



# Taxing data as an instrument of economic digital constitutionalism: elements for a normative agenda

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## Abstract

Digital constitutionalism rarely focuses on value creation, extraction, and distribution. This Article introduces a symposium that contributes to filling this gap, using data taxation as an entry point and sketching the elements of a normative agenda. The contributions advance different proposals, but they share the view that the externalities of informational capitalism have constitutional significance. Based on this, this introduction keeps four issues together: (1) the impact of excessive datafication on contemporary societies; (2) the role of data in contemporary economy; (3) concrete tax design; (4) the interaction of data taxation with other legal regimes and social justice issues, also at the global level. The first goal is to increase the dialogue among strands of legal scholarship that do not necessarily speak the same language. The second goal is to expand the analytical and normative scope of digital constitutionalism, which cannot address such issues as accidental elements but needs to be (also) an economic constitutionalism. The Article proceeds as follows. Section 2 focuses on the link between the digital revolution and constitutional states, especially on their role in value creation, extraction, and distribution. Section 3 identifies such an issue as a gap in digital constitutionalism and opens the way to the following sections. Section 4 is divided into four subsections. Section 4.A stresses the need for critical approaches to datafication, which needs to be seen as an autonomous object of regulation. Section 4.B highlights the role of data within contemporary economy and offers normative justifications for its taxation. Section 4.C highlights the need to include Pigouvian, progressive, and rent-targeting elements into data tax design. Section 4.D puts these issues within the context of economic governance, highlighting the role of (global) institutions in creating, extracting, and distributing value as well as the political nature of the underlying policy choices. Section 5 concludes.

**Keywords:** digital constitutionalism; informational capitalism; data taxation; global governance; law and political economy

## 1. Introduction

By and large, digital constitutionalism – roughly understood as the constellation of scholarly and policy discourses exploring the relationship between constitutionalism and the socio-legal challenges of the digital revolution<sup>1</sup> – has not focused on value creation, extraction, and

<sup>1</sup>According to an influential definition, digital constitutionalism is an ‘ideology which aims to establish and ensure the existence of a normative framework for the protection of fundamental rights and the balancing of powers in the digital environment’: see E Celeste, ‘Digital Constitutionalism: A New Systematic Theorisation’ 33 (2019) *International Review of Law, Computers & Technology* 76 at 88. See also A Golia Jr and G Teubner, ‘Societal Constitutionalism: Deconstruction of State-Centrism and Construction of a Constitutional Theory for the Digital Age’ in G De Gregorio, O Pollicino and P Valcke

distribution of data/informational capitalism.<sup>2</sup> To be sure, legal scholarship has long investigated the relationship between the digital revolution – with its underlying political economy and legal infrastructure – and social justice.<sup>3</sup>

However, authors rarely thematise these issues within explicitly constitutionalist frameworks.<sup>4</sup> Scholars using such frameworks, on the other hand, mainly focus on questions such as access to the Internet; free speech and disinformation; privacy and data protection; procedural guarantees (transparency, participation, fairness);<sup>5</sup> digital administration<sup>6</sup> and justice;<sup>7</sup> applicability of constitutional law standards to private actors via (some variation of) the ‘horizontal effect’ of fundamental rights.<sup>8</sup> Moreover, most constitutional analyses take the regulatory capacity of modern states somehow for granted and do not account for tendencies towards the re-feudalisation of socio-political relationships deriving from the business models of data economy.<sup>9</sup> Put differently, the impact of digital and algorithmic innovation on societal processes and on (the legitimisation of) both national and non-national political institutions<sup>10</sup> is hardly linked

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(eds), *Oxford Handbook on Digital Constitutionalism* (Oxford University Press 2024); F De Abreu Duarte, G De Gregorio and A Golia Jr, ‘Perspectives on Digital Constitutionalism’ in B Brożek, O Kanevskaia and P Pałka (eds), *Research Handbook on Law and Technology* (Elgar 2023) 315–29; A Golia Jr and G Teubner (eds), *Digital Constitution: On the Transformative Potential of Societal Constitutionalism, Symposium: 30 Indiana Journal of Global Legal Studies*, vol 30 (2023); G De Gregorio, *Digital Constitutionalism in Europe: Reframing Rights and Powers in the Algorithmic Society* (Cambridge University Press 2022); O Pollicino, *Judicial Protection of Fundamental Rights on the Internet. A Road Towards Digital Constitutionalism?* (Hart 2021); L Gill, D Redeker and U Gasser, ‘Towards Digital Constitutionalism? Mapping Attempts to Craft an Internet Bill of Rights’ 80 (2018) *The International Communication Gazette* 302; N Sutor, ‘Digital Constitutionalism: Using the Rule of Law to Evaluate the Legitimacy of Governance by Platforms’ 4 (2018) *Social Media + Society* 1. For some observations on Celeste’s definition, see A Golia Jr, ‘Critique of Digital Constitutionalism: Deconstruction and Reconstruction from a Societal Perspective’ (2023) *Global Constitutionalism* 1 at 12–13.

<sup>2</sup>In this Article, ‘data,’ ‘digital,’ and ‘informational’ capitalism, as well as ‘data’ and ‘digital’ economy are used interchangeably. On the differences with Zuboff’s ‘surveillance capitalism’ (see below n 137), see G Ignatow, ‘Information Capitalism’ in G Ritzer (ed), *The Wiley-Blackwell Encyclopedia of Globalization* (2017); JE Cohen, *Between Truth and Power: The Legal Constructions of Informational Capitalism* (Oxford University Press 2019); and A Kapczynski, ‘The Law of Informational Capitalism’ 129 (2020) *The Yale Law Journal* 1460. On the economic theories of value-creation and their relevance to regulatory approaches, see M Mazzucato, *The Value of Everything: Makers and Takers in the Global Economy* (Penguin 2018) 219–21.

<sup>3</sup>See, eg, and besides the sources mentioned in the n 2 above, R Vatanparast, ‘The Code of Data Capital: A Distributional Analysis of Law in the Global Data Economy’ 1 (2021) *Juridikum* 98; E Bietti, ‘The Data-Attention Imperative,’ 22 February 2024 <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4729500](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4729500)>; and, more generally, the contributions to the LPE blog symposium on the political economy of technology <<https://lpeproject.org/symposia/political-economy-of-technology/>>. For a contribution specifically focusing on taxation as an instrument of inclusive growth in the digital age, see R Merola, ‘Inclusive Growth in the Era of Automation and AI: How Can Taxation Help?’ (2022) 5 *Frontiers in AI* <<https://doi.org/10.3389/frai.2022.867832>>.

<sup>4</sup>This applies also to the most recent wave of studies turning around the notion of ‘technofeudalism’: see, eg, C Durand, *Techno-féodalisme. Critique de l’économie numérique* (Le Découverte 2020). For a literature review and critique, see only E Morozov, ‘Critique of Techno-Feudal Reason’ 133/134 (2022) *New Left Review* 89.

<sup>5</sup>For a critique to proceduralist approaches within digital constitutionalism scholarship, see M Zalnieriute, ‘Against Procedural Fetishism: A Call for a New Digital Constitution’ 30 (2023) *Indiana Journal of Global Legal Studies* 227.

<sup>6</sup>S Ranchordas, ‘Empathy in the Digital Administrative State’ 77 (2022) *Duke Law Journal* 1340.

<sup>7</sup>T Sourdin, *Technology and Artificial Intelligence: The Artificial Judge* (Elgar 2021).

<sup>8</sup>Cf L Casini, ‘The Future of the (Digital) State’ (2023) *BioLaw Journal – Rivista di Bio Diritto* 242; S Theil, ‘Private Censorship and Structural Dominance: Why Social Media Platforms Should have Obligations to their Users Under Freedom of Expression’ 81 (2022) *Cambridge Law Journal* 645 at 670; Pollicino (n 1) at 203 ff.; and already PS Berman, ‘Cyberspace and the State Action Debate: The Cultural Value of Applying Constitutional Norms to “Private” Regulation’ 71 (2000) *University of Colorado Law Review* 1263. On the horizontal effect in general, see only M Tushnet, ‘The Issue of State Action: Horizontal Effect in Comparative Constitutional Law’ 1 (2003) *International Journal of Constitutional Law* 79.

<sup>9</sup>A Supiot, *Governance by Numbers. The Making of a Legal Model of Allegiance* (Hart 2017).

<sup>10</sup>Cf, for social media platforms, S González-Bailón and Y Lelkes, ‘Do Social Media Undermine Social Cohesion?’ (2022) *Social Issues Policy Review* 1; and, for AI, M Coeckelbergh, ‘Democracy, Epistemic Agency, and AI: Political Epistemology in Times of Artificial Intelligence’ 3 (2023) *AI Ethics* 1341; M Coeckelbergh, *Why AI Undermines Democracy and What to Do About It* (Polity 2024).

to the latter's capacity to *effectively* pursue policies such as social justice and egalitarian objectives.<sup>11</sup> At an even deeper level, constitutional lawyers do not thematise the dangers coming from the excessive datafication of society<sup>12</sup> as a self-standing problem.

Against this background, this Article introduces a symposium that contributes to filling this gap, using data taxation as an entry point. More specifically, it sketches the elements of a research and policy agenda concerning data taxation within a (digital) constitutionalist framework. While the single contributions adopt distinct approaches and advance different proposals, they share the view that the externalities of informational capitalism are issues of constitutional significance.

Starting from this view, this Article and the symposium (try to) keep four macro-issues together: (1) the impact of excessive datafication on contemporary societies; (2) the role of data in contemporary economy and the justifications to its taxation; (3) concrete tax design, coherent with the regulatory purposes of a (digital) constitutionalist agenda; (4) the interaction of data taxation regimes with other legal regimes and social justice issues, also at the global level. The interlinked questions underlying these issues constitute the building blocks of an expanded digital constitutionalism, which includes the socioeconomic dimension not exceptionally but structurally.<sup>13</sup>

Put differently, this Article – and the entire symposium – takes on the issue of data taxation to explore the interconnection among such questions, both analytically and normatively.<sup>14</sup> The first-order goal is to increase the dialogue among different strands of scholarship – constitutional law, law and technology studies, 'law & political economy' (LPE), and tax law, among others – that do not necessarily speak the same language. The second-order goal is to expand and strengthen the analytical and normative scope of digital constitutionalism.

These goals are based on a specific view of the normative purposes of digital constitutionalism: if the latter aims to rise at the level of complexity required by the challenges posed by the digital revolution and informational capitalism, it needs to address issues related to value creation, extraction, and distribution, also through interactions with legal fields that do not speak the language of constitutional law. If digital constitutionalism aspires to be authentically normative, it cannot address such issues as contingent, accidental elements.<sup>15</sup> To be fully normative, digital constitutionalism needs to be (also) an *economic* constitutionalism.<sup>16</sup>

<sup>11</sup>See however A Gurumurthy and N Chami, 'Towards a Global Digital Constitutionalism: A Radical New Agenda for UN75' 64 (2021) Development 29; and A Bradford, *Digital Empires. The Global Battle to Regulate Technology* (Oxford University Press 2023).

<sup>12</sup>Understood as the process of conversion of information about people, environments, and social processes into digital data. See M Lycett, "'Datafication': Making Sense of (Big) Data in a Complex World' 22 (2017) European Journal of Information Systems 381 (framing datafication through the concepts of dematerialisation, liquification, and density).

<sup>13</sup>One can observe a similar development in the field of 'global constitutionalism': see A Peters, 'Global Constitutionalism: The Social Dimension' in T Suami et al (eds), *Global Constitutionalism from European and East Asian Perspectives* (Cambridge University Press 2018) 277–350.

<sup>14</sup>In this symposium, cf especially J Lamchek, 'Human Rights and Taxation in a Digital Economy: Data Tax and the Right to Science' (2024) European Law Open.

<sup>15</sup>This critique to digital constitutionalism extends to those constitutional ideologies and traditions that over-rely on some features of state-centred liberal theory and remain relatively blind to socio-economic power and other societal constraints: cf Golia (n 1) 24 ff; and Golia and Teubner (n 1).

<sup>16</sup>With a degree of simplification, 'economic constitutionalism,' as understood here, includes at least two meanings: first, the production by different societal and institutional actors of (either de iure or de facto) constitutional rules aimed at governing and constraining processes of economic production; second, the fact that societal normative orders, as they result *also* from economic processes, contribute by their very nature to constraining political authority. See, among many, and only to refer to recent scholarship, A Skordas, G Halmay and L Mardikian (eds), *Economic Constitutionalism in a Turbulent World* (Elgar 2023); D Dobre, 'Constitución económica: Una propuesta al debate conceptual' 3 (2021) Revista de Derecho Público: Teoría y Método 157; I Kampourakis, 'Bound by the Economic Constitution: Notes for "Law and Political Economy" in Europe' 1 (2021) Journal of Law and Political Economy 301; C Joerges and M Everson, 'The Legal Proprium of the Economic Constitution' in PF Kjaer (ed), *The Law of Political Economy: Transformations of the Function of Law* (Cambridge University Press 2020) 33–61; HC Hofmann and K Pantazatou (eds), *The Metamorphosis of the European Economic Constitution*

After this introduction, the Article proceeds as follows. Section 2 focuses on the link between the digital revolution and (the legitimacy of) constitutional states, notably when it comes to the latter's role in value creation, extraction, and distribution. Section 3 identifies such an issue as a gap in digital constitutionalism and opens the way to the following sections. Section 4 is divided into four subsections. Section 4.A highlights that, to address the issues mentioned coherently, one has to start from a critical approach to datafication. This means that excessive datafication needs to be seen as a source of problems in itself, to be addressed as an autonomous object of regulation. Section 4.B highlights the role of data as an economic factor within the data economy, beyond its monetary value and the specific conceptualisations in different legal fields. Analysing the role of data in the contemporary economy, one can individuate normative justifications for its taxation, even in the light of constitutional limits to states' taxing power. Section 4.C moves to tax design issues, highlighting the need to include Pigouvian, progressive, and rent-targeting elements. Finally, Section 4.D puts these issues within the context of economic governance, highlighting the role of (global) institutions in creating, extracting, and distributing economic value, and the political nature of the underlying policy choices. Section 5 concludes.

