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Paving the Way Forward for Data Governance: a Story of Checks and Balances

Editorial

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data access, data
portability, data pro-
tection, competition,
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property

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Data governance is a phenomenon that brings many interests and considerations together. This editorial argues that active involvement of various stakeholders is vital to advance discussions about how to create value from data as a means to stimulate societal progress. Without adequate checks and balances, each stakeholder group on its own will not have sufficient incentives to do its utmost to achieve this common goal. Policymakers and regulators need to be stimulated to look beyond short-term results to ensure that the design of their initiatives is fit for purpose. Industry players have to be transparent about their practices to prevent strategic behaviour that may harm society. And researchers must inform their findings with real-world evidence and proper terminology.

1. Setting the scene

It is striking how little is known about effective governance structures for data considering the intensity of discussions about the importance of data as a currency, input or asset.¹ From a legal perspective, debates are still dominated by data protection law – a regime mostly motivated by the need to offer protection against the risks that the processing of personal data entails for the privacy of individuals. Apart from risks, the use of data can provide enormous benefits to consumers, businesses as well as society at large. Data forms a basis for innovative products and services, enables businesses to make their production processes more efficient and can boost economic growth as well as serve societal interests such as through personalized healthcare and improved energy efficiency.² Although data pro-

tection (at least in the context of EU law) also pursues an objective of market integration and thereby stimulates the free flow of personal data, other considerations beyond data protection need to be taken into account as well in order to design adequate governance models for data. This is not a straightforward exercise, because there is a myriad of legal, economic, technical, and social interests to be reconciled.

Questions about how to regulate data become increasingly complex as datasets typically consist of several types of information (personal, non-personal, machine-generated, organizational, public sector information) over which multiple parties hold overlapping entitlements (data protection and consumer rights of individuals, intellectual property rights of firms as well as confidentiality obligations between parties). The coexistence of such entitlements raises conceptual questions about how various forms of control over data (legal, contractual, technical) can be exercised in parallel and what governance structures should be designed to fully exploit the potential of data across the economy.³ Because legislators are now preparing to take concrete measures to stimulate data-driven innovation,⁴ this is a crucial moment to inform policymaking in the area.

Such a discussion connecting different strands of thought surrounding data governance was the objective of a workshop held at Tilburg University in November 2019 that I co-organized with Martin

- 1 Beyond the many policy documents published by EU institutions as referenced throughout this editorial, see for instance World Economic Forum, 'Data-Driven Development: Pathways for Progress', January 2015, available at <http://reports.weforum.org/data-driven-development/> and OECD, 'Enhancing Access to and Sharing of Data: Reconciling Risks and Benefits for Data Re-use across Societies', November 2019, available at https://www.oecd-ilibrary.org/science-and-technology/enhancing-access-to-and-sharing-of-data_276aaca8-en
- 2 The European Commission has argued that "Data-driven innovation will bring enormous benefits for citizens, for example through improved personalised medicine, new mobility and through its contribution to the European Green Deal" and has expressed its intention of creating an attractive policy environment for data "so that, by 2030, the EU's share of the data economy – data stored, processed and put to valuable use in Europe – at least corresponds to its economic weight". See Commission Communica-

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tion 'A European strategy for data', COM(2020) 66 final, 19 February 2020, 1, 4.

- 3 The question of how to deal with parallel entitlements to the same data formed the core of the research project 'Conceptualizing Shared Control Over Data' as funded by Microsoft. Next to the workshop on which this editorial reports, the project also involved a call for Microsoft fellows in 2019. Selected candidates obtained funding to visit TILT and join the project for a number of months.
- 4 In its February 2020 Communication 'A European strategy for data', the European Commission announced its intention to adopt a proposal for a 'Data Act' by 2021, as discussed below in section 4.

Husovec. The workshop was sponsored by Microsoft within the framework of the research project ‘Conceptualizing Shared Control over Data’ and brought together scholars from across the globe to reflect on the governance of data from their own expertise in areas such as intellectual property, open data, data protection, data ethics and competition. This special issue entitled ‘**Governing Data as a Resource**’ is the result of that workshop and collects four of the papers presented.

This editorial brings together some of the insights of the workshop and sets out ideas to move the debate around data governance forward.

