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Data circulation and data rights: The issue of attribution in Europe and China

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Data circulation and data rights:
The issue of attribution in Europe and China (*)

Marina Timoteo (**)

Summary: 1. Introduction. Data: the legal dilemma of attribution. – 2. European Union: from the right to ownership to the right to access data. – 3. China: the modularized system of rights over data. – 4. Concluding remarks.

1. Introduction. Data: the legal dilemma of attribution

Every form of wealth involves the issue of attribution.

Over the past decade, this issue has become a dilemma: is there or is there not a possible form of attribution for the type of wealth that has overwhelmingly emerged as the new and dominant one, namely data?

Data has been identified as "the" asset of the 21st century, an asset representing a driving force of economic development and an essential component of any business.[1] This new asset can be "created, manufactured, processed, stored,

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[1] Or, better, one might call data as "a raw material" of any business, according to the definition given by V. Zeno-Zencovich, *Do "Data Market" Exist?*, in *Media Laws*, 2019, p. 22.

transferred, licensed, sold and stolen."[2] In these regards data seems very similar to other goods. However, if we look at this new good from the perspective of its circulation, of trade in data, we enter an uncharted territory, where lawyers wander looking for orientation points. One of the biggest uncertainties that lawyers face in this search regards the possibility to establish property rights over data. If on the one hand the uncertainty reflects the jurist's difficulty to follow – or, better, to chase - a reality shaped by technology, producing constant leaps forward that are difficult to intuit, on the other it suffers at its root from the need to envisage new solutions to frame data in traditional property law categories.

As a matter of fact, data differ from the traditional strategic assets based on which property law has been shaped, since data are duplicable virtual entities, neither tangible nor exclusive by nature. These specific characteristics render data a *sui generis* asset, making it difficult to conceive it in terms of traditional property rights and in particular in terms of ownership, that is, the concept which denotes the most extensive of the property rights.

These legal uncertainties, which radically go to the fundamental concepts forming the basis of property law, have been crossing legal systems from Europe to China and have not yet been resolved.

This essay falls within the still ongoing debate on the legal mechanisms to establish, claim, and transfer property rights of data, offering a first reconstruction of the current situation in the European Union and China, focusing on the central concept of property law, i.e. ownership.

2. European Union: from the right to ownership to the right to access data

[2] J. Ritters, A. Mayer, *Regulating Data as Property: A New Construct for Moving Forward*, in *Duke Law and Technology Review*, 2019, p. 220.

Since 2014, as part of the Digital Single Market Strategy,[3] the European Commission has launched a number of initiatives aimed at regulating the data market and addressing data ownership. In 2016, following a public consultation, the European Commission published an impact assessment in which the DG Connect confirmed that "barriers to the free flow of data are caused by the legal uncertainty surrounding the emerging issues on 'data ownership' or control, (re)usability and access to/transfer of data and liability arising from the use of data."[4] As it was stressed, "New rights of the sort were believed necessary to overcome the fact that protection of data via contractual means only has *inter partes* effects, the high thresholds to enter the scope of competition law, as well as the shortcomings of personal data protection law, trade secret law and IP law."[5]

However, calls for data ownership encounter great difficulties when it comes to treating data as goods and framing data within the existing property law regime.[6] As has been observed by comparative law scholars, the traditional taxonomies of property do not fit easily with the new phenomenon of datification, and both civil law and common law tradition have to step outside the traditional boundaries of property law to provide a legal framework for dealing with data.[7] The challenge is particularly strong for civil law countries, where the concept of ownership has been built with respect to material things. In the typical taxonomy of civil codes, the owner has an absolute and exclusive right over their things. Ownership is thus

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[3] See Communication of the European Commission, *A Digital Single Market Strategy for Europe*, COM(2015) 192 final, 6 May 2015.

[4] European Commission, European free flow of data initiative within the Digital Single Market – Inception Impact Assessment, November 2016, available at *https://ec.europa.eu/smart-regulation/roadmaps/docs/2016_cnect_001_free_flow_data_en.pdf*.

[5] These are words by S. Geiregat, *The Data Act. Star of a New Era for Data Ownership?*, 2022, p. 7, available at *https://ssrn.com/abstract=4214704*.

[6] For a first introduction to the topic see A. Boerding, N. Culik, C. Doepke, T. Hoeren, T. Juelicher, C. Roettgen, M. V. Schoenfeld, *Data Ownership. A Property Rights Approach from a European Perspective*, in *Journal of Civil Law Studies*, 2018, pp. 325-369, S. Geiregat, *The Data Act. Star of a New Era for Data Ownership?*, cit., p. 6 ff., S. Gutwirth, G. González Fuster, *L'éternel retour de la propriété des données: de l'insistance d'un mot d'ordre*, in C. de Terwangne, E. Degrave, S. Dusollier, R. Queck (eds.), *Law, Norms and Freedoms in Cyberspace. Liber Amicorum Yves Poullet*, Bruxelles, Larcier, 2018, p. 117 ff., V. Zeno-Zencovich, *Do "Data Market" Exist?*, cit., p. 23 ff.