## 2. Böckenförde's dilemma, governability and the (digital) constitutional state

'The liberal secularised state lives by prerequisites which it cannot guarantee itself.'<sup>17</sup> Böckenförde's (in)famous line looks at any lawyer standing at the gates of constitutional theory. At its core, it is a sobering reminder of the insufficiency of modern (constitutional) law in generating the preconditions for its own normativity. When god(s) cannot be invoked anymore – not directly, at least – and nationalism has generated monsters, when justice and values mean something different to each social group, the legitimacy of political institutions in post-war constitutional states has come to rely on their capacity to adopt collectively binding decisions<sup>18</sup> while simultaneously preserving room for conflicts to emerge *and* mediating them.<sup>19</sup> Post-war liberal, constitutional states with capitalist modes of production are thus characterised by an intrinsically precarious balance which puts their own 'governability' into question.<sup>20</sup>

Indeed, the capacity of political institutions – both national and supranational – to generate, extract, and distribute value, while also striking balances among societal actors, is crucial to their legitimation and, ultimately, to the performance of their societal functions.<sup>21</sup> Effective, socially legitimated systems of value creation, extraction, and distribution are not only instruments in the hands of political apparatuses aimed at preserving social peace. At a deeper level, they are essential to the capacity of political institutions to adopt consensus-based, collectively binding decisions, that is,

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(Elgar 2019). For analogies and differences between 20<sup>th</sup>-century economic constitutionalism, 'public law of the economy,' and more recent LPE scholarship, see M Renner and T Kindt, 'Wirtschaftsrecht und Politische Ökonomie' 78 (2023) *Juristen Zeitung* 313.

<sup>17</sup>E-W Böckenförde, *Staat, Gesellschaft, Freiheit – Studien zur Staatstheorie und zum Verfassungsrecht* (Surkamp 1976) at 60.

<sup>18</sup>Cf N Luhmann, *Trust and Power* (Wiley 1979).

<sup>19</sup>For this issue of post-war political and constitutional theory, see, among many, C Offe, *Strukturprobleme des kapitalistischen Staates* (Campus Verlag 1972); E-W Böckenförde, 'Die Politische Funktion Wirtschaftlich-Sozialer Verbände Und Interessenträger In Der Sozialstaatlichen Demokratie: Ein Beitrag Zum Problem Der "Regierbarkeit"' 15 (1976) *Der Staat* 457; C Offe, 'Political Authority and Class Structures – An Analysis of Late Capitalist Societies' 2 (1972) *International Journal of Sociology* 73; N Bobbio, *The Future of Democracy* (Minnesota University Press 1987); and, more generally, J Quadagno, 'Theories of the Welfare State' 13 (1987) *Annual Review of Sociology* 109.

<sup>20</sup>On the 'ungovernability' theory, developed by both Marxist-critical and conservative political theorists in the 1970s and its role in legitimising the neoliberal turn of the following decade, see C Offe, 'Ungovernability: On the Renaissance of Conservative Theories of Crisis' in J Habermas (ed), *Observation on 'The Spiritual Situation of the Age'* (MIT Press 1984) 66–78; and more recently, B Roth, 'The Welfare State Between Juridification and Commodification: How the Frankfurt School Gave Up On Economic Democracy' 2 (2023) *European Law Open* 386.

<sup>21</sup>See again Böckenförde (n 19); and Offe, *Political Authority* (n 19).

to the performance of their societal functions.<sup>22</sup> As instruments of social justice, tax systems are crucial to *both* socioeconomic governance<sup>23</sup> and the legitimization of modern political authority.<sup>24</sup>

Such elements are relevant to digital constitutionalism. The digital revolution, the platformisation of socioeconomic relations, and data- and automation-driven business models have profoundly impacted the political economy and the public sphere(s) underlying contemporary societies.<sup>25</sup> The COVID-19 pandemic has accelerated pre-existing dynamics, touching upon the relationship between authority and freedom, state and society, politics and economy, collective and individual actors.<sup>26</sup> The public sphere(s) where individuals and groups generate debate, contestation, and conflict have become extremely different from those presupposed at the foundational time of modern constitutionalism<sup>27</sup> and often go beyond the territorial borders of nation-states. These developments, in turn, take place alongside processes of political-economic globalisation, dispersion, and fragmentation triggered or dominated by neoliberal policies. In this context, the value of traditional procedures legitimising constitutional states – especially elections and other institutions of representative democracy – is more and more eroded.<sup>28</sup>

These developments are further linked to the crisis of economic governance models presupposed by post-war constitutional states. In addition to the race to the bottom triggered by the competitive alignment of regulatory, fiscal, welfare, and labour protection systems,<sup>29</sup> and by so-called austerity policies, the business model of the data economy impacts socio-political integration by *also* affecting the capacity of value creation and distribution – that is, taxation and welfare systems – presupposed by modern constitutional states.<sup>30</sup>

Models of value creation based on digital services and finance, personalised advertisement, big data analytics, cryptocurrencies, smart contracts, metaverse(s) – in one phrase, informational capitalism<sup>31</sup> – accelerated and exacerbated pre-existing social dynamics of

<sup>22</sup>In the literature on the post-2008 economic crisis, see only, and most recently, RD Gabriel, M Klein and AS Pessoa, ‘The Political Costs of Austerity’ (2023) *The Review of Economics and Statistics* 1.

<sup>23</sup>On the elusive concept of governance, see only K-H Ladeur, ‘Governance, Theory of’ in A Peters and R Wolfrum (eds), *MPEIL* (Oxford University Press 2010).

<sup>24</sup>Cf L Murphy and T Nagel, *The Myth of Ownership: Taxes and Justice* (Oxford University Press 2002) 40 ff. For a historical analysis based on the case of post-WWI Belgium, see S Watteyne, ‘Social Justice through Taxation? Taxing the Rich in Belgium in the 1920s’ in M Conway and C Erlichman (eds), *Social Justice in Twentieth-Century Europe* (Cambridge University Press 2024) 78–95.

<sup>25</sup>J Habermas, ‘Reflections and Hypotheses on a Further Structural Transformation of the Political Public Sphere’ 39 (2022) *Theory, Culture & Society* 145. See below, Section 4.A.

<sup>26</sup>S Viljoen, ‘A Relational Theory of Data Governance’ 131 (2021) *Yale Law Journal* 573; L Floridi (ed), *The Onlife Manifesto. Being Human in a Hyperconnected Era* (Springer 2015); J Cohen, *Configuring the Networked Self. Law, Code, and the Play of Everyday Practice* (Yale University Press 2012).

<sup>27</sup>Habermas (n 25).

<sup>28</sup>Cf C Crouch, *Post-Democracy* (Polity Press 2006). Unsurprisingly, recent scholarship coming from the field of blockchain governance is exploring alternative modes of legitimization, centred around blockchain networks and polycentric orders: see, eg, E Alston et al, ‘Blockchain Networks As Constitutional And Competitive Polycentric Orders’ 18 (2022) *Journal of Institutional Economics* 707; and P de Filippi et al, *Blockchain Constitutionalism: The Role of Legitimacy in Polycentric Systems* (2023).

<sup>29</sup>It is well documented that tax competition triggered by neoliberal globalisation has historically caused a shift from taxing capital income to taxing labour income, with direct effects on the – actual or perceived – legitimacy of tax systems and consequently of political institutions of nation-states. Cf RS Avi-Yonah, ‘Globalization, Tax Competition, and the Fiscal Crisis of the Welfare State’ 113 (2000) *Harvard Law Review* 1573; E Saez and G Zucman, ‘The Rise of Income and Wealth Inequality in America: Evidence from Distributional Macroeconomic Accounts’ 34 (2020) *Journal of Economic Perspectives* 3. For an analysis of the impact of the unequal distribution of the tax burden between investments in robots and software (automation) and investments in people in the United States, see D Acemoglu, A Manera and P Restrepo, ‘Does the U.S. Tax Code Favor Automation?’ (2020) *Brookings Papers on Economic Activity*, Spring, 231 <<https://www.brookings.edu/wp-content/uploads/2020/12/Acemoglu-FINAL-WEB.pdf>>. For the effects of tax composition on income inequality, see G Ciminelli et al, ‘The Composition Effects of Tax-Based Consolidation on Income Inequality’ 57 (2019) *European Journal of Political Economy* 107.

<sup>30</sup>See Section 4.C below.

<sup>31</sup>Kapczynski (n 2); Ignatow (n 2).



late-20<sup>th</sup>-century economic globalisation, weakening the capacity of political institutions to govern social processes *also* through economic distribution. Following processes of globalisation, dispersion, and intangible-isation,<sup>32</sup> the data economy makes traditional taxation systems – especially the income tax – much less effective<sup>33</sup> and aggravates the fiscal crisis and ‘base erosion’ that emerged even before the global neoliberal turn of the 1980s.<sup>34</sup> Informational capitalism does not influence only individual behaviour and how societies collectively reach (presumptive) consensus on specific issues and accept political authority as legitimate. It also affects political institutions’ capacity to govern the economy via collectively binding decisions and politically legitimated law-making. The externalities of profit-driven datafication affect the ability of politics to produce socially legitimised decisions;<sup>35</sup> of science to produce socially shared truth;<sup>36</sup> of medicine to improve collective health;<sup>37</sup> of economy to create value for the whole society.<sup>38</sup>

### 3. A gap in digital constitutionalism

By now, there is a vast literature on how law ‘codes’ data, making it one of the factors of production within the data economy/informational capitalism<sup>39</sup> and contributing to ‘datafying’ other factors of production.<sup>40</sup> Social justice issues have been explored especially by labour law scholars, for example in the context of platform work,<sup>41</sup> workplace democracy,<sup>42</sup> or the impact of digital technologies on processes of value-creation and -distribution at the global level.<sup>43</sup> Tax law scholars, for their part, investigate how informational capitalism affects states’ fiscal capacities,

<sup>32</sup>See only J Haskel and S Westlake, *Capitalism without Capital: The Rise of the Intangible Economy* (Princeton University Press 2017).

<sup>33</sup>Cf O Marian, ‘Taxing Data’ 47 (2022) Brigham Young University Law Review 511 spec. 532 ff; Y Brauner, *Taxation of Information and the Data Revolution* (2023) spec. 13–72.

<sup>34</sup>Historically, income tax has been designed to target modes of value creation relatively localised and turning around tangible goods. See Marian (n 33) 531–51; Avi-Yonah (n 29); W Streeck, ‘The Fiscal Crisis Continues: From Liberalization to Consolidation’ 8 (2010) Comparative European Politics 504; J O’Connor, *The Fiscal Crisis of the State* (St. Martin’s 1973).

<sup>35</sup>Cf again González-Bailón and Lelkes (n 10).

<sup>36</sup>Z Epstein et al, ‘The Social Media Context Interferes with Truth Discernment’ 9 (2023) Science Advances 1.

<sup>37</sup>Cf IRI Alberto et al, ‘The Impact of Commercial Health Datasets on Medical Research and Health-Care Algorithms’ 5 (2023) Lancet Digit Health e288.

<sup>38</sup>B Martens, *An economic perspective on data and platform market power* (JRC Digital Economy Working Paper 2020-09, 2020). Unsurprisingly, world’s tax havens are becoming the data centres for the digital economy: cf S Scassera and A Foronda, ‘Banking on data: How the world’s tax havens became the data centres for the digital economy’ (2022) Transnational Institute Papers <<https://www.tni.org/en/publication/banking-on-data>>.

<sup>39</sup>See among others Vatanparast (n 3); K Pistor, *The Code of Capital: How the Law Creates Wealth and Inequality* (Princeton University Press 2019) at 183–204; J Sadowski, ‘When Data Is Capital: Datafication, Accumulation, and Extraction’ 6 (2019) Big Data & Society 1; Cohen (n 2) at 15–47.

<sup>40</sup>Cohen (n 2) at 5–37; Lycett (n 12). See also below, Section 4.B.

<sup>41</sup>See the Proposal for a Directive of the European Parliament and of the Council on improving working conditions in platform work, COM/2021/762 final, and a first analysis in A Kelly-Lyth and J Adams-Prassl, *The EU’s Proposed Platform Work Directive* (2021). On 11 March 2024, the EU employment and social affairs ministers confirmed the provisional agreement reached on 8 February 2024 between the Council’s presidency and the European Parliament’s negotiators on the platform work directive: V De Stefano, *It Takes Three to Tango in the EU: The New European Directive on Platform Work* (2024).

<sup>42</sup>B Rogers, *Data and Democracy at Work: Advanced Information Technologies, Labour Law, and the New Working Class* (MIT Press 2023); A Aloisi and V De Stefano, *Your Boss Is an Algorithm. Artificial Intelligence, Platform Work and Labour* (Hart 2022).

<sup>43</sup>J Haidar and M Keune (eds), *Work and Labour Relations in Global Platform Capitalism* (Elgar 2021); C Fuchs, ‘Labor in Informational Capitalism and on the Internet’ 26 (2010) The Information Society 179.

potentially contributes to tax avoidance,<sup>44</sup> or how Artificial Intelligence (hereafter AI) and digital technologies may optimise tax systems, making them more efficient.<sup>45</sup>

However, after a false start in the 1990s,<sup>46</sup> only recently have tax law scholars begun conceptualising data as *autonomously* taxable wealth.<sup>47</sup> More generally, authors do not thematise these challenges within constitutional-theoretical frameworks. However, the relationship between digital technologies and constitutional law goes beyond the protection of the integrity of the ‘free marketplace of ideas’, the guarantee of ‘digital rights’, or more broadly, the political public sphere and market competition. Instead, it touches upon the very sources of integration/legitimation of constitutional states as they emerged following the secularisation of modern societies.

Digital constitutionalism, for its part, is by now a relatively settled strand of constitutional scholarship.<sup>48</sup> Recent contributions have highlighted how digital constitutionalism is intrinsically characterised by different perspectives and, in this sense, represents a discursive field whose elements are *both* complementary *and* contradictory.<sup>49</sup> However, if it aims at overcoming some limits of the liberal political theory underlying modern constitutional law and avoiding overlooking issues of societal power, a normative digital constitutionalism is called to frame excessive datafication and social justice as parts of a *single* project concerning the relationship between the digital revolution, the economic system, and constitutional law.

In both analytical and normative terms, social justice and value distribution are pieces of a broader puzzle within any digital constitutionalism aiming to stand as a counter-power to different kinds of authoritarianism. In this sense, digital constitutionalism needs to be an economic constitutionalism.<sup>50</sup> Looking at the trajectory of modern constitutional state, this means considering and revitalising the normative elements of economic and industrial democracy,<sup>51</sup> currently largely missing in digital constitutionalism discourses. Indeed, while traditionally overlooked or abandoned by constitutional theorists of the past century, such elements have historically played a significant role in the reality of 19<sup>th</sup>-century constitutional states.

