-down but also implicates bottom-up instances.[104] As the socio-legal scholarship on the phenomena of constitutionalisation shows, constitutional norms are first elaborated at the societal level. Law and society are not two airtight containers. The evolution of the law is closely connected to societal developments: it represents the result of the juridification of social norms, which are at their turn a reflection of societal pressures. If one adopts an empirical-functional approach, looking beyond

103 Teubner, 'Societal Constitutionalism: Alternatives to State-centred Constitutional Theory?' (n. 31).
104 See Graber (n. 79).

what is formally constitutional, it is possible to identify the emergence of constitutional counteractions even at the societal level. The process of constitutionalisation, therefore, cannot be exclusively confined to what is formally legal or, conversely, be uniquely characterised as a societal phenomenon.[105] Such compartmentalisation would simply not correspond to reality. The concept of constitutionalisation of the digital ecosystem pragmatically encompasses the full range of possible constitutional counteractions. Not only those are emerging in the legal dimension, but also mere societal initiatives: all the tesserae of the contemporary constitutional mosaic.

4. Implementing Digital Constitutionalism

Constitutionalisation and constitutionalism are not two interchangeable concepts. Unfortunately, the scholarship sometimes uses these two terms as synonyms.[106] However, the concept of constitutionalisation denotes a process.[107] The suffix -isation characterises a procedure, an operation; it implies the idea of advancement, progression, and evolution. It may have occurred in the past, be still ongoing, or be advocated in a normative sense for the future. Conversely, constitutionalism is a 'theory,'[108] a 'movement of thought,'[109] a 'conceptual framework,'[110] a 'set of values,'[111] an 'ideolo-

105 As some scholars seem to contend, see Celeste, 'Digital Constitutionalism' (n. 11).

106 Rossana Deplano, 'Fragmentation and Constitutionalisation of International Law: A Theoretical Inquiry,' European Journal of Legal Studies 6 (2013), 67-89.

107 See Girardeau A. Spann, 'Constitutionalization,' Saint Louis University Law Journal 49 (2005), 709-747; Karolina Milewicz, 'Emerging Patterns of Global Constitutionalisation: Towards a Conceptual Framework,' Ind. J. Global Legal Stud. 16 (2009), 413-436; Wiener et al. (n. 51); Jamart (n. 92).

108 Jeremy Waldron, 'Constitutionalism: A Skeptical View,' Philip A. Hart Memorial Lecture (2010), https://scholarship.law.georgetown.edu/hartlecture/4; see also Pernice, 'Global Constitutionalism and the Internet. Taking People Seriously' (n. 61), 7, according to whom constitutionalism is a form of 'theoretical thinking'.

109 Marco Bani, 'Crowdsourcing Democracy: The Case of Icelandic Social Constitutionalism,' (2012) SSRN Scholarly Paper ID 2128531.

110 Peer Zumbansen, 'Comparative, Global and Transnational Constitutionalism: The Emergence of a Transnational Legal-Pluralist Order,' Global Constitutionalism 16 (2012), 16-52.

111 Aoife O'Donoghue, *Constitutionalism in Global Constitutionalisation* (Cambridge: Cambridge University Press 2014).

gy.'[112] The suffix -ism does not imply the idea of the process; it denotes a more static concept.[113] An ism is 'a distinctive practice, system, or philosophy, typically a political ideology or an artistic movement.'[114] Constitutional-*isation* is the *process* of implementation of constitutional-*ism*. Constitutionalisation would put into effect the values of constitutionalism or, regarded the other way around; constitutionalism would provide the principles that permeate, guide, inform constitutionalisation.[115]

The constitutional counteractions that have emerged so far to address the challenges of the digital ecosystem are driven by the values of contemporary constitutionalism. Constitutionalism evolves. Its underlying values, ideals, principles have changed over time. Constitutionalism is today synonymous with key principles such as the values of democracy, the rule of law and the separation of powers.[116] Constitutionalism is associated with the idea of the protection of all fundamental rights that have been gradually recognised over the past few centuries, be they civil, political, socio-economic or cultural.[117] However, what today no longer holds true is the necessary connection of the idea of constitutionalism with the nation-state.

The values of constitutionalism historically ripened in the context of the state.[118] However, over the past few decades, in a society that has become increasingly more global, the centrality of the state has faded due to the emergence of other dominant actors in the transnational context.[119] The scholarship has therefore started to transplant the constitutional conceptual machinery beyond the state, including the concept of constitutionalism.[120] The myth of the compulsory link between constitutionalism

112 Celeste, 'Digital Constitutionalism' (n. 9); see Maurice Cranston, 'Ideology' https://www.britannica.com/topic/ideology-society; cf. Viellechner (n. 9).
113 See Waldron (n. 108); Milewicz (n. 107).
114 *Oxford Dictionary of English* (3rd edn, Oxford: Oxford University Press 2010).
115 Celeste, 'Digital Constitutionalism' (n. 11); on the same line, but more concretely, Martin Loughlin, 'What Is Constitutionalisation?' in: Petra Dobner and Martin Loughlin (eds), *The Twilight of Constitutionalism?* (Oxford: Oxford University Press 2010).
116 Cf. von Bogdandy (n. 93).
117 See András Sajó and Renáta Uitz, *The Constitution of Freedom: An Introduction to Legal Constitutionalism* (Oxford: Oxford University Press 2017), chs 1 and 10.
118 See Dieter Grimm, *Constitutionalism: Past, Present, and Future* (Oxford: Oxford University Press 2016).
119 See Dobner and Loughlin (n. 3).
120 See Grimm (n. 118), ch VII and VIII.