Data governance is understood broadly here as referring not only to how to set up practical tools or mechanisms for using data, but also including legislative and regulatory actions to enhance the creation of value from data, for instance by facilitating data access and data portability. As key message, this editorial puts forward the claim that active involvement of all stakeholders is needed as a system of checks and balances in order to achieve outcomes that strike a proper balance between the various interests. In what follows, a number of lessons for data governance is discussed from the perspective of the checks and balances relevant for three groups of stakeholders, namely policymakers and regulators, industry players, and researchers. All four contributions to this special issue relate to one of these three angles, so that each of the papers is introduced in the relevant part of this editorial.

2. Policymakers and regulators

Policymakers and regulators are in the front seat of steering the development of data governance in directions that meet societal needs. Because of their commercial interests, the incentives of market players are typically not fully aligned with achieving broader policy goals. Some market players may not want to share data, even when this is societally desirable, due to fear of losing a competitive advantage. Others may be afraid of liability for sharing data in violation of, for instance, data protection rules and be reluctant to share data in the absence of clearer guidance. Policymakers and regulators thus have a key role in facilitating the creation of adequate governance structures for data. The European Commission launched its European data economy initiative in 2017,⁵ which in February 2020 culminated in the publication of a Commission Communication ‘A European strategy for data’ containing a range of specific actions “to enable the EU to become the most attractive, most secure and most dynamic data-agile economy in the world”.⁶ Such policy and legislative initiatives have to be implementable in practice and be fit for purpose. Input from industry and academia (but also from other actors such as consumer organizations)⁷ is therefore vital to guide regulatory actions to prevent that, for instance due to political pressure and a focus on short-term results, suboptimal approaches are taken to achieve a particular policy objective.

How to establish community-based governance of a shared resource is central to the framework of knowledge commons, which **Michael Madison** applies to data in this special issue’s opening paper “**Tools for Data Governance**”.⁸ His analysis is informed by a distinction

between data-as-form, treating data as a fixed object, and data-as-flow, looking at data’s fluid attributes and numerous applications. When applying the framework of knowledge commons to data, the author provides two essential tools to develop governance strategies for data focusing on the concepts of groups and things. The first one consists of the identification of relevant social groups in which governance frameworks may be embedded and the second one concerns the identification of relevant resources or things that will contribute to the welfare effects of the data governance system.

The multi-faceted nature of data is also reflected in the various regulatory actions being considered at the EU level to govern data. The European Commission emphasizes the need for sector-specific approaches because of the differences across industries and at the same time aims to create a ‘single’ or ‘common’ European data space where data can flow across sectors.⁹ There does not seem to be one overarching policy objective behind the Commission’s European data strategy. The Commission’s February 2020 Communication refers to the existence of market failures as a trigger to adopt data access rights that would make the sharing of data compulsory in specific circumstances.¹⁰ Data-driven innovation is mentioned various times as a notion the Commission wants to support.¹¹ Reference is made as well to the need for empowering individuals and to more sector-specific goals such as better healthcare, competitiveness in agriculture and tackling climate change.¹² Identifying the underlying objective of policy action is vital, because the objective acts as the benchmark against which to assess the costs and benefits of additional measures and forms the determining factor for how to design new regulatory interventions.

An example explored in my own co-authored work¹³ where one can doubt whether legislative design choices are capable of achieving the goal of a single market for data is the artificial distinction between personal and non-personal data made by the EU legislator in the Regulation on the free flow of non-personal data¹⁴ and by the European Commission as policymaker in the context of the European data strategy.¹⁵ Current initiatives to stimulate the European data economy focus on non-personal data in order to complement data protection rules that regulate the processing of personal data. However, because datasets are often mixed, it seems almost practically impossible to maintain two separate legal frameworks.¹⁶

An underlying assumption of this regulatory choice seems to be that non-personal data is more essential as innovation input than personal data. Statements in the Commission Communication ‘A European Strategy for Data’ from February 2020 give the impression

5 Commission Communication ‘Building a European Data Economy’, COM(2017) 9 final, 10 January 2017.

6 European Commission (n 2) 25.

7 See the public consultation that the Commission started in February 2020 to allow stakeholders to comment on the European strategy for data.

8 Michael Madison, ‘Tools for Data Governance’ (2020) *Technology & Regulation* 29-43.

9 Commission Communication ‘Towards a common European data space’, COM(2018) 232 final, 25 April 2018 and Commission (n 2) 4-5, 26-34.