Taking into consideration the different perspectives shaping its identity, digital constitutionalism is called to address at least four issues as part of a comprehensive, coherent research and policy agenda: (1) the negative impact of excessive datafication on contemporary societies (*critical approach to datafication*); (2) the legal conceptualisation of data for the

<sup>44</sup>See T Diniz Magalhães and A Christians, ‘Why Data Giants Don’t Pay Enough Tax’ 18 (2023) Harvard Law & Policy Review 119, and more generally the contributions of the University of Antwerp DigiTax center <<https://www.uantwerpen.be/en/research-groups/digitax/research/taxation-of-digital-economy/>>.

<sup>45</sup>See again the contributions of the University of Antwerp DigiTax center <<https://www.uantwerpen.be/en/research-groups/digitax/research/new-technologies/>> as well as A Bianco and K Pantazatou, *Good Administration in the AI Era: The Case of Tax Administrations* (2023).

<sup>46</sup>See, eg, AJ Cordell et al, *The New Wealth of Nations: Taxing Cyberspace* (Between the Lines 1997).

<sup>47</sup>C Kim, ‘Taxing the Metaverse’ (forthcoming 2024) 114 Georgetown Law Journal; X Oberson, *Taxing Artificial Intelligence* (Elgar 2024); AB Forteza, *Are we arriving on time? An analysis of issues related to the taxation of the metaverse* (2023); K Kuñnapas et al, ‘Taxes on the Digital Economy’ in DR Troitiño, T Kerikmäe and O Hamulák (eds), *Digital Development of the European Union An Interdisciplinary Perspective* (Springer 2023) 101–17; R Avi-Yonah, YR (Christine) Kim and K Sam, ‘A New Framework for Digital Taxation’ 63 (2022) Harvard International Law Journal 279; Marian (n 33); Z Rubinstein, ‘Taxing Big Data: A Proposal to Benefit Society for the Use of Private Information’ 31 (2021) Fordham Intellectual Property, Media & Entertainment Law Journal 1199; DA Zetzsche and L Anker-Sørensen, ‘Taxing Data-Driven Business: Towards Datapoint Pricing’ (2021) World Tax Journal 217; F Farri, *Tax Sovereignty and the Law in the Digital and Global Economy* (Giappichelli-Routledge 2020); O Ben-Shahar, ‘Data Pollution’ 11 (2019) Journal of Legal Analysis 104.

<sup>48</sup>See De Abreu Duarte et al (n 1).

<sup>49</sup>Cf De Abreu Duarte et al (n 1) 323 (‘this connection [between different perspectives] does not aim to forcefully build coherence and/or agreement at all costs, as some key differences undeniably remain’), and 326–7; and Golia and Teubner (n 1).

<sup>50</sup>See above n 16.

<sup>51</sup>In the sense of P Selznick and P Nonet, *Law, Society, and Industrial Justice* (Russell Sage 1969).

extraction and distribution of its value (*data as an economic factor*); (3) the design of data taxes (*tax design*); (4) the interaction of data taxation with other legal regimes and issues of social justice at both national and global levels (*economic digital constitutionalism*).

#### 4. From a critical approach to datafication to economic digital constitutionalism

##### A. Critical approach to datafication, regulatory goals, and data taxation

Any digital constitutionalism that takes the ‘datafication question’ seriously requires a critical approach and an awareness of the externalities deriving from datafication itself. Such an approach<sup>52</sup> is necessary to expand the regulatory goals of data governance and entails several consequences.

First, it forces new problems to appear or reframes existing ones.<sup>53</sup> ‘Big data’ and digital technologies are not only a means for received models of governance of populations and subjects. The amassing, analysis, and mobilisation of hybrid data repositories and real-time data flows – primarily driven by the profit-maximisation compulsion of (informational) capitalism<sup>54</sup> and the power-maximisation compulsion of political systems<sup>55</sup> – open to new and potentially dangerous forms of governance, a new ‘digital political economy’.<sup>56</sup> The combination and mutual reinforcement of private/commercial and public/political surveillance, powered by digital and algorithmic technologies, end up affecting or manipulating individuals, groups, and social systems alike.<sup>57</sup>

In Habermasian language, the excessive datafication of society narrows the ‘life-world’ spaces within societies.<sup>58</sup> At the same time, it allows for their colonisation/corruption by rationalities –

<sup>52</sup>Critical’ in the sense of J Balkin, ‘Critical Legal Theory Today’ in FJ Mootz (ed), *On Philosophy in American Law* (Cambridge University Press 2009) 64–72 at 64 (‘Critical theories ask how law legitimates power in both senses of the word: how it shapes, channels and restrains power, and how it mystifies, disguises and apologises for it. In addition, a critical theory studies how the very acts of making, interpreting and applying law produce and proliferate ever new forms of power, both just and unjust’).

<sup>53</sup>Cf Golia (n 1) 2, building on Christodoulidis’ work (‘Digital constitutionalism’s political rationality (the possibility to think the given otherwise) is hardly accompanied by a critical phenomenology (the forcing to appear)’).

<sup>54</sup>On the continuity between pre- and post-digital revolution capitalism, see Kapczynski (n 2); Cohen (n 2); Morozov (n 4).

<sup>55</sup>‘Digital authoritarianism’ is a phrase coined to indicate ‘the use of information technology by authoritarian regimes to surveil, repress, and manipulate domestic and foreign populations’ (‘Digital Human Rights Need a Single Home in U.S. Government,’ *Foreign Policy*, 14 March 2022 <<https://foreign-policy.com/2022/03/14/digital-authoritarianism-tech-human-rights/>>). Cf especially Global Rachel Griffin, ‘EU Platform Regulation in the Age of Neo-Illiberalism,’ 29 March 2024 <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4777875](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4777875)>; M Whittaker, ‘Social Media, Authoritarianism, And The World As It Is,’ *LPE Blog*, 28 March 2024 <<https://lpeproject.org/blog/social-media-authoritarianism-and-the-world-as-it-is/>>; Global Affairs Canada, Report ‘Decoding Digital Authoritarianism,’ March 2023 <<https://berggruen.org/news/decoding-digital-authoritarianism>>; C Véliz, *Privacy is Power* (Penguin 2021); and T Dragu and Y Lupu, ‘Digital Authoritarianism and the Future of Human Rights’ 75 (2021) *International Organization* 991.

<sup>56</sup>G Teubner and A Golia Jr, ‘Societal Constitutionalism in the Digital World: An Introduction’ 30 (2023) *Indiana Journal of Global Legal Studies* 1 at 8 ff. Cf also Bietti (n 3); L Ulbricht and K Yeung (eds), ‘Special Issue: Algorithmic Regulation’ 16 (2022) *Regulation & Governance* 1; Véliz (n 55); A Iliadis and F Russo (eds), ‘Special E-Issue: Critical Data Studies’ (2016) *Big Data & Society*.

<sup>57</sup>Ulbricht and Yeung (eds) (n 56); F Jongepier and M Klenk (eds), *The Philosophy of Online Manipulation* (Routledge 2022); Véliz (n 55); F Johns, ‘Governance by Data’ 17 (2021) *Annual Review of Law and Social Science* 4.1; K Pistor, ‘Rule by Data: The End of Markets?’ 83 (2020) *Law and Contemporary Problems* 101; Ben-Shahar (n 47); N Suzor, *Lawless: The Secret Rules That Govern Our Digital Lives* (Cambridge University Press 2019).

<sup>58</sup>Cf H Wang, *Algorithmic Colonization: Automating Love and Trust in the Age of Big Data*, vol PhD (Amsterdam Institute for Humanities Research, University of Amsterdam 2022); Ulbricht and Yeung (eds) (n 56); N Couldry and U Mejias, *The Costs of Connection. How Data Is Colonizing Human Life and Appropriating It for Capitalism* (Stanford University Press 2019); B-C Han, *In the Swarm: Digital Prospects* (MIT Press 2017). Cf also Viljoen (n 26) 573 (‘What makes datafication wrong is not (only) that it erodes the capacity for subject self-formation, but instead that it materializes unjust social relations: data relations that enact or amplify social inequality’).



economic, political, but also scientific, medical, mass-mediatic, etc. – whose inner expansive tendencies are less and less constrained.<sup>59</sup> Datafication is not a problem ‘only’ to the extent it reinforces the power- and profit-accumulation imperatives of political and economic actors. It re-frames, constrains, and potentially corrupts the social processes which allow for the protection and free development of individuals, collective groups, and functional systems within society.<sup>60</sup>

Second, a critical approach highlights other – actual or potential – harms, eg, the energy consumption and environmental degradation linked to the data economy;<sup>61</sup> the exploitation and invisibilisation of old and new forms of labour;<sup>62</sup> and the socioeconomic costs deriving from data- and automation-driven business models.<sup>63</sup> Such issues are hardly taken into consideration in data governance strategies. The latter – typically focusing on harms to individuals and issues related to data protection, hate speech, discrimination, misinformation,<sup>64</sup> market competition,<sup>65</sup> and, more recently, (urban) safety and sustainability – do not include the reduction of the compulsion to datafication among their goals. Instead, they aim to increase the availability, quality, sharing of data<sup>66</sup> or, at best, the participation of data subjects in its control/

<sup>59</sup>Cf Teubner and Golia (n 56). The data overproduction also contributes to the noise/information problem (D Kahneman, Olivier Sibony and Cass Sunstein, *Noise: A Flaw in Human Judgment* (Little, Brown Spark 2021) which during the COVID-19 pandemic has led to an ‘infodemic’ (A Gruzdt et al, ‘Special E-Issue: Studying the COVID-19 Infodemic at Scale’ (2021) *Big Data & Society*) and, more generally, has devastating effects on politics, mass media, and science. The function of separation of information from noise has become a contested commodity in itself, a function that business actors are trying to privatise (cf LJ Hoffmann, ‘Commodification Beyond Data: Regulating the Separation of Information from Noise’ 2 (2023) *European Law Open* 424). In other words, business actors tend to privatise/monetise a function that has become socially necessary precisely because of the power-driven and profit-driven compulsion to overproduce data.

<sup>60</sup>This observation also offers a potential point of reference on the crucial question of the difference between ‘normal’ and ‘excessive’ datafication. This question cannot be answered in the abstract and cannot adequately be addressed in this Article, as any answer needs to be tested on a case-by-case basis and, importantly, regulatory responses need to be adapted to specific contexts. However, under an only preliminary answer, in functionally differentiated societies datafication could be seen as ‘excessive’ when individuals’ and collective actors’ behaviour, economic activities, scientific research, news generation, etc are not oriented towards spontaneous self-realisation, production output, scientific results, socially relevant information, etc, but pushed/manipulated primarily towards the generation of ever-newer data. I adapt here the arguments from G Teubner, ‘The Constitution of Non-Monetary Surplus Values’ 30 (2021) *Social & Legal Studies* 501.

<sup>61</sup>For some data, see B Kindig, ‘AI Power Consumption: Rapidly Becoming Mission-Critical,’ *Forbes*, 20 June 2024 <<https://www.forbes.com/sites/bethkindig/2024/06/20/ai-power-consumption-rapidly-becoming-mission-critical/#>>; S Hebous and N Vernon-Lin, ‘Carbon Emissions from AI and Crypto Are Surging and Tax Policy Can Help,’ IMF Blog, 15 August 2024 <<https://www.imf.org/en/Blogs/Articles/2024/08/15/carbon-emissions-from-ai-and-crypto-are-surg-ing-and-tax-policy-can-help>>; and I O’Brien, ‘Data center emissions probably 662% higher than big tech claims. Can it keep up the ruse?’ *The Guardian*, 15 September 2024 <<https://www.theguardian.com/technology/2024/sep/15/data-center-gas-emissions-tech>>. See also E Bietti and R Vatanparast, ‘Data Waste’ 61 (2020) *Harvard International Law Journal* Frontiers 1.

<sup>62</sup>A Parsons, ‘Tax’s Digital Labor Dilemma’ 71 (2022) *Duke Law Journal* 1781; A Williams, M Miceli and T Gebru, *The Exploited Labor Behind Artificial Intelligence* (2022); M Andrejevic, ‘Exploitation in the Data Mine,’ *Internet and Surveillance* (Routledge 2011); Fuchs (n 43).

<sup>63</sup>In this symposium, see spec. J Vipra, ‘The Case for Data Rent Modelled on Ground Rent’ (2024) *European Law Open*. See also M Beraja and N Zorzi, ‘Inefficient Automation,’ NBER Working Paper 30154, June 2022 <<https://www.nber.org/papers/w30154>>; and below, Section 4.B.

<sup>64</sup>Cf especially the Digital Services Act (DSA), Regulation (EU) 2022/2065, the most advanced instrument adopted by the EU. On the liberal rationality underlying most recent regulatory efforts in the EU, see B Farrand, ‘The Ordoliberal Internet? Continuity and Change in the EU’s Approach to the Governance of Cyberspace’ 2 (2023) *European Law Open* 106; E Bietti, ‘A Genealogy of Digital Platform Regulation’ 7 (2023) *Georgetown Law Technology Review* 1.

<sup>65</sup>Cf the Digital markets Act (DMA), Regulation (EU) 2022/1925. On the ambiguous nature – both antitrust and regulatory – of the DMA, see N Moreno Belloso and N Petit, ‘The EU Digital Markets Act (DMA): A Competition Hand in a Regulatory Glove’ (2023) *European Law Review*.

<sup>66</sup>See Art 5(1)(d) of the General Data Protection Regulation (GDPR), Regulation (EU) 2016/679; Art 4(1)(d) Regulation (EU) 2018/1725; and Art 10 of Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU)

management.<sup>67</sup> Despite its potential,<sup>68</sup> the principle of data minimization – one of the cornerstones of data protection law<sup>69</sup> – remains underenforced<sup>70</sup> and, in any case, limited to the relatively narrow realm of *personal* data.<sup>71</sup> What was designed as one of its primary safeguards – the possibility to refuse or withdraw individual consent to data treatment<sup>72</sup> – has long shown its limits, especially in the age of so-called digital resignation.<sup>73</sup> Moreover, AI systems and intensive data processing put into question the very dualism between personal data/non-personal data on which data protection law has been built.<sup>74</sup>

More generally, by creating ‘data markets’ controlled by data intermediaries,<sup>75</sup> by circumventing or softening fundamental right guarantees concerning mass surveillance, often in the

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No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act).