and the state is debunked.[121] As Hamann and Ruiz Fabri state, today 'it appears that any polity can be endowed with or can acquire constitutional features.'[122] Consequently, the constitutional dimension becomes plural, composite and fragmented.[123] If the values of constitutionalism remain the same in their essence, their articulation in specific contexts, within and beyond the state, necessarily becomes 'polymorphic.'[124]

Today, existing constitutional principles cannot anymore solve all the challenges of contemporary society. The external shape of constitutionalism necessarily changes again. New constitutional layers are progressively added to those already in existence. Novel principles emerge to articulate the fundamental values of constitutionalism in light of the problematic issues of contemporary society, including, but not limited to, the challenges of the digital revolution.[125] Constitutionalism is undergoing a mutation on multiple fronts. However, the scale of transformation prompted by the advent of the digital revolution is such that one can neatly distinguish the multiplicity of new normative layers addressing this phenomenon. A fresh sprout within the constitutionalist theory: what one could call 'digital constitutionalism.'[126]

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121 See Ulrich K. Preuss, 'Disconnecting Constitutions from Statehood: Is Global Constitutionalism a Viable Concept?' in: Petra Dobner and Martin Loughlin (eds), *The Twilight of Constitutionalism?* (Oxford: Oxford University Press 2010).

122 Andrea Hamann and Hélène Ruiz Fabri, 'Transnational Networks and Constitutionalism,' International Journal of Constitutional Law 6 (2008), 481–508, 503.

123 Walker (n. 12); Teubner, *Constitutional Fragments* (n. 9); see also Paul Blokker, 'Modern Constitutionalism and the Challenges of Complex Pluralism' in: Gerard Delanty and Stephen P. Turner (eds), *Routledge International Handbook of Contemporary Social and Political Theory* (London: Routledge 2011).

124 See Walker (n. 14).

125 An example is the constitutionalisation of principles related to the protection of the environment, see David Marrani, 'The Second Anniversary of the Constitutionalisation of the French Charter for the Environment: Constitutional and Environmental Implications,' Environmental Law Review 10 (2008), 9-27, 9; see also Stefano Rodotà, *Il diritto di avere diritti* (Rome: Laterza 2012), 70.

126 First formulated in this sense in Edoardo Celeste, 'Digital Constitutionalism: Mapping the Constitutional Response to Digital Technology's Challenges,' 2018, HIIG Discussion Paper Series No. 2018-02; subsequently revised and amplified in Celeste, 'Digital Constitutionalism' (n. 9). In this last paper, at 88, I defined 'digital constitutionalism' as 'the ideology which aims to establish and to ensure the existence of a normative framework for the protection of fundamental rights and the balancing of powers in the digital environment'.

IV. Conclusion

A complex process of constitutionalisation is currently underway within contemporary society. A multiplicity of normative counteractions is emerging to address the challenges of the digital ecosystem. However, there is no single constitutional framer. As in a vast construction site, there are several contracting companies working at the same time, so, in a globalised environment, constitutionalisation simultaneously occurs at different societal levels. This is not only in the institutional perimeter of nation-states but also beyond: on the international plane, in the fiefs of the private actors, within the civil society. The sense of this Gordian knot of normative responses can be deciphered only if these emerging constitutional fragments are interpreted as complementary tesserae of a single mosaic. Each one is surfacing with a precise mission within the constitutional dimension, each one compensating for the shortcomings of the others in order to achieve a common aim: translating the core principles of contemporary constitutionalism in the context of the digital ecosystem.

International law scholarship offers a useful theoretical toolbox to understand the phenomenon of constitutionalisation of the digital ecosystem. International constitutional law first projected the notion of constitution beyond the state dimension by taking a functional approach, looking beyond the formal constitutional character of norms. International law scholarship understands that, in a globalised environment, national constitutional law faces a plurality of issues when projected in a transnational dimension. State constitutions cannot cope alone with transnational legal issues but necessitate the emergence of a plurality of parallel responses. The constitutional dimension becomes plural and composite, acting at the same time on multiple levels in a complementary fashion. Constitutionalisation is, therefore, a fragmented phenomenon, which finds its unity in its aim to instil constitutional values in an environment that is challenged by global legal issues.

Digital constitutionalism is the theoretical strand of contemporary constitutionalism that is adapting core constitutional values to the needs of the digital ecosystem. An evolution and not a revolution of contemporary constitutionalism. Digital constitutionalism advocates the perpetuation of foundational principles, such as the rule of law, the separation of powers, democracy and the protection of human rights, in the mutated scenario of the digital ecosystem. It triggers a complex process of constitutionalisation of the virtual environment, which occurs through a multiplicity of constitutional counteractions, within and beyond the state, through top-down and bottom-up complementary instances. Century-old values

are translated into normative principles that can speak to the new social reality. Digital constitutionalism reiterates that digital technology does not create any secluded world where individuals are not entitled to their quintessential guarantees.