10 European Commission (n 2) 13 and footnote 39.

11 European Commission (n 2) 1, 8 15, 16.

12 European Commission (n 2) 10, 20, 22.

13 Inge Graef, Raphaël Gellert & Martin Husovec, ‘Towards a Holistic Regulatory Approach for the European Data Economy: Why the Illusive Notion of Non-Personal Data is Counterproductive to Data Innovation’ (2019) 44 *European Law Review* 605. For a law and computer science perspective, see Michèle Finck & Frank Pallas, ‘They who must not be Identified – Distinguishing Personal from Non-Personal Data under the GDPR’ (2020) 10 *International Data Privacy Law* 11-35.

14 Regulation (EU) 2018/1807 of the European Parliament and of the Council of 14 November 2018 on a framework for the free flow of non-personal data in the European Union [2018] OJ L303/59.

15 European Commission (n 2). The notion of non-personal data already came up in the Commission Communication ‘Building a European Data Economy’, COM(2017) 9 final, 10 January 2017.

16 Graef, Gellert & Husovec (n 13) 608-610.

that initiatives to stimulate data innovation will focus on the sharing of non-personal data. With regard to personal data, the Commission emphasizes the importance of complying with data protection law by stating: “Citizens will trust and embrace data-driven innovations only if they are confident that any personal data sharing in the EU will be subject to full compliance with the EU’s strict data protection rules”.¹⁷ For non-personal data, the Commission instead stresses its role as “potential source of growth and innovation” by arguing that making non-personal data “available to all – whether public or private, big or small, start-up or giant [...] will help society to get the most out of innovation and competition and ensure that everyone benefits from a digital dividend”.¹⁸ However, there is no evidence that non-personal data is more valuable as innovation input than personal data. The two categories of data can hardly be separated in practice and personal data may sometimes even have more value due to its potential to predict new overall trends as well as individual preferences.¹⁹

When the design of legislative measures or policy initiatives is not properly aligned with their overall objective, there is room for market players to engage in strategic behaviour when deciding how to comply with the law by favouring the interpretation that fits their interests. This concern is further discussed in the next section.

3. Industry players

Industry players play an important role in developing adequate governance structures for data. They will often have more knowledge and insights about the market and available approaches than the other two stakeholder groups discussed in this editorial, namely policymakers and regulators as well as researchers. At the same time, industry players have commercial motives. This implies that they normally have limited incentives to contribute to achieving societal goals on their own initiative, especially when this would go at the expense of their own interests. Pressure to meet the demands of customers and consumers restrains their ability to engage in problematic conduct, as do existing legal regimes ranging from competition, data protection and consumer law to contract, labour and environmental law (and many others). There is a role for researchers as well as policymakers and regulators to keep industry players accountable and to ensure the transparency of industry practices.

An interesting example illustrating the issues data governance can bring about in situations involving multiple competing interests in data is provided by **Teresa Scassa** in her paper “**Designing Data Governance for Data Sharing: Lessons from Sidewalk Toronto**”.²⁰ The paper analyzes the data governance scheme proposed by Sidewalk Labs, a subsidiary of Alphabet (which also owns Google), to develop a smart city project as commissioned by Waterfront Toronto, a Canadian non-profit corporation. In explaining how the chosen governance model failed in the situation at hand, the author draws valuable lessons for the future of data governance more generally. Through the lens of the concept of knowledge commons, the paper concludes that it is vital to address data governance issues at the stage of the project design and to involve a diverse range of stakeholders in the conceptualization and implementation of the data governance model representing different interests that can be both public and private.

As a purely industry-led initiative, the Data Transfer project set up by Facebook, Google, Microsoft and Twitter in 2018 and joined by

Apple in 2019 is also worthwhile to discuss here. The project aims to create an open-source platform to enable the transfer or portability of data between online services as initiated by users.²¹ In December 2019, Facebook announced the release of a tool developed within the Data Transfer project that allows Facebook users to move Facebook photos and videos directly to Google Photos, with the expectation for other services to be connected to the tool later on.²² While the tool is presented as a gesture to users at the courtesy of Facebook, Article 20 of the General Data Protection Regulation (GDPR)²³ already requires data controllers to provide data subjects with a right to receive and transmit personal data to another provider. However, Article 20 GDPR only entitles data subjects to a right to have personal data directly transferred between controllers (without having to export and import data themselves) “where technically feasible”. Facebook’s efforts and those of the Data Transfer project more generally are thus to be welcomed as a way to increase the number of situations in which data portability can be technically implemented.