<sup>67</sup>This is the sense in which most calls for ‘democratizing AI’, for example, are normally understood: for a critique, see J Himmelreich, ‘Against “Democratizing AI”’ 38 (2023) *AI & Society* 1333.

<sup>68</sup>Cf the AI Now Institute 2023 Landscape Report, ‘Data Minimization as a Tool for AI Accountability’, 11 April 2023 <<https://ainowinstitute.org/spotlight/data-minimization#footnote-list-5>>.

<sup>69</sup>In EU law, the data minimisation principle is recognised under Art 5(1)(c) GDPR; and Art 4(1)(c) of Regulation (EU) 2018/1725, and provides that personal data shall be ‘adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed.’ See also the California Consumer Privacy Act of 2018 (CCPA), spec. Section 1798.100(c).

<sup>70</sup>See again the AI Now Institute 2023 Landscape Report (n 68).

<sup>71</sup>Which is notoriously a contested notion. Art 4(1) defines ‘personal data’ as ‘any *information* relating to an identified or identifiable natural person [emphasis added]’. On some definitional issues deriving from the reference to the notion of ‘information’, see R Gellert, ‘Comparing Definitions of Data and Information in Data Protection Law and Machine Learning: A Useful Way Forward to Meaningfully Regulate Algorithms?’ 16 (2022) *Regulation & Governance* 156; and N Purtova and G van Maanen, ‘Data as an Economic Good, Data as a Commons, and Data Governance’ 16 (2024) *Law, Innovation and Technology* 1 at 5–8.

<sup>72</sup>To be sure, the GDPR did not rely only on individual consent but established a broad range of further safeguards, which have been given relevance especially in most recent administrative and judicial implementation. See only, and most recently, CJEU, Judgment of the Court (Grand Chamber) of 4 July 2023, Case C-252/21, *Meta Platforms Inc. and Others v Bundeskartellamt*, esp. paras 138–9: ‘the processing of personal data by the operator of an online social network [...] is justified [...] where it is actually necessary for compliance with a legal obligation to which the controller is subject [...], where that legal basis meets an objective of public interest and is proportionate to the legitimate aim pursued and where that processing is carried out only in so far as is strictly necessary. [...] such processing of personal data cannot [...] be regarded as necessary in order to protect the vital interests of the data subject or of another natural person [...] or for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller [...]’. See also European Data Protection Board (EDPB), Binding Decision 3/2022 on the dispute submitted by the Irish SA on Meta Platforms Ireland Limited and its Facebook service (Art 65 GDPR), Adopted on 5 December 2022 <[https://edpb.europa.eu/system/files/2023-01/edpb\\_bindingdecision\\_202203\\_ie\\_sa\\_meta\\_facebookservice\\_redacted\\_en.pdf](https://edpb.europa.eu/system/files/2023-01/edpb_bindingdecision_202203_ie_sa_meta_facebookservice_redacted_en.pdf)>, deciding that Meta inappropriately relied on contract as a legal basis to process personal data for the purpose of behavioural advertising as this was not a core element of the services. The EDPB found that Meta lacked a legal basis for this processing and therefore unlawfully processed these data.

<sup>73</sup>J Turow et al, *Americans Can’t Consent to Companies’ Use of Their Data* (2023); NA Draper and J Turow, ‘The Corporate Cultivation of Digital Resignation?’ 21 (2019) *New Media & Society* 1824.

<sup>74</sup>See AP Lima Monteiro, ‘Privacy at a Crossroads’ in Brożek, Kanevskaia and Palka (eds) (n 1) spec. 217–20; B Lazarotto and G Maligneri, *The Data Act: A (Slippery) Third Way Beyond Personal/Non-Personal Data Dualism?* (2023); P Palka, ‘Harmed While Anonymous: Beyond the Personal/Non-Personal Distinction in Data Governance’ (2023) *Technology & Regulation* <<https://techreg.org/article/view/13829>>; G Sher and A Benchlouch, ‘The privacy paradox with AI’ *Reuters* <<https://www.reuters.com/legal/legalindustry/privacy-paradox-with-ai-2023-10-31/>>; A Beduschi, ‘Synthetic Data Protection: Towards a Paradigm Change in Data Regulation?’ 11 (2024) *Big Data & Society*.

<sup>75</sup>Cf esp Arts 10–15 of the Data Governance Act (DGA), Regulation (EU) 2022/868, which includes business-to-business data intermediaries and personal information management systems (PIMS) into the notion of ‘data intermediation services’; and the Data Act, Regulation (EU) 2023/2854.

name of child protection;<sup>76</sup> by encouraging ‘smart’ urban planning;<sup>77</sup> and by relying on the mirage of data anonymisation,<sup>78</sup> more recent regulatory instruments incentivise data (over)production, commercial surveillance, and stabilisation of dominant market positions of ‘data producers’.<sup>79</sup>

The challenges underlying data governance do not derive only from the role of business actors in highly concentrated markets, actors that can often escape ‘hard’ regulation and create their own regulatory standards.<sup>80</sup> They also come from the fact that regulatory approaches based on data as economic good are ‘hardwired to only produce governance strategies that will facilitate the provision of more or better-quality data’,<sup>81</sup> thus overlooking other societal goals *beyond* data provision. Even risk-based regulatory approaches<sup>82</sup> and ‘hard’ prohibitions of more recent instruments<sup>83</sup> – pursuing goals such as protection of the democratic process, innovation, privacy, or minors’ wellbeing – have only limited effect if the internal incentives to excessive datafication are unaffected.

The reduction of surveillance-based, profit-driven, attention-maximising datafication can be pursued without foreclosing the prospects for authentic inclusion, participation,<sup>84</sup> solidarity, and emancipation brought by digital innovation, as well as the economic opportunities brought by safe digital technology.<sup>85</sup> Certainly, datafication of contemporary societies, on the one hand, and the emergence of informational capitalism, on the other, have been deeply entangled. But such entanglement remains contingent: technological progress does not necessarily need to consolidate the institutions and actors of (informational) capitalism and may be directed towards authentic socio-political change, whatever the latter might be. A digital constitutionalism that (re-)asks the ‘social question’ is not about fighting rear-guard battles. Rather, it is about reducing the incentives to the *excessive* datafication of society and the closely related pressure to societal manipulation/

<sup>76</sup>See, eg, the exceptions to the prohibition to real-time remote biometric identification systems in publicly accessible spaces under Art 5(1)(d); the EU Commission Proposal for a Regulation of The European Parliament and of the Council Laying Down Rules to Prevent and Combat Child Sexual Abuse, COM/2022/209 final (cd. CSAM Regulation), which has been met with strong opposition by scientists and researchers (see the latest open letter <[https://homes.esat.kuleuven.be/~preneel/Open\\_letter\\_CSAR\\_aug24\\_still\\_unacceptable.pdf](https://homes.esat.kuleuven.be/~preneel/Open_letter_CSAR_aug24_still_unacceptable.pdf)>); and the Online Safety Act 2023 in the UK, which received Royal Assent on 26 October 2023. For actual or potential contrasts with human rights law, see most recently ECtHR, *Podchasov v. Russia*, Application no. 33696/19, Judgment of 13 February 2024 and the observations by Erik Tuchtfield, *No Backdoor for Mass Surveillance*, Verfassungsblog, 29 February 2024 <<https://verfassungsblog.de/no-backdoor-for-mass-surveillance/>>. For an assessment of such developments in the context of EU platform regulation, see Griffin (n 55).

<sup>77</sup>CC Okafor, ‘I Think Quality is More Important Than a Lot of Data’ in *Cities Datafication* 11 (2023) Media & Communication 344; P Calvo, ‘The Ethics of Smart City (Eosc): Moral Implications of Hyperconnectivity, Algorithmization and the Datafication of Urban Digital Society’ 22 (2019) Ethics and Information Technology 141.

<sup>78</sup>AP Carvalho et al, *Big Data, Anonymisation and Governance to Personal Data Protection* (2020); S Stalla-Bourdillon and A Knight, ‘Anonymous Data v. Personal Data – A False Debate: An EU Perspective on Anonymization, Pseudonymization and Personal Data’ 34 (2017) Wisconsin International Law Journal 284.

<sup>79</sup>Cf D Wielsch, ‘Political Autonomy in the Digital World. From Data Ownership to Digital Constitutionalism’ 30 (2023) Indiana Journal of Global Legal Studies 115 at 118; T O’Reilly, I Strauss and M Mazzucato, ‘Algorithmic Attention Rents: A Theory of Digital Platform Market Power’ (2023) UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2023-10) 1; M Kurz, *The Market Power of Technology. Understanding the Second Gilded Age* (Columbia University Press 2023).

<sup>80</sup>In this symposium, cf Vipra (n 63), describing how (real or supposed) legal vacuums morph into ‘legal defaults’ that allows digital platforms to extract value from other actors in the economy. More generally, see E Fosch-Villaronga and A Golia Jr, ‘Robots, Standards and the Law: Rivalries between Private Standards and Public Policymaking for Robot Governance’ 35 (2019) Computer Law & Security Review 129.

<sup>81</sup>Purtova and van Maanen (n 71). Their critical review, however, includes only the literature on the classification along the axes of rivalry and excludability and does not consider literature conceptualising data as a particular kind of a good, eg, infrastructure, labour, or capital. On these issues, see also Bietti (n 3).

<sup>82</sup>See generally G De Gregorio, ‘The European Risk-Based Approaches: Connecting Constitutional Dots in the Digital Age’ 59 (2022) Common Market Law Review 473.

<sup>83</sup>See esp. Arts 25 and 28 DSA; and Art 5 AI Act.

<sup>84</sup>Cf recently R Fischli and J Muldoon, ‘Empowering Digital Democracy’ (2024) Perspectives on Politics 1.

<sup>85</sup>In this symposium, cf esp. Lamchek (n 14). On the false dichotomy regulation v. innovation, see most recently A Bradford, ‘The False Choice Between Digital Regulation and Innovation’ 118 (2024) Northwestern University Law Review (forthcoming) <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4753107](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4753107)>.

colonisation, which, under current modes of production, is in turn linked to other perverse dynamics of global neoliberal capitalism (especially the free flow of capital and the financialisation of the economy).<sup>86</sup> Here, tax policies represent an overlooked instrument.<sup>87</sup>

Historically, taxes – especially progressive ones<sup>88</sup> – have served multiple goals, well beyond the ‘mere’ funding of governments.<sup>89</sup> Taxes may be imposed to reduce risks associated with lawful but potentially harmful activities, to tackle the societal power coming from the accumulation of profit by economic actors, to enhance social mobility, inclusion and purchasing power of low- and middle-income population.

However, the normative justifications of proposals for ‘digital services taxes’ – in the EU or elsewhere – normally focus on the need to target new forms of intangible wealth that escape tax systems (so-called base erosion) but rarely mention disincentivising excessive datafication *as such*.<sup>90</sup> Once again, this is a regulatory blind spot, showing a persisting market-driven imprint.<sup>91</sup> As long as the contrast to excessive datafication does not become a goal *as such*, any regulatory strategy is doomed to overlook the related risks or, worse, contribute to their invisibility.

Against this background, tax law is only one instrument of a necessarily diverse regulatory mix that also needs strategically to include *both* state law – notably corporate, labour, administrative, tort law<sup>92</sup> – and non-state normative systems (international law,<sup>93</sup> but also social and private norms of different kind<sup>94</sup>). As long as it makes the data economy – which, as we will see below, is primarily a rentier economy<sup>95</sup> – less profitable, reduces the compulsion to excessive datafication, and slows down automation,<sup>96</sup> taxation is a useful and, so far, relatively underexplored tool to tackle the negative externalities of data capitalism.<sup>97</sup>

<sup>86</sup>Cf Teubner (60); and, *mutatis mutandis*, G Teubner, *Constitutional Fragments: Societal Constitutionalism and Globalization* (Oxford University Press 2012) at 99, referring to the financialisation of the economy (‘it is not the growth imperative that becomes the centre of the attention, but rather the *difference between necessary growth and self-destructive growth excesses*, which trigger adverse developments’).

<sup>87</sup>For an exception, see M Mazzucato, J Ryan-Collins and G Gouzoulis, ‘Mapping Modern Economic Rents: The Good, The Bad, and the Grey Areas’ 47 (2023) *Cambridge Journal of Economics* 507.

<sup>88</sup>Taxes in which the tax rate increases together with the taxable amount.

<sup>89</sup>Cf Marian (n 33). To be sure, I do not subscribe to the idea that taxable wealth somehow pre-exists laws and social conventions: cf Murphy and Nagel (n 24) spec. 76–95 and 130–41; and, more generally, Mazzucato (n 2).

<sup>90</sup>For an overview, see Kujnnapas et al (n 47); J Hochstetter-Diez et al, ‘Governance Democratic and Big Data: A Systematic Mapping Review’ 15 (2023) *Sustainability* 12630; R Mason and L Parada, ‘The Legality of Digital Taxes in Europe’ 40 (2020) *Virginia Tax Review* 175; W Cui, ‘The Digital Services Tax: A Conceptual Defense’ 73 (2019) *Tax Law Review* 69. For an exception, see Marian (n 33).

<sup>91</sup>See again Farrand (n 64); Bietti (n 64).

<sup>92</sup>For some proposals, see J Balkin, ‘To Reform Social Media, Reform Informational Capitalism’ in L Bollinger and GR Stone (eds), *Social Media, Freedom of Speech and the Future of Our Democracy* (Oxford University Press 2022) 233–54.

<sup>93</sup>See most recently S-y Peng, *International Economic Law in the Era of Datafication* (Cambridge University Press 2024); K Raustiala, ‘Whose Internet? Authoritarianism and the Struggle Over Governance’ in *Global Affairs Canada Report* (n 55) 15–18; and E Celeste, ‘The Constitutionalisation of the Digital Ecosystem: Lessons from International Law’ in A Golia Jr, M Kettemann and R Kunz (eds), *International Law and the Internet* (Nomos 2021) 47–76.

<sup>94</sup>Cf Golia and Teubner (n 1). In that sense, resorting to tax law – one of the most ‘statist’ instruments available – is not incoherent with the approach of Teubner (n 86) 96–102 (arguing for state-based, hard law solutions to counter the uncontrolled financialisation of the economy); and with parallel proposals aiming at strategising private normative systems within the digital ecosystem (eg, A Golia Jr, ‘The Transformative Potential of Facebook Oversight Board: Strategic Litigation within the Digital Constitution?’ 30 (2023) *Indiana Journal of Global Legal Studies* 325).

<sup>95</sup>Cf O’Reilly et al (n 79) spec. 3 (and the recalled literature); and Mazzucato et al (n 87) at 510 (building on R Baiman, ‘Unequal Exchange and the Rentier Economy’ 46 (2014) *Review of Radical Political Economics* 536). See more generally B Christophers, *Rentier Capitalism: Who Owns the Economy and Who Pays for It?* (Wiley 2020); and Durand (n 4).

<sup>96</sup>Cf Beraja and Zorzi (n 63), showing how, due to the labour market frictions that displaced workers face, it is not enough to merely redistribute wealth through taxation of automation; instead, optimal policy aims at slowing down automation itself.

<sup>97</sup>Cf in policy terms, Mazzucato et al (n 87) spec. 518 and 527 ff.

To summarise, a critical approach helps identify datafication as a self-standing problem and orient the related regulatory strategies. Here, one needs to consider the potential contradiction between conflicting regulatory goals of data taxation: budget-funding/distribution of value, on the one hand; reducing/disincentivising excessive datafication, on the other. Indeed, any data tax effectively reducing the datafication compulsion might shrink the tax base<sup>98</sup> of data companies and therefore the targeted revenue.<sup>99</sup> Certainly, which goal should prevail is a policy issue that needs to be addressed through politically legitimated decision-making processes. However, thematising the reduction of datafication as a regulatory goal is worth in itself, as it makes the associated dangers more visible – it *forces* them to appear as a problem, opens to more informed debates, and re-politicises data governance.<sup>100</sup> Further, the automatic link between data taxes effectively reducing datafication and the shrinking of the tax base is not to be taken for granted and is so far supported by little empirical evidence. There is indeed the possibility – and initial evidence<sup>101</sup> – that raising the marginal costs of data collection might push companies to pass the burden to users by charging them for using digital services that are currently ‘free’. This dynamic could bring people to use less of it or, more realistically, re-expand the base of traditional income tax – the one most affected by the ‘base erosion’ linked to the data economy<sup>102</sup> – thus potentially increasing tax revenues.<sup>103</sup>

Be as it may, before elaborating concrete tax designs, scholars and policymakers need to explore understandings of data providing normative justifications to data taxation also in light of constitutional limits related to taxpayers’ ability to pay. In other words, any effective data taxation policy needs to frame data as a factor contributing to data-collectors’ tax base.<sup>104</sup> In this way, a critical approach to datafication represents the point of departure towards topics investigated by LPE scholarship and institutional economics.<sup>105</sup>

## B. Data as a legitimate tax base within a rentier economy

Today, it is almost a cliché to observe that data is the new oil<sup>106</sup> or, as the EU Commission put it, ‘the lifeblood of economic development’.<sup>107</sup> Besides more or less questionable metaphors, data has undoubtedly become a major economic factor in contemporary economies. Profits of business actors – both dominant and non-dominant – heavily rely on their capacity to access, extract,

<sup>98</sup>Understood as the total amount of income, property, assets, consumption, transactions, or other economic activity subject to taxation by a tax authority.

<sup>99</sup>In this symposium, cf A Parsons, ‘Defining the Goal of a Data Tax’ (2024) European Law Open; and, in the same direction, see K Pantazatou, ‘Why Revenue Matters: A Case for an EU Digital Levy’ (2024) European Law Open.

<sup>100</sup>See below, Sections 4.D and 4.E.

<sup>101</sup>See S Schechner, ‘Meta Plans to Charge \$14 a Month for Ad-Free Instagram or Facebook’ The Wall Street Journal, 3 October 2023 <<https://www.wsj.com/tech/meta-floats-charging-14-a-month-for-ad-free-instagram-or-facebook-5dbaf4d5>>.

<sup>102</sup>See above, Section 2 and n 33 and 34.

<sup>103</sup>Cf Marian (n 33) at 565 (‘if Facebook wants to put monetary value on the collection of information of residents of a particular jurisdiction – fantastic! Income tax is back in vogue! We can just tax Facebook using the traditional methods of taxation that rely on monetary value’).

<sup>104</sup>On this point, see in this symposium esp. Pantazatou (n 99).

<sup>105</sup>See only S Deakin et al, ‘Legal Institutionalism: Capitalism and the Constitutive Role of Law’ 45 (2017) Journal of Comparative Economics 188.

<sup>106</sup>Sadowski (n 39); K Bhagshpur, ‘Data Is the New Oil and That’s a Good Thing’, *Forbes*, 15 November 2019 <<https://www.forbes.com/sites/forbestechcouncil/2019/11/15/data-is-the-new-oil-and-thats-a-good-thing/?sh=598c582d7304>>; The World’s Most Valuable Resource Is No Longer Oil, but Data, *Economist*, 6 May 2017 <[<sup>107</sup>Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions ‘A European Strategy for Data’ COM, \(2020\) 66 final, Brussels, 19.2.2020, at 2.](https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data?utm_medium=cpc.adword.pd&utm_source=google&ppcampaignID=18151738051&ppcadID=&utm_campaign=a.22brand_pmax&utm_content=conversion.direct-respnse.anonymous&gad_source=1&gclid=EAIAIQobChMI4-ed6u6rhQMvq6hoCR3BKw78EAYASAAEgKsfPD_BwE&gclidsrc=aw.ds>”; Ben-Shahar (n 47).</a></p>
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process, and monetise data.<sup>108</sup> Some scholars even argue that data might progressively replace money or at least some of its functions.<sup>109</sup>

From a legal point of view, data is not a ‘thing’, as it is normally defined as a ‘digital representation of information’.<sup>110</sup> Law ‘codes’ data as a ‘representation’, constantly replicated for a potentially infinite number of times. The term ‘data’ clusters a constellation of activities, notably inputting, processing, organisation, abstraction, units, aggregation, and resourcing of information through digital technologies.<sup>111</sup> But the law does not only define data. It also contributes to making it an economic factor.

Taking a step back, one can observe that, from an economic point of view, data becomes a valuable good through the aggregation and analysis of pre-existing information in huge amounts, via technologies created by software engineers and data scientists.<sup>112</sup> This constellation of activities, however, is difficult to evaluate economically, as it is contingent on specific technoscientific, legal, and institutional ecosystems.<sup>113</sup>

Indeed, legal scholars have proposed numerous conceptualisations which, according to different policy goals,<sup>114</sup> variably frame data as object of property rights, privacy rights, or as commons.<sup>115</sup> However, it is crucial to stress the role of law in shaping the capacity of business actors to produce, commodify, and monetise data. The law ‘codes’ data as capital by making priority of use, durability, convertibility, and universality possible.<sup>116</sup> Law – or rather, a combination of (intellectual) property, contract, collateral, trust, corporate, bankruptcy, procurement law<sup>117</sup> – contributes to this result in three ways.

<sup>108</sup>For a case study drawn on the retail industry, see recently C Durand and C Baud, ‘Profit-Making, Costs, and Investments in the Digitalization of Retailing – The Uneven Trajectories of Carrefour, Amazon and Walmart (1995–2019)’ 28 (2024) *Competition & Change* 318.

<sup>109</sup>See again Pistor (n 57). On the question of whether data – or the digital code – can replace at least some of the communication media of the functionally differentiated society (power, money, information, faith, etc.), potentially contributing to their de-differentiation, see Teubner and Golia (n 56) at 22–3.

<sup>110</sup>Cf the definition under Art 2(1) of the Data Act, Art 2(1) of the DGA, Art 2(24) of the DMA, defining data as ‘any digital representation of acts, facts or information and any compilation of such acts, facts or information, including in the form of sound, visual or audio-visual recording.’ To be sure, such legal definitions differ from what information scientists recognise as ‘data’ (and how it is different from information): see n 71 above; as well as LA Bygrave, ‘Information Concepts in Law: Generic Dreams and Definitional Daylight’ 35 (2015) *Oxford Journal of Legal Studies* 91.

<sup>111</sup>J Raso and N Sheffi, ‘Data’ in M Valverde et al (eds), *Routledge Handbook of Law and Society* (Routledge 2021) 112–18.

<sup>112</sup>In this symposium, see Lamchek (n 14); but already JS Lamchek, ‘Ensuring Data Science and Its Applications Benefit Humanity: Data Monetization and the Right to Science’ 23 (2023) *Human Rights Law Review*. Cf Marian (n 33) 517 (‘Data only becomes valuable when it is manipulated, and insights are used to anticipate and modify your consumption behaviour. It becomes even more valuable when feedback data is used to assess the success of such manipulations and to better affect behavioural modifications’).

<sup>113</sup>See again Bietti (n 3).

<sup>114</sup>Purtova and van Maanen (n 71).

<sup>115</sup>See *ibid* (and their literature review at 8 ff); Wielsch (n 79); I Cofone, ‘Beyond Data Ownership’ 43 (2021) *Cardozo Law Review* 501; P Hummel, M Braun and P Dabrock, ‘Own Data? Ethical Reflections on Data Ownership’ 34 (2021) *Philosophy & Technology* 545; C Godt, ‘“Data Property”: Entitlements Between “Ownership”, Factual Control and Access to Commons’ in B Akkermans and A Berlee (eds), ‘*Sjef-Sache*’ (Eleven 2021); S Viljoen, *Data as Property?* (2020); PJ Singh and J Vipra, ‘Economic Rights Over Data: A Framework for Community Data Ownership’ 62 (2019) *Development* 53; T Scassa, *Data Ownership* (CIGI Papers No 187, 2018); V Janeček, ‘Ownership of Personal Data in the Internet of Things’ 34 (2018) *Computer Law & Security Review* 1039; S van Erp, ‘Ownership of Digital Assets?’ 5 (2016) *European Property Law Journal* 73. For a normatively oriented contribution, see J Muldoon, ‘Data-Owning Democracy or Digital Socialism?’ (2022) *Critical Review of International Social and Political Philosophy* 1 <<https://doi.org/10.1080/13698230.2022.2120737>>.

<sup>116</sup>I refer to the framework proposed by Pistor (n 39) spec. 13–15. According to different framing, for social justice and equal value-distribution purposes, data would better be conceptualised as labour, based on users’ roles in creating data: see I Arrieta-Ibarra et al, ‘Should We Treat Data as Labor? Moving beyond “Free”’ 108 (2018) *AEA Papers and Proceedings* 38.

<sup>117</sup>Vatanparast (n 3).

First, the law keeps the ‘raw’ information *potentially* representable or processable via digital technologies a free, abundant resource, open to use, ‘mining’, even ‘scraping’.<sup>118</sup> Large networks of users ‘hooked’<sup>119</sup> to digital platforms and vast amounts of publicly available, ‘free’ information build the datasets necessary for the business model of data companies,<sup>120</sup> both those providing social media services and those focusing on AI.<sup>121</sup> Information potentially representable and/or processable via digital technologies is treated as *res nullius* rather than *res communis*.<sup>122</sup> But data is an economically relevant factor only above certain thresholds that can be reached only by (few) governments<sup>123</sup> and companies through their control of digital infrastructures.<sup>124</sup> In this sense, the data economy is an economy of scale.<sup>125</sup>

Second, the law protects and stabilizes – notably via proprietary technologies<sup>126</sup> – the unequal control over digital and computational infrastructures<sup>127</sup> and, therefore, business actors’ capacity

<sup>118</sup>DG Widder, S West and M Whittaker, *Open (For Business): Big Tech, Concentrated Power, and the Political Economy of Open AI*, 18 August 2023 <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4543807](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4543807)>.

<sup>119</sup>In the sense of N Eyal, *Hooked: How to Build Habit-Forming Products* (Random House 2014).

<sup>120</sup>Cf Morozov (n 4) at 111 (Paradoxically, the tremendous success of Google’s business model suggests that the environment in which it operates is not defined by ‘information feudalism’ but, rather, by ‘information communism’).

<sup>121</sup>The tendency of AI companies to infringe upon IP law when it comes to ‘training’ their models can be seen through this lens. On this topical issue, see most recently the class action filed on 4 December 2023 by the Authors Guild and 17 authors against Open AI before the US Southern District of New York; the complaint filed on 27 December 2023 by the New York Times against Microsoft and Open AI before the US Southern District of New York, contending that millions of articles were used to train automated chatbots; and the Guangzhou Internet Court decision finding an AI company committing copyright infringement (reported by J Costigan, ‘China Rules AI Firm Committed Copyright Infringement’, *Forbes*, 29 February 2024 <<https://www.forbes.com/sites/johannacostigan/2024/02/29/china-rules-ai-firm-committed-copyright-infringement/#>>). The AI leading firm OpenAI reportedly claimed in a filing submitted to a House of Lords subcommittee that using only content from the public domain would be insufficient to train the kind of large language models (LLMs) it is building, suggesting that the company must therefore be allowed to use copyrighted material: see J Titcomb and J Warrington, ‘OpenAI warns copyright crackdown could doom ChatGPT’, *The Telegraph*, 7 January 2024 <<https://www.telegraph.co.uk/business/2024/01/07/openai-warns-copyright-crackdown-could-doom-chatgpt/>>.

<sup>122</sup>Cf Pistor (n 57) at 107. See also Cohen (n 2) ch. 2, arguing that ‘contemporary practices of personal data extraction and processing constitute a new type of public domain [...] the biopolitical public domain: a source of raw materials that are there for the taking and that are framed as inputs to particular types of productive activity’.

<sup>123</sup>See M Ananny, ‘An Infrastructural Approach to Digital Authoritarianism’ in *Global Affairs Canada Report* (n 55) 29–38.

<sup>124</sup>Understood not only as internet cables, data centres, and transmission networks, but also as identity, payment, data storage systems: cf D Eaves, M Mazzucato and B Vasconcellos, ‘Digital public infrastructure and public value: What is “public” about DPI?’, UCL Institute for Innovation and Public Purpose, Working Paper Series (IIPP WP 2024-05) <<https://www.ucl.ac.uk/bartlett/public-purpose/wp2024-05>> at 7–9.