At the same time, the Article 29 Working Party has interpreted the scope of the right to data portability broadly in its guidelines on data portability from April 2017 – which are not legally binding but do have an authoritative status. According to the Article 29 Working Party, personal data for which data portability can be requested does not only include personal data knowingly and actively provided by data subjects, such as a user name, email address or one’s age, but also data observed from the activities of users, including activity logs or history of website usage.²⁴ Photos are uploaded by users and thus certainly fall within the scope of application of the right to data portability, but also observed data such as one’s search history and location data would need to be made portable under the interpretation of the Article 29 Working Party. There is thus a need to remain vigilant as to the efforts made by industry players to comply with the law and to keep developing tools to push for new technical possibilities. Again, this requires involvement of different stakeholders to ensure adequate checks and balances.

Interestingly, when announcing the photo transfer tool, Facebook called upon regulators to step in and balance the benefits and risks of enhancing data portability. If a social network user ports his or her data to another provider, that user does not only reveal information about herself but also about her friends and contacts due to the interactive nature of social networking. According to Facebook, the transfer of data through data portability thereby increases the risks of leaks and raises questions about liability. Facebook argues that it is for regulators to make these trade-offs between the desirability of data portability and the greater risks for privacy, and that such decisions cannot be left to private companies.²⁵ These are indeed valid concerns requiring proactive approaches by regulators to ensure that such trade-offs are made transparent but also to prevent that industry players use risks for data protection or privacy strategically as an excuse to limit data portability.

21 See <https://datatransferproject.dev/>.

22 Steve Satterfield, ‘Driving Innovation in Data Portability With a New Photo Transfer Tool’, Facebook Newsroom, 2 December 2019, available at <https://about.fb.com/news/2019/12/data-portability-photo-transfer-tool/>.

23 Regulation (EU) 2016/679 of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (GDPR) [2016] OJ L119/1.

24 Article 29 Working Party, Guidelines on the right to data portability, 5 April 2017, WP 242 rev.01, 9-10.

25 Matthew Newman, ‘Facebook wants EU lawmakers to weigh up data portability’s risks and rewards, Clegg says’, MLex, 2 December 2019.

17 European Commission (n 2) 1.

18 European Commission (n 2) 1.

19 Graef, Gellert & Husovec (n 13) 617.

20 Teresa Scassa, ‘Designing Data Governance for Data Sharing: Lessons from Sidewalk Toronto’, *Technology @ Regulation*, (2020) 44-56.

Data portability is an important tool to empower individuals to have more control over how their personal data is used. To make sure this objective of empowerment is achieved, adequate implementation by industry players as well as effective enforcement by regulators is key. Advocacy is also important to make individuals aware of their rights, of which the right to data portability is only one. Researchers, to which the attention turns in the next section, can play a role here to make sure such rights do not merely exist in the books but are actually used in practice.²⁶

4. Researchers

Researchers play an important role in commenting on industry initiatives, as well as on enforcement actions and legislative proposals from policymakers and regulators. In their turn, researchers have a responsibility to put checks and balances in place in order to inform their findings with adequate evidence, to be transparent about research funding,²⁷ and to be clear and consistent with regard to terminology. Scholarship in the area of data governance will often bring different disciplines together. For instance, in order to make findings about how to best implement and enforce the GDPR's right to data portability from a legal perspective, it is necessary to have an understanding of the technical requirements of data portability. To study how to apply or develop the law, legal scholars need to make themselves acquainted with industry initiatives as well as the way products and services work from a more technical perspective. A reality-check with the 'law in practice' as well as with insights from other disciplines is necessary to make a proper analysis.

Data governance indeed increases the need for collaboration between disciplines, ranging from computer science, law, economics and other social sciences such as philosophy and ethics. As it is a topic where so many different interests come together, interdisciplinary research will play an important role in moving discussions about data governance forward. To advance scholarship relating to data governance within a discipline, it is also worthwhile to explore what lessons can be drawn from earlier regulatory experiences. Two of the contributions in this special issue take this approach.