<sup>125</sup>More precisely, an economy characterised by ‘cross-jurisdictional scale without mass’: cf OECD (2018), *Tax Challenges Arising from Digitalisation – Interim Report 2018: Inclusive Framework on BEPS*, OECD/G20 Base Erosion and Profit Shifting Project, OECD Publishing, Paris <<https://doi.org/10.1787/9789264293083-en>>, para 33 (‘Digitalisation has allowed businesses in many sectors to locate various stages of their production processes across different countries, and at the same time access a greater number of customers around the globe. Digitalisation allows some highly digitalised enterprises to be heavily involved in the economic life of a jurisdiction without any, or any significant, physical presence, thus achieving operational local scale without local mass’).

<sup>126</sup>Such as algorithms and data mining software. ‘Proprietary technology’ refers here to any technology or innovation that is owned by a company or individual and is protected by legal means, such as patents, trademarks, or copyrights. It is technology that gives a company a competitive advantage over its competitors and sets it apart in the market. Importantly, the possibility to commodify data often relies on non-IP forms of appropriation and de facto control. Actually, commodification of intangibles and capital accumulation often benefit from traditional, public domain-enhancing doctrines, to the extent the enclosure of data presupposes its previous availability, its nature of ‘*res nullius*’: cf M Borghi, ‘Commodification of Intangibles in Post-IP Capitalism: Rethinking the Counter-Hegemonic Discourse’ 2 (2023) *European Law Open* 434.

<sup>127</sup>Cf J Vipra and SM West, ‘Computational Power and AI’ AI Now Institute <<https://ainowinstitute.org/publication/policy/compute-and-ai#a0d31d2f-e17a-41c8-8001-7e2fd35e79f9>>; A Fisher and T Streinz, ‘Confronting Data Inequality’ 60 (2022) *Columbia Journal of Transnational Law* 829, who underline the unequal power over what does (not) become data. ‘Computing power’ is understood as the ability of a computing system to perform a large number of calculations or operations in a short amount of time.

to appropriate and process information, excluding others from the use of data,<sup>128</sup> primarily through trade secrecy protections.<sup>129</sup> In theory, data could be an (impure) public, universally accessible good only with the combined presence of some elements: no or minimal constraints to computing and processing power; digital infrastructure built with interoperable standards; open-source (or unlicensed and in the public domain) software.<sup>130</sup> Absent such elements, data becomes *de facto* privatised.

Third, the law ensures the possibility of exchanging data for some direct or indirect advantage: direct monetisation, improvement/optimisation of one company's own services, and influence on the social and political environment.<sup>131</sup>

To sum up, data's economic value varies depending on who uses it and how it is being used.<sup>132</sup> One feature – possibly *the* feature – of informational capitalism is that data is an economic good but its contribution to taxpayers' wealth oscillates and is extremely difficult to pre-determine in monetary terms.<sup>133</sup> This makes it difficult to individuate its role in data-producers' ability to pay<sup>134</sup> and therefore a pre-determined tax base to target.<sup>135</sup> Also for this reason, data does not appear in corporate balance sheets and legal systems do not 'code' it as an economic good that can be taxed as such. This could be seen as an obstacle to taxing data in the light of the constitutional guarantees requiring taxes to be limited by taxpayers' ability to pay and tied to some pre-determined tax base.<sup>136</sup>

However, this obstacle also derives from the almost exclusive focus on the *exchange value* of data, that is, the possibility to convert it into other economic goods, notably money. Relatedly, in most advanced economies, the bulk of taxes presently falls on production, income, and consumption rather than rents. Therefore, tax policies are normally evaluated through the relatively narrow lens of the income tax as a default taxation model.

In contrast, recent scholarship has highlighted the *use value* of data, that is, the 'value of being able to infer or predict likely future actions or effects'.<sup>137</sup> The use value of data, in other

<sup>128</sup>Even from other data companies: see A Liang, 'Elon Musk threatens to sue Microsoft over Twitter data', BBC, 20 April 2023 <<https://www.bbc.com/news/business-65332207>>.

<sup>129</sup>The process of so-called 'assetisation': cf K Birch and F Muniesa, 'Introduction: Assetization and Technoscientific Capitalism' in K Birch and F Muniesa (eds), *Assetization: Turning Things into Assets in Technoscientific Capitalism* (MIT Press 2020) 1–41. On the related legal trajectory and political economic implications, see A Kapczynski, 'The Public History of Trade Secrets' 55 (2022) University of California Davis Law Review 1367.

<sup>130</sup>Cf Eaves et al (n 124) at 15.

<sup>131</sup>A Parsons and S Viljoen, 'Valuing Social Data' (forthcoming) Columbia Law Review <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4513235](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4513235)>.

<sup>132</sup>M Olbert and C Spengel, 'Taxation in the Digital Economy – Recent Policy Developments and the Question of Value Creation' (2019) ZEW – Centre for European Economic Research Discussion Paper No. 19-010 <<https://ssrn.com/abstract=3368092>> spec. 15 ff.

<sup>133</sup>Cf Cui (n 90) at 19 ('It is [...] somewhat speculative to analyse how data generates platform rent aside from advertising, intermediation, and the online provisions of goods and services'). The creation of 'data markets' in more recent legislation (see above n 75), however, might change this element and should not be underestimated. For an overview of the attempts at capturing the economic value of data, see I Clay and N Cory, 'Data Is Not Oil, Bacon, or Gold: An Actual Measure of Data as an Asset', ITIF, 3 April 2023 <<https://itif.org/publications/2023/04/03/data-is-not-oil-bacon-or-gold-an-actual-measure-of-data-as-an-asset/>>; and M Olbert and C Spengel, 'International Taxation in the Digital Economy: Challenge Accepted' 9 (2017) World Tax Journal 3.

<sup>134</sup>On the principle of ability to pay in modern constitutional and tax law, according to which there must be a connection between taxable wealth and the amount levied, and taxpayers must be reasonably able to fulfil their fiscal obligations, see only R De Caria, 'Taxes' in R Grote, F Lachenmann and R Wolfrum (eds), *MPECCoL (online edition)* (Oxford University Press 2017) paras 28, 40–4.

<sup>135</sup>Cf Marian (n 33) at 546–8.

<sup>136</sup>See again De Caria (n 134).

<sup>137</sup>Parsons and Viljoen (n 131). See generally S Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (Public Affairs 2019).

words, consists in exponentially enhancing data companies' predictive power.<sup>138</sup> Predictive power and algorithmic control over user attention and digital infrastructures enable data companies to extract a *rent*<sup>139</sup> from the actors in their ecosystems (users, suppliers, and advertisers).<sup>140</sup> Even without an immediate monetary benefit – and often engaging in non-profitable or loss-taking investments<sup>141</sup> – acquiring predictive power provides structural economic advantages, further incentivising datafication.<sup>142</sup> The data economy, in other words, is primarily – although not exclusively<sup>143</sup> – a rentier economy.<sup>144</sup>

The individuation of data and the predictive power it brings as an autonomously relevant economic factor – more specifically, as a source of rent – offers a normative justification for data taxation even in the light of constitutional norms imposing the pre-determination of a tax base as a limit to governments' taxation power.<sup>145</sup>

Further justifications may be figured out by looking at the process of data production. As seen above, this process involves the 'mining' of publicly available information and its subsequent transformation into effectively enclosed data. In this process, the intellectual labour and the technology made possible by data science are crucial.<sup>146</sup> Based on these observations and the scholarship supporting the existence of a right to science in international human rights law,<sup>147</sup> one could resort to the following argument: to the extent it dispossesses different types of workers of (the value of) their labour, without necessarily compensating such loss with a commensurate increase of aggregated demand, investment, and job gains;<sup>148</sup> and to the extent it is based on a common good – science – whose benefits are the object of an international right, profit-driven datafication provides data companies with a rent.<sup>149</sup>

Put differently, data contributes to the tax base – and taxing data can be considered legitimate under traditional constitutional guarantees – not only because, above certain thresholds, it gives

<sup>138</sup>See most recently R Mùhlhoff and H Ruschmeier, 'Predictive Analytics and the Collective Dimensions of Data Protection' 16 (2024) Law, Innovation & Technology (forthcoming) <[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4614268](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4614268)>.

<sup>139</sup>Understood as 'income over and above the opportunity cost of the factors of production employed' (M Wolf, *The Crisis of Democratic Capitalism* (Penguin 2023) at 154). For a brief historical account of the different notions of rent and its disappearance in economic theory, see Mazzucato (n 2) at 71–4.

<sup>140</sup>Cf O'Reilly et al (n 79) 525, who in turn rely on R Baiman, 'The Impact of Rent from Unequal Exchange on Shaikh's Classical-Keynesian Political Economic Analysis: The Example of Facebook' 52 (2020) Review of Radical Political Economics 239, who estimates that in 2014 Facebook extracted an absolute rent of 3.8 billion dollars; Kurz (n 79); Cui (n 90); Martens (n 38); and Zuboff (n 137), who refers to an 'extraction of behavioural surplus'.

<sup>141</sup>Cf Borghi (n 126) (discussing Google Books and Ryanair as case studies); and L Khan, 'Amazon's Antitrust Paradox' 126 (2017) Yale Law Journal 710 (discussing the Amazon Prime program as a case study).

<sup>142</sup>See Purtova and van Maanen (n 71) at 16.

<sup>143</sup>Cf Morozov (n 4).

<sup>144</sup>With a degree of simplification, this means essentially two things: first, once certain volumes are reached, there are virtually no costs involved with bringing data – and the predictive power coming with it – into a process of value-extraction and upward redistribution; second, there is a generalised retreat from production as the site of surplus-value appropriation. See also above, Section 4.A and (n 95). Whether or not the rentier features of the data economy move away from modern capitalism and back to some kind of (techno)feudalism (see n 4 above) is an issue at the centre of intense debates: see Morozov (n 4); C Durand, 'Scouting Capital's Frontiers' 136 (2022) New Left Review 29; and C Rikap, 'Capitalism as Usual?' 139 (2023) New Left Review 145.

<sup>145</sup>Cf again Cui (n 90), who however resorts to this argument to justify digital services taxes (DST, see Section 4.C below) targeting location-specific rent (LSR).

<sup>146</sup>For this argument, see in this symposium, Lamchek (n 14).

<sup>147</sup>Lamchek, Ensuring (n 112); S Besson, 'The "Human Right to Science" Qua Right to Participate in Science' (2023) The International Journal of Human Rights; R Kunz, 'Opening Access, Closing the Knowledge Gap?' 81 (2021) Heidelberg Journal of International Law 23.

<sup>148</sup>See Merola (n 3); and D Acemoglu, D Autor and S Johnson, 'Can we Have Pro-Worker AI? Choosing a Path of Machines in Service of Minds' (2023) CEPR Policy Insight No 123, CEPR Press, Paris & London <<https://cepr.org/publications/policy-insight-123-can-we-have-pro-worker-ai-choosing-path-machines-service-minds>>.

<sup>149</sup>For this argument, see again in this symposium, Vipra (n 63); Lamchek (n 14); Lamchek (n 112).

companies a crucial economic advantage through the use value/predictive power but also because it structurally deprives other actors – notably workers, households, economic actors in subaltern market position, and humankind more generally – of economic opportunities and benefits to which they are *also* legally entitled. Either way, the data economy emerges as a typical rentier economy, encouraging further rent-seeking or ‘conspicuous consumption’ rather than productive investment.<sup>150</sup>

These considerations relate to the objection that, because of its elusive monetary/exchange value, data does not per se contribute to the data collector’s ability to pay and cannot be used to determine a tax base. To be sure, several issues are left unaddressed, although, as we will see below,<sup>151</sup> such considerations have an impact on tax design.

Here, one needs to stress that grounding data taxation on data’s use value is compatible with different (legal) notions of data. In other words, as far as taxation goes, qualifying data as an economic factor is compatible with different legal qualifications (personal and non-personal, sensitive and non-sensitive, ‘simple’ data and metadata, ‘synthetic’ and ‘authentic’, etc.) and regimes (ownership, commons, etc.) inspired by distinct regulatory goals (protection of privacy and individual self-determination, market competition, well-functioning political sphere, intellectual property, etc.).

### C. A constitutionalist data taxation: Pigouvian, progressive, rent-targeting

As seen above, the regulatory goals of a ‘constitutionalist’ data taxation (may) include the reduction of excessive datafication, as well as issues of social justice, distribution, and legitimation of constitutional states. The ultimate choices concerning tax design are political and should be open to debate, struggle, conflict, and collective decision-making. Digital constitutionalism does not and should not offer a pre-made, ready-to-go, depoliticised policy agenda, be it economic or not.<sup>152</sup> Its normative nature, if any, does not consist in providing a pre-set project of a ‘good society’ but rather in highlighting the crucial role of some aspects in policy fields where ultimate decisions will still be based on the interaction and conflict among politically engaged, strategic societal actors. In this sense, what a ‘good’ digital revolution is – or will be – can only result from this ‘blind’ collective dynamic. However, the arguments concerning the ability-to-pay objection are not neutral in terms of tax design.

Firstly, and more generally, any tax design coherent with the regulatory goals of digital constitutionalism needs to incorporate Pigouvian elements. This means that data taxes should target data companies and other actors of the data economy as actors who produce externalities and be designed to change their behaviour.<sup>153</sup>

Secondly, data taxation informed by digital constitutionalism includes elements of progressivity.<sup>154</sup> In data capitalism, any form of data taxation has structurally progressive effects on the overall tax system, regardless of whether the specific tax imposition is designed as actually progressive or not, with increasingly higher rates<sup>155</sup>. While ‘data-rich’ taxpayers – basically, big

<sup>150</sup>Cf Mazzucato et al (n 87) 526 (building on J Stiglitz, ‘New Theoretical Perspectives on the Distribution of Income and Wealth Among Individuals’ in K Basu and J Stiglitz (eds), *Inequality and Growth: Patterns and Policy* (MacMillan 2016) 1–71); O’Reilly et al (n 79); Durand (n 144). In that sense, resorting to loss of jobs and economic opportunities as a normative justification to the taxation of the data economy is not a backward-looking, ‘Luddite’ argument, adverse to technological innovation. Rather, it is grounded on institutional and economic considerations related to the way the digital/AI revolution unfolded concretely, that is, decreasing the aggregated demand in the involved markets.

<sup>151</sup>See Section 4.C below.

<sup>152</sup>See Sections 4.D and 4.E above.

<sup>153</sup>X Landes, ‘Pigovian Taxation’ in SO Idowu et al (eds), *Encyclopedia of Corporate Social Responsibility* (Springer 2013) 1846–53; JS Masur and EA Posner, ‘Toward a Pigouvian State’ 164 (2015) *University of Pennsylvania Law Review* 93. On the features of Pigouvian taxes, see, in this symposium, Parsons (n 99).

<sup>154</sup>See n above 88.

<sup>155</sup>Marian (n 33) 563–4.



data companies – easily avoid traditional income taxes,<sup>156</sup> low- and middle-income (‘data-poor’) taxpayers (eg, the individual Internet user) cannot. Therefore, via an exemption threshold calculated based on the volume of data traffic,<sup>157</sup> a fiscal imposition targeting (the collection and transmission of) data could easily capture only high-volume users that otherwise avoid income tax. Creating a ‘no-data tax’ area below specific data traffic volumes is not only sound in policy terms.<sup>158</sup> It is also a way to make data taxation compatible with relevant constitutional principles, given the specific features of the data economy. If the ability-to-pay principle can be respected only based on the use value/predictive power which comes from the amassing of huge amounts of data – typically those reached by data companies in an economy of scale – then a ‘no-data tax’ area for small-time data producers is a constitutional requisite for any legitimate form of data taxation.<sup>159</sup>

Besides that, specific fiscal impositions could easily be made progressive. Once certain thresholds are crossed, the marginal tax rate could be designed as a logarithmic function to streamline data tax and prevent cliff effects.<sup>160</sup> The more data is produced, the (gradually) higher the tax rates and brackets would be. Once again, making data taxation progressive is not related only to the options concerning the distribution of the value extracted by oligopolistic economic actors. It also relates to underlying policy goals deriving from a digital constitutionalist agenda aware of the effects of excessive datafication as such and, at the same time, of the potential for inclusive economic growth coming from digital innovation.<sup>161</sup> Put otherwise, disincentivising excessive datafication means designing data taxes not as ‘flat taxes’ but rather as progressive ones.

Thirdly, a constitutionalist purview provides reasons to design data taxes as *direct* taxes targeting rent-providing positions.<sup>162</sup> For example, data taxes could be designed as royalties rather than digital services taxes (DSTs).<sup>163</sup> Royalties are fiscal impositions related to the extraction of (often) public resources. Those wishing to extract the resource must pay a ‘concession’ to the public authority for the right to do so. While not a tax in the technical sense, a royalty is commonly used by governments to raise revenue from extractive industries. Designing data taxes as royalties

<sup>156</sup>See again Diniz Magalhães and Christians (n 44); and Section 2 and n 34 above.

<sup>157</sup>Examples of tax exemption thresholds calculated based on non-monetary elements can be drawn from other taxes with a Pigouvian outlook, such as so-called sugar taxes, where the tax is levied only when the quantity of added sweeteners and sugar go beyond a pre-determined percentage of a drink’s total volume.

<sup>158</sup>Marian (n 33) 574.

<sup>159</sup>This Article does not address other points related to the ability-to-pay principle, notably those concerning how to measure the volumes of data traffic in relation to multi-corporate entities (only the corporate entity with the closest nexus to the ‘digital market’ of the national tax authority; the holding company, the corporate group; etc); and the legal problems coming from diverging understandings and application of the ability to pay principle in national and supranational tax law systems: see G Bizzioli, ‘Fairness of the Taxation of the Digital Economy’ in W Haslechner et al (eds), *Tax and the Digital Economy. Challenges and Proposals for Reforms* (Wolters Kluwer 2019) 49–65 spec. 55–9.

<sup>160</sup>I draw this from Marian (n 33) 574 (‘In order to make sure we do not capture small-time data users, there should be an exemption threshold. The exemption threshold does not have to be structured as a “cliff,” but as an exponent so as to make sure that once people start using large amounts of data, they will be quickly (yet somewhat gradually) captured by the tax’).

<sup>161</sup>See again Section 4.A. and n 86 above.

<sup>162</sup>Marian (n 33) 573–4.

<sup>163</sup>DSTs are taxes on turnover associated with specific types of digital services, for example, revenue from selling online advertisements. They are designed as consumption and therefore indirect taxes whose burden can be easily transferred on the consumers. Some of the few forms of data taxation have been designed as DSTs (eg, Italy’s levy on digital transactions, Hungary’s advertisement tax, France’s tax on online and physical distribution of audio-visual content). These taxes have triggered retaliatory measures by the United States, as they disproportionately target US data companies, allegedly infringing upon (international) trade law: see Office of the US Trade Representative, ‘USTR announces next steps of Section 301 Digital Services Taxes Investigations’ (26 March 2021), announcing investigations against Austria, India, Italy, Spain, Turkey, and the UK <<https://ustr.gov/about-us/policy-offices/press-office/press-releases/2021/march/ustr-announces-next-steps-section-301-digital-services-taxes-investigations>>. On this topic, see in this symposium A Christians and T Diniz Magalhães, ‘Taxing Data When the United States Disagrees’ (2024) *European Law Open*; Pantazatou (n 99) (who also defends DSTs on normative grounds); and, more generally, R Mason, ‘Legal Problems with digital Taxes in the United States and Europe’ in C Elliffe (ed), *International Tax at the Crossroads* (Elgar 2023); and Cui (n 90).

fits the reality of the data economy – as described above – taking into consideration the critical role of governments in developing digital technologies and infrastructure<sup>164</sup> as well as their continuing control over most computational and data infrastructures. Besides that, designing a data tax as a royalty has further advantages.

First, royalties do not require the activity to be productive and therefore are well suited to target sources of wealth that provide only potential rents.<sup>165</sup> As they do not target income deriving from data but data use as such, they bypass the problem of the delayed income realisation typical of the data economy.<sup>166</sup> Second, contrary to excises,<sup>167</sup> royalties can easily be made progressive – thus increasing based on some production measurement (eg, data traffic volumes) – and the related burden cannot easily be transferred to consumers. Third, contrary to DSTs, legal bases for adopting royalties can be found in (an evolutive reading of) existing international tax and trade treaties, which allow withholding taxes at source such as are applied to royalties. Therefore, they might forestall retaliatory measures, notably by the US, and reduce the need for international cooperation.<sup>168</sup>

Even the criticism normally raised against royalties in the industries where they are most common – that they deter investment – does not necessarily apply to the data economy. Progressive royalties on data would only deter a *specific* business model. Moreover, the political economy surrounding data ensures that the ‘raw’ information potentially representable or processable via digital technologies, contrary to oil, remains a free, abundant resource, open to use and ‘mining’ even by non-profit actors. As highlighted above, the revenues of a few oligopolistic data companies are more akin to a rent and hardly create *new* value as such.

Fourthly and finally, a digital constitutionalist approach does not only aim at reducing excessive datafication and distributing wealth but also at countering the ‘governability’ and legitimacy problems of contemporary constitutional states accelerated by the digital revolution.<sup>169</sup> To that purpose, the related economic benefits should not necessarily be directed to individuals whose information was used to accumulate data (so-called data dividend taxes).<sup>170</sup> Indeed, data dividends feature some of the same issues as income taxation, that is, the problem of assessing the value of data collected from a specific territory, with the valuation and localisation problems coming with it. Further, the data economy is not based only on personal data but also – and, after the AI revolution, mainly – on non-personal, synthetic, and meta-data. Most importantly, data dividends de-responsibilise governments and de-politicise data governance.<sup>171</sup>

Put otherwise, deciding how to specifically distribute the value produced in the data economy through the institutions of the political system potentially re-legitimises constitutional states and strengthens their role within (global) economic governance. Contrary to data dividends, direct taxes and royalties on data give governments the opportunity to regain legitimacy precisely because they do not take away from them the burden of adopting collectively binding decisions over different distributive options.

<sup>164</sup>Cf M Mazzucato, *The Entrepreneurial State* (Penguin 2023 [2013]) spec. 93–119.

<sup>165</sup>For arguments supporting designing data taxes as royalties or withholding taxes, see in this symposium Vipra (n 63); and Christians and Diniz Magalhães (n 163); and, more generally, Marian (n 33) 574–5; and A Báez Moreno and Y Brauner, ‘Taxing the Digital Economy Post BEPS ... Seriously’ 58 (2019) *Columbia Journal of Transnational Law* 121 at 131 ff.

<sup>166</sup>Cf in this symposium Parsons (n 99).

<sup>167</sup>An excise is a duty on manufactured goods that is normally levied at the moment of manufacture for internal consumption rather than at sale. It is considered an indirect tax, that is, the producer or seller who pays the levy to the government is expected to try to recover their loss by raising the price paid by the eventual buyer of the goods. Early proposals of the data economy taxation were designed as excises: see again Cordell et al (n 46), discussed in Marian (n 33) 567–9.

<sup>168</sup>For this argument, see in detail in this symposium Christians and Diniz Magalhães (n 163). See also below, Section 4.D.

<sup>169</sup>See Section 2 above.

<sup>170</sup>Data dividend taxes are taxes whose revenue is distributed to the individuals who supplied the data.

<sup>171</sup>For further arguments in this direction, see Muldoon (n 115).

However, such decisions must consider that the data economy is intrinsically transnational. An authentically normative digital constitutionalism needs to thematise distributive issues through the lens of states' legitimacy and within the framework of global (economic) governance.

#### D. Economic digital constitutionalism within global governance

In the globally dispersed data economy, location of income and ownership of data mean little to tax purposes. Relatedly, the externalities of datafication are also highly dispersed. Decisions concerning data governance, the contrast to excessive datafication, and distributive justice need to take these elements into account,<sup>172</sup> also from the perspective of the North/South divide. Such issues have already been debated for a long time<sup>173</sup> and go well beyond the scope of this Article. This section highlights their analytical and normative interconnectedness from the perspective of digital constitutionalism, especially if the latter aims to hold onto its 'global' nature<sup>174</sup> and does not want to reinforce hegemonic positions within world society.<sup>175</sup>

Taking a step back to tax design, one can observe that data taxes designed as excises, direct taxes, or royalties can be purely domestic. They do not target income and, therefore, bypass the problems of income realisation/localisation with which tax cooperation initiatives have been struggling<sup>176</sup> for over a decade.<sup>177</sup> For the same reasons, such taxes are less likely to trigger trade conflicts.<sup>178</sup>

This notwithstanding, global tax cooperation still needs to be thematised within a digital constitutionalist framework, especially in light of trends towards the liberalisation of data trade in international trade law<sup>179</sup> and the persisting unequal control over digital infrastructures.<sup>180</sup> Overlooking such elements by designing purely domestic taxes targeting data traffic individuated through digital infrastructure may be convenient to Global North countries and the main

<sup>172</sup>Mason (n 163) 265–86.

<sup>173</sup>Especially within the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS) that has been developing since 2013. For brief overviews, see A Parsons, *Advancing Equity in the Data Economy: The Case for International Taxation* (2022); Marian (n 33) 552–5; A Báez Moreno and Y Brauner, 'Taxing the Digital Economy Post-BEPS . . . Seriously?' 58 (2019) *Columbia Journal of Transnational Law* 121. For issues of fair distribution and social justice in global tax governance, see more generally T Rixen, 'Tax Competition and Inequality: The Case for Global Tax Governance' 17 (2011) *Global Governance* 447; and J Stark, 'Tax Justice Beyond National Borders-International or Interpersonal?' 42 (2022) *Oxford Journal of Legal Studies* 133.

<sup>174</sup>One of the perspectives that co-define it as a discursive field: cf De Abreu Duarte et al (n 1) 326–7. Incidentally, one may notice structural similarities between global climate governance/constitutionalism, on the one hand; and global digital governance/constitutionalism, on the other hand: highly dispersed negative externalities of the sought objects of regulation; a political economy characterised by economy of scale, dominated by oligopolistic (but publicly subsidised) business actors in highly concentrated markets; need for international cooperation to address policy and regulatory issues that involve global justice and (post)colonial dynamics; role of either hard or soft international fora and laws.

<sup>175</sup>See, among many, A Gwagwa and B Townsend, 'Re-imagining Africa's Sovereignty in a Digitally Interdependent World' (2023) *Global Policy*; S Scassera, 'La desigualdad automatizada. Industrialización, exclusión y colonialismo digital' (2021) *Nueva Sociedad* 49; D Coleman, 'Digital Colonialism: The 21st Century Scramble for Africa through the Extraction and Control of User Data and the Limitations of Data Protection Laws' 24 (2019) *Michigan Journal of Race & Law* 417; P Ricaurte, 'Data Epistemologies, the Coloniality of Power, and Resistance' 20 (2019) *Television & New Media* 350; R Ávila Pinto, 'Digital Sovereignty or Digital Colonialism?' 27 (2018) *Sur – International Journal of Human Rights* 15. For a review of Afro-centric literature on law & technology, see CB Ncube and TR Phiri, 'Afro-centric law and technology discourse' in Brožek et al (eds) (n 1) 276–95.

<sup>176</sup>Especially to prevent double taxation of income: cf Marian (n 33) at 568.

<sup>177</sup>See again n 173 above.

<sup>178</sup>Cf in this symposium, Christians and Diniz Magalhães (n 163) and Section 4.C and n 163 above.

<sup>179</sup>Driven by the countries that simultaneously lead the creation of trade rules and are likely to have the greatest impact on their evolution and to benefit from them: cf B Agarwal and N Mishra, 'Incorporating Digital Development Perspectives in International Trade Law' in Brožek, Kanevskaja and Palka (eds) (n 1) at 305–7.

<sup>180</sup>Cf Fisher and Streinz (n 127); Eaves et al (n 124).

competitor of the US for global hegemony – China.<sup>181</sup> However, data taxation policies overlooking issues of international cooperation and the North/South divide risk becoming a redistributive endeavour involving already-hegemonic actors that does not tackle and might actually reinforce digital colonialism.<sup>182</sup>

At the same time, when it comes to distributive obligations with respect to taxing rights, it is crucial to differentiate between the collective and the individual level, as ‘the reallocation of taxing rights from state to state does not necessarily help when it comes to fulfilling duties of justice towards individuals’.<sup>183</sup> Put otherwise, the normative goals of an economic digital constitutionalism are not necessarily met by a value distribution from state to state but require a consideration of the actual political decisions over the distributive choices towards *both* individuals *and* communities.