By discussing the governance of electricity data and in-vehicle data, **Charlotte Ducuing** draws lessons regarding the limitations of a so-called 'data flow paradigm' in her paper "**Beyond the Data Flow Paradigm: Governing Data Requires to Look Beyond Data**"²⁸. She warns that promoting data exchange as a regulatory aim in itself can lead to imprecise and short-sighted policymaking when there is a lack of consideration for sectoral objectives and constraints. One of the observations relevant for further regulatory initiatives is how the emergence of independent data platforms can help to structure data markets by coordinating supply and demand for data. The creation of such an extra layer in the vertical value chain can be compared with the creation of physical infrastructure managers in some liberalized industries.

26 In its Communication 'A European Strategy for Data' from February 2020, the Commission also emphasizes the need to further support individuals in enforcing their data subject rights and mentions initiatives to enhance the right to data portability by promoting the use of personal data apps and novel data intermediaries such as personal data spaces. See European Commission (n 2) 20.

27 See for instance the Transparency and Disclosure Declaration that the Academic Society for Competition Law (ASCOLA) developed for competition law scholars: <https://ascola.org/content/ascola-declaration-ethics>. And note the disclosure of funding from Microsoft in the first footnote of this editorial.

28 Charlotte Ducuing, 'Beyond the data flow paradigm: governing data requires to look beyond data' (2020) *Technology and Regulation* 57-64.

The final paper of this special issue "**Defining Data Intermediaries**"²⁹ creates terminological clarity in an effort to move research and policymaking about data sharing forward in a more systematic way. By categorizing different data governance models, **Alina Wernick, Christopher Olk and Max von Grafenstein** analyze the possibilities data intermediaries can offer depending on the needs of market players and individuals. Drawing an analogy with intellectual property, they argue that the concepts of clearinghouses and patent pools are particularly useful to understand the opportunities and limits of data governance but that there is a need to adapt these governance mechanisms to the peculiarities of data.

With regard to adequate approaches towards regulating data more generally, an analogy can be made with the influential paper published by Easterbrook in 1996 on "Cyberspace and the Law of the Horse". According to Easterbrook, there is no need for specialized legal rules to regulate cyberspace just as it would make no sense to create a separate body of law for regulating all activities relating to horses. In his view, "the best way to learn the law applicable to specialized endeavors is to study general rules" and any effort to collect separate sets of rules into a 'Law of the Horse' "is doomed to be shallow and to miss unifying principles".³⁰ Easterbrook's views still have impact in the field of technology regulation up to the present day in determining how to regulate new technologies that do not neatly fit within the categories of existing legal frameworks.³¹ Data is no exception to this. As the contributions in this special issue will show, many different legal regimes apply simultaneously to data. Not all of them pursue similar objectives so that inconsistencies and tensions are inevitable. Such clashes do not only occur at the level of specific rules but also at the level of general principles Easterbrook referred to.

How can one for instance reconcile the need for data protection and the protection of property with the potential of data sharing for innovation purposes? The GDPR requires data controllers to limit the processing of personal data to what is strictly necessary through principles such as purpose limitation and data minimization.³² Intellectual property law entitles right holders to exclude third parties from using the protected subject matter, which can include data when it qualifies for protection under copyright, sui generis database protection or as a trade secret.³³ While data protection and intellectual property law thus have mechanisms in place to limit the exchange of data, policymakers are at the same time adopting new measures to stimulate reuse and sharing of data (which will inevitably include personal data and intellectual property protected data) in an effort to create more competition and innovation.³⁴ Such tensions between policy objectives will

29 Alina Wernick, Christopher Olk and Max von Grafenstein, 'Defining Data Intermediaries' (2020) *Technology and Regulation* 65-77.

30 Frank H. Easterbrook, 'Cyberspace and the Law of the Horse' (1996) *University of Chicago Legal Forum* 207.

31 For a discussion, see Ronald Leenes, 'Of Horses and Other Animals of Cyberspace' (2019) *Technology and Regulation* 1, 2-3.

32 Article 5(1)(b) and (c) GDPR

33 For a discussion of intellectual property protection for data, see Josef Drexler, 'Designing Competitive Markets for Industrial Data: Between Propertisation and Access' (2017) 8 *Journal of Intellectual Property, Information Technology and Electronic Commerce Law* 257, 267-269.

34 Examples of such measures can be found in the payment and energy sectors as well as in the context of the provision of digital content. See respectively, Directive (EU) 2015/2366 of 25 November 2015 on payment services in the internal market [2015] OJ L337/35; Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity [2019] OJ L158/125; Directive (EU) 2019/770 of the European Parliament and of the Council of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services [2019] OJ L136/1. For a discussion of such sector-specific data

need to be reconciled in practice. Trade-offs as to how to comply with different legal regimes that would lead to diverging outcomes are now mainly left to industry players, the risks of which have been discussed in the previous section.

To prevent that this leads to undesirable strategic behaviour, a question worthy of consideration is whether there is a need to overcome the criticism of Easterbrook regarding the ‘Law of Horse’ and create some sort of ‘Law of Data’. Its purpose would be to set out more concretely how the general principles underlying existing regimes like data protection, intellectual property and competition law should be applied to questions of data governance, and in particular to situations where tensions occur between requirements of separate legal regimes. Additional (sector-specific) measures creating new rights or duties for data access and data portability risk fragmenting the legal landscape even more because of the increasing uncertainty as to how new regimes should be interpreted in light of rules coming from existing frameworks.

An example is how the GDPR’s right to data portability of data subjects interacts with the intellectual property rights held by data controllers. Are data controllers obliged to facilitate portability requests for personal data over which they hold intellectual property claims? And if yes, does this also imply that new controllers should be able to reuse this data free of charge without having to obtain a license from the original intellectual property rights holder?³⁵ The Article 29 Working Party clarified that intellectual property and trade secrets should be considered before answering a data portability request but that “the result of those considerations should not be a refusal to provide all information to the data subject”.³⁶ The Article 29 Working Party suggests data controllers to see if they can transmit the personal data provided by data subjects in a form that does not release information covered by trade secrets or intellectual property rights but does not specify what should happen if this is not possible.³⁷

The answers to such questions are too important to be left to ad-hoc solutions. The ‘Data Act’ that the European Commission announced it intends to adopt in 2021 may provide a necessary overarching framework for the regulation of data by creating clarity about how new(er) mechanisms to promote data access and data portability interact with the existing regimes of general application.³⁸ As data is affecting all sectors of activity³⁹ and is becoming relevant for so many different areas of law, there may indeed be a need to set out at a more general level how to prioritize different interests and considerations

within an ever-more complex society driven by data.

5. Future steps

There are many unanswered questions about what are the most effective approaches to govern data. To determine the way forward, this editorial has illustrated that continuous interactions between the three groups of stakeholders are necessary to create new insights and learn what mode of governance works best in a given set of circumstances. Policymakers and regulators, industry players as well as researchers each carry their own responsibility in advancing our current knowledge but also have to keep checks and balances in place towards actions of their counterparts. Only with active involvement of all stakeholders will outcomes be achieved that are as optimal as possible.

The four peer-reviewed papers in this special issue aim to contribute to discussions about data governance from a mainly legal perspective by mapping the current thinking around adequate governance approaches for data and by setting out directions to be explored in future work. We hope that this special issue will stimulate further debates, initiatives and research to help move the debate forward.

access regimes, see Inge Graef, Martin Husovec & Jasper van den Boom, ‘Spill-overs in data governance: Uncovering the uneasy relationship between the GDPR’s right to data portability and EU sector-specific data access regimes’ (2020) 9 *Journal of European Consumer and Market Law* 3.

35 For an analysis, see Inge Graef, Martin Husovec & Nadezhda Purtova, ‘Data portability and data control: Lessons for an emerging concept in EU law’ (2018) 19 *German Law Journal* 1359, 1375-1386.

36 Article 29 Working Party (n 24) 12.

37 Article 29 Working Party (n 24) 12.

38 The Commission intends to cover many different issues in its proposal for a Data Act, such as business-to-government data sharing, business-to-business data sharing, an evaluation of the intellectual property framework to further promote data access and use, a clarification on the compliance of data sharing arrangements with competition law, enhancing the right to data portability for individuals and the creation of usage rights on co-generated industrial data. See European Commission (n 2) 13, 14, 15, 20, 21, 26.

39 In the context of data protection, Purtova has claimed that that with advances in data analytics any information is becoming personal data thereby turning data protection into the ‘law of everything’. See Nadezhda Purtova, ‘The Law of Everything. Broad Concept of Personal Data and Future of EU Data Protection’ (2018) 10 *Law, Innovation and Technology* 40.