Such issues are linked to the role of global institutions, notably international organisations and transnational networks.<sup>184</sup> This consideration opens to issues of institutional design and management of conflicts across different governance regimes.<sup>185</sup> Put differently, an effective constitutionalisation of the digital sphere can – *has* to – involve institutions that compensate for the absence of a world state (and tax authority)<sup>186</sup> by collectively fulfilling the functions performed by political systems at the global/transnational level.<sup>187</sup>

As recalled, institutions such as the OECD have become incubators of global tax cooperation – especially in the field of digital economy – and should be considered at least as important as those traditionally at the forefront of digital constitutionalism’s reflections (eg, the ICANN). Whether such efforts will be successful/effective or not is an open question. At the moment, the multilateral anti-BEPS initiative<sup>188</sup> seems to have stalled, potentially giving rise to new trade conflicts.<sup>189</sup> However, such fora allow for the thematisation and, potentially, contestation of key issues of

<sup>181</sup>In the negotiations conducted within the OECD-led Inclusive Framework, since market jurisdictions stand to be net winners in any reform designed to strengthen taxing rights over digital businesses, African countries converged with some proposals made by the US concerning so-called marketing intangibles: cf A Kibirige, “Marketing intangibles”: challenges and opportunities for taxation in Africa’ International Center for Tax & Development <<https://www.ictd.ac/blog/marketing-intangibles-challenges-opportunities-taxation-africa/>>.

<sup>182</sup>Cf Gwagwa and Townsend (n 175); R Heeks et al, ‘China’s digital expansion in the Global South: Systematic literature review and future research agenda’ (2024) *The Information Society* 1; T Ilori, ‘Foreign Actors and Digital Authoritarianism in Africa: Recent Trends on Methods and Their Human Rights Impacts’ in *Global Affairs Canada Report* (n 55) 20–7; Bradford (n 11); MS Erie and T Streinz, ‘The Beijing Effect: China’s Digital Silk Road as Transnational Data Governance’ 54 (2021) *NYU Journal of International Law & Politics* 1; M Kwet, ‘Digital Colonialism: US Empire and the New Imperialism in the Global South’ 60 (2019) *Race & Class* 3.

<sup>183</sup>Cf Stark (n 173); and Muldoon (n 115).

<sup>184</sup>See already SJ Kobrin, ‘Economic Governance in an Electronically Networked Global Economy’ in RB Hall and J Thomas Biersteker (eds), *The Emergence of Private Authority in Global Governance* (Cambridge University Press 2002) 43–75.

<sup>185</sup>Eg, the actual or potential conflicts between national/regional digital tax measures and global/regional trade law: see only M Burri (ed), *Big Data and Global Trade Law* (Cambridge University Press 2021); A Andrenelli and J Lopez-Gonzalez, *Understanding the Potential Scope, Definition and Impact of the WTO E-Commerce Moratorium* (OECD Trade Policy Paper 2023); and Agarwal and Mishra (n 179). In this symposium, Christians and Diniz Magalhães (n 163) refer to the difficulty of taxing data-driven business models ‘without contravening the existing *global quasi-constitutionalist* order on tax, trade, and investment law’ (emphasis added).

<sup>186</sup>Cf recently T Dagan, ‘Tax and Globalisation: Toward a New Social Contract’ (2024) *Oxford Journal of Legal Studies* <<https://doi.org/10.1093/ojls/ggae010>>.

<sup>187</sup>See generally A Golia Jr and G Teubner, ‘Networked Statehood: An Institutionalised Self-contradiction in the Process of Globalisation?’ 12 (2021) *Transnational Legal Theory* 7; O Perez and O Stegmann, ‘Transnational Networked Constitutionalism’ 45 (2018) *Journal of Law and Society* S135. For a discussion of the transformation of international institutional law in the light of the new tasks/functions performed by international organisations within global governance, see most recently A Peters, ‘Constitutional Theories of International Organisations: Beyond the West’ 20 (2021) *Chinese Journal of International Law* 649.

<sup>188</sup>Consisting of 145 countries and jurisdictions. See above n 173.

<sup>189</sup>Cf Christians and Diniz Magalhães (n 163). This seems a typical case of ‘un-governance’, under the framework set by D Desai and A Lang, ‘Introduction: Global Un-Governance’ 11 (2020) *Transnational Legal Theory* 219.

economic global governance.<sup>190</sup> From this perspective, the recent emergence of a competing initiative within global tax governance<sup>191</sup> might be seen as a positive development not only from an experimentalist perspective but also because it contributes to the further politicisation of such regime. The purposes of re-legitimation of political institutions and global justice impose a *political* reflection on how to direct the related revenue.

Indeed, besides the more general goal of tackling the fiscal crisis of states,<sup>192</sup> it is crucial to strengthen the social fields – eg, medicine, information/press, science – most affected by the commodification trends and the reduction of aggregated demand deriving from the business models currently dominating the data economy.<sup>193</sup> If digital constitutionalism wants to live up to the aspirations of any authentic constitutionalism and constrain the expansive tendencies of economic systems ‘freed’ by the digital revolution, it has to embed forms of social protection,<sup>194</sup> especially for the processes instrumental to political participation,<sup>195</sup> socioeconomic inclusion, and generation of socially shared consensus, knowledge, truth. Moreover, focusing on the protection of social processes as such might help address two admittedly difficult regulatory questions: first, the choice between the collective and the individual levels of revenue reallocation/distribution; second, the individuation of the point where datafication becomes ‘excessive’.<sup>196</sup>

In this regard, scholars have formulated proposals concerning, for example, funding some form of universal basic income (UBI).<sup>197</sup> Other contributions explore the possibility of using the data tax revenue to fund open medical research, supranational organisations such as the EU, especially considering their role in tackling other pressing global governance issues such as the climate emergency.<sup>198</sup> But many other solutions and proposals might be advanced, based for example on the environmental, social, and governance (ESG) agenda promoted by the United Nations Environment Programme Finance Initiative,<sup>199</sup> or – even more interesting and disruptive – the Program of Action on the Construction of a New International Economic Order elaborated by the Progressive International,<sup>200</sup> published on the occasion of the 50<sup>th</sup> anniversary of the UN General Assembly resolutions adopted in 1974 that aimed at establishing a New International Economic Order (NIEO).

<sup>190</sup>For an analysis of the public sphere emerging in the parallel field of global climate governance, see M Vinken, ‘Shaping Global Public Spheres Through International Law: An Investigation into International Climate Change Law’ 11 (2023) *Politics and Governance* 145.

<sup>191</sup>On 15 November 2023, the Second Committee of the UN General Assembly approved the draft resolution A/RES/78/230, introduced by the African group (‘Promotion of inclusive and effective international tax cooperation at the United Nations’, A/C.2/78/L.18/Rev.1), by a vote of 125 in favour to 48 against, with 9 abstentions. The resolution established a Member State-led, open-ended ad hoc intergovernmental committee for the purpose of drafting a United Nations framework convention on international tax cooperation and represents the first attempt in decades to effectively transfer multilateral tax governance from the OECD to the UN platform.

<sup>192</sup>See Section 2 and n 29 above.

<sup>193</sup>J Lamchek, ‘Funding Social Protection from Data After COVID-19: Potential Contribution of the Right to Benefit from Scientific Progress’ in T Chaiechi and J Wood (eds), *Community Empowerment, Sustainable Cities, and Transformative Economies* (Springer 2022) 571–85; V Pickard, ‘Can Journalism Survive in the Age of Platform Monopolies? Confronting Facebook’s Negative Externalities’ in T Flew and FR Martin (eds), *Digital Platform Regulation* (Palgrave 2022) 23–41.

<sup>194</sup>In the sense of the ‘double movement’ of K Polanyi, *The Great Transformation: The Political and Economic Origins of Our Time* (Beacon 1991 [1944]). See also G Teubner, ‘Counter-Rights: On the Trans-Subjective Potential of Subjective Rights’ in Kjaer (ed) (n 16) 372–93.

<sup>195</sup>For the link between ‘data ownership’ and political participation, see again Wielsch (n 26).

<sup>196</sup>See n 60 above.

<sup>197</sup>See in this symposium Lamchek (n 14); and Vipra (n 63).

<sup>198</sup>In this symposium, see Pantazatou (n 99), offering also a discussion on the legal bases in EU law to adopt such measures.

<sup>199</sup>As known, such an agenda consists of a set of aspects, including environmental issues, social issues, and corporate governance that can be considered in investing. The ESG movement has grown from a UN corporate social responsibility initiative into a global phenomenon representing more than US\$30 trillion in assets under management.

<sup>200</sup>Progressive International, ‘Program of Action on the Construction of a New International Economic Order’, September 2024 <<https://act.progressive.international/nieo-poa/#iv-measures>>.



Before concluding this section, one needs to address another question: Why ‘economic digital constitutionalism’ instead of the less conceptually demanding ‘digital constitutionalism for the economy’ or ‘constitutionalism for the digital economy’? And why is taxation important?

By using that phrase, the purpose is to link the analytical and normative frameworks of digital constitutionalism to the older conceptual tradition of the economic constitution, which, in its different understandings, goes beyond the ‘mere’ constitutional governance or regulation of the economy.<sup>201</sup> Importantly, that phrase brings back an entire set of normative elements related to forms of democratic legitimacy and decision-making that, instead of exclusively focusing on the traditional schemes of representative democracy turning around formal political institutions and procedures, take the condition of subaltern groups – especially within economic relationships – as the starting point to build any effective form of constitutional legitimacy and normativity *even in the digital age*.<sup>202</sup>

Relatedly, arguing that data taxation is a crucial instrument of a properly normative *and therefore economic* digital constitutionalism is meant to highlight two elements. First, data taxation aims – should aim – at constraining the expansive/colonising tendencies of both economic and political systems ‘freed’ by datafication processes. Second, value distribution through taxation may ultimately (re)legitimise the institutions of the political system, ‘exhausted’ by the persisting necessity to produce collectively binding decisions even when social consensus declines or is absent.

In other words, and without necessarily subscribing to the famous dictum of the US Supreme Court ‘the power to tax involves the power to destroy’,<sup>203</sup> data taxation could be a crucial element to re-assert the centrality of *political* institutions in global governance, especially in the light of the historically genetic link between taxation, democracy, (popular) sovereignty, and modern constitutionalism.<sup>204</sup>

Along the same lines, advancing tax-based policies and proposals does not necessarily mean validating or naturalising governance approaches treating systemic problems in global capitalism as externalities and the results of failures of otherwise ‘perfect’ systems. The proposals mentioned above are rough and need to be discussed, analysed, and tested, also based on empirical elements provided by other disciplines. In no way are they supposed to be exhaustive, and, most importantly, they do not exclude regulatory measures of different kinds. In particular, they do not rule more radical options out, for example those questioning the current governance of digital infrastructures, one of the key structures underlying the data economy itself.<sup>205</sup>

## 5. Conclusion: a call for normative and institutional imagination

An authentically normative digital constitutionalism may point at some common principles<sup>206</sup> and regulatory directions but, as such, is not and should not be a post-political discourse offering a pre-made agenda.<sup>207</sup> Neither constitutional law (theory) nor law in general have the communicative/symbolic potential to solve, by themselves, the material challenges of the digital revolution and global governance. However, recognising the role of the law in constituting the institutions of (digital) capitalism – like the recent LPE scholarship does – is a fundamental step to

<sup>201</sup>Cf n 16 above.

<sup>202</sup>See again Selznick and Nonet (n 51).

<sup>203</sup>*McCulloch v. Maryland*, 17 US 316 (1819).

<sup>204</sup>Cf again Dagan (n 187).

<sup>205</sup>See most recently Eaves et al (n 124); and again the ‘Program of Action on the Construction of a New International Economic Order’ (n 200).

<sup>206</sup>Cf De Abreu Duarte et al (n 1) 323–6.

<sup>207</sup>For parallel arguments in the field of climate and environmental governance, cf M Petel, ‘The Illusion of Harmony: Power, Politics, and Distributive Implications of Rights of Nature’ 13 (2024) *Transnational Environmental Law* 12.

address the related challenges and contribute to their transformation.<sup>208</sup> At the same time, the transformative possibilities of the law should not be overestimated. This holds particularly true when it comes to more radical forms of contestation of global economic (re)production.

Digital constitutionalism can and must provide a discursive field to thematise constitutionally significant economic issues: a ground for conflict and collisions to arise and produce constituting and limiting norms.<sup>209</sup> Opening the gates to conflict – *forcing* the problems to appear as problems – strengthens the analytical and normative potential of digital constitutionalism. It also establishes fruitful conversations with other political-economic discourses *and* practices concerning the material conditions of the digital revolution at the global level, which, in turn, might be enriched by more direct interactions with explicitly constitutionalist frameworks.

To be sure, the cluster of informational capitalism,<sup>210</sup> ‘technofeudalism’,<sup>211</sup> data colonialism,<sup>212</sup> and different forms of both public and private digital authoritarianism<sup>213</sup> will hardly be overcome only through litigation before (constitutional) courts. Nevertheless, collectively rethinking the meaning of ‘(un)constitutional’ in the digital era is a necessary step towards radical transformation. Digital constitutionalism can emerge as a counter-discourse and be authentically normative *if* and *to the extent* it (1) breaks the conflation between a ‘public sector’ driven by digitalised power and a ‘private sector’ driven by digitalised profit;<sup>214</sup> and (2) contributes to the re-legitimisation of both national and international political institutions, reducing their tendency to decomplexify their social environments through techno-authoritarian solutions.<sup>215</sup>

In both cases, data taxation should be considered as a piece of a complex puzzle whose contours (should) remain open to institutional and legal imagination.<sup>216</sup>

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<sup>208</sup>Cf PF Kjaer, ‘What is Transformative Law?’ 1 (2023) *European Law Open* 760.

<sup>209</sup>Cf Golia and Teubner (n 1); but see also T Negri, *Insurgencies: Constituent Power and the Modern State* (University of Minnesota Press 1999).

<sup>210</sup>See n 2.

<sup>211</sup>See n 4.

<sup>212</sup>See n 175 and 182.

<sup>213</sup>See n 55.

<sup>214</sup>Cf Teubner and Golia (n 56).

<sup>215</sup>Cf Luhmann (n 18).

<sup>216</sup>In the sense of RM Unger, ‘Legal Analysis as Institutional Imagination’ 59 (1996) *Modern Law Review* 1.