[7] See E. Calzolaio, *From Data Property to Data Access and Back Again? Comparative Remarks on the Eu Data Act*, in *La cittadinanza europea*, 2024, p. 48 ff. Calzolaio comparative analysis considers the legal status of data in the framework of the "different lexicon of property" existing in the European context.

based on the materiality of the object and is characterized by its absoluteness, fullness, and exclusivity. However, these three characteristics absoluteness, plenitude and exclusiveness cannot be associated with goods like data.

If we look at data as an asset in light of the mother rule on property rights in civil law systems, i.e., article 544 of the French Civil Code, we do not find any possibility of relation. Article 544 defines ownership as "the right to enjoy and dispose of things in the most absolute manner, provided they are not used in a way prohibited by statutes or regulations." In light of this definition, data appear very far from the classical regime of property, as their holder does not enjoy them in the most absolute manner. On the contrary the enjoyment is limited due to the aforementioned characteristics of these new virtual goods, whose use is non-rival. This is the reason why some scholars say that these digital goods border on "half" goods or "mini" goods, unless they are simply "false" goods.[8] Moreover, at the EU level we find an even more complex situation, considering that property law is one of the fields where the Treaty on the Functioning of the European Union[9] limits EU jurisdiction as can be read in Article 345: "The treaties shall in no way prejudice the rules in Member States governing the system of property ownership."

In this context, due to the difficulties in applying legal categories and rules to data that were instead developed with material and rival goods in mind and taking into account the evolution of the debate on the possibility to claim ownership rights on data, the EU decided to abandon the idea of creating property rights over data and to focus on data access and data sharing rights with the aim of making more data available for competition and innovation.

The Data Act – considered as "an important milestone in the data ownership and access debate"[10] – was thus conceived in this spirit.

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[8] H. Périnet-Marquet, *Regard sur les nouveaux biens*, in *JCP*, 2020, p. 2071, cit. in E. Calzolaio, *From Data Property to Data Access and Back Again? Comparative Remarks on the Eu Data Act*, cit., p. 50.

[9] The Treaty on the Functioning of the European Union which adopted the Treaty of Lisbon, signed on 13 December 2007, OJ C 326.

[10] According to the definition given by S. Geiregat, *The Data Act. Star of a New Era for Data Ownership?*, cit., p. 1.

The Data Act – which came into force on January 11, 2024 and will apply from September 12, 2025[11] – is a new piece in the mosaic of rules that the EU is creating through intense legislative activity in the field of data. Other key pieces include the cornerstone regulation on personal data (the GDPR) adopted in 2016 – where the right to data access was established[12] – followed by the regulation on non-personal data[13] in 2018, the Open Data Directive[14] in 2019, the Data Governance Act (DGA)[15] in 2022, the Digital Services Act (DSA)[16] in 2022, and the Digital Markets Act[17] in 2022. This matrix of rules is part of the EU Data Strategy, providing a comprehensive regulation of digital and data-intensive markets that reflects European values and fundamental rights.[18] The Data Act is a core part of this regulatory matrix currently under construction. The Act will contribute to remove barriers that prevent optimal and fair sharing and allocation of digital data in the internal market and to promote a better use of data. Moreover, it is another

[11] See Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act), OJ L, 22.12.2023.
[12] See Regulation (EU) 2016/679 of the European Parliament and of the Council 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 (General Data Protection Regulation or GDPR) [2016], OJ L 119/1. As for right of access we can mention article 15, acknowledging to data subject right to access all data that a data controller is processing and that allow for data subject identification.
[13] See 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, OJ L 303.
[14] See Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information (recast), OJ L 172.
[15] See Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (Data Governance Act), OJ L 152.
[16] See Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market for Digital Services and amending Directive 2000/31/EC (Digital Services Act), OJ L 277.
[17] See Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act), OJ L 265.
[18] The EU Commission calls for a virtuous use of data in the EU economy taking into due account the pillars of EU legal identity that stems from European values and fundamental rights "and the conviction that the human being is and should remain at the center". See Communication on A European Strategy for Data, COM(2020) 66 final, 19 February 2020.

step in the process of building an EU digital sovereignty in order to protect its interests and those of Member States in the digital sphere.[19]

The Data Act introduces new rights for users of IoT devices to access, use, and share IoT data, moving from the premise that "the main problem of the current governance of IoT data is the fact that often the manufacturers of IoT devices can get through their technical design of these devices exclusive de facto control over data generated by the IoT devices of the users," a situation that "has negative effects on the use and sharing of this data which can impede data-driven innovation and economic growth."[20] According to Recital 6, "Data generation is the result of the actions of at least two actors, the designer or manufacturer of a product and the user of that product. It gives rise to questions of fairness in the digital economy, because the data recorded by such products or related services are an important input for aftermarket, ancillary and other services. In order to realise the important economic benefits of data as a non-rival good for the economy and society, a general approach to assigning access and usage rights on data is preferable to awarding exclusive rights of access and use". Thus, the protagonist of the new Data Act is the right for users to access and use all data generated by their IoT devices. In order to guarantee this right, "Products shall be designed and manufactured, and related services shall be provided, in such a manner that data generated by their use are, by default, easily, securely and, where relevant and appropriate, directly accessible to the user" (Article 3.1). If direct access is not possible, data holders must make readily available to users "the data generated by its use of a product or related service without undue delay, free of charge and, where applicable, continuously and in real-time. This shall be done on the basis of a simple request through electronic means where technically feasible" (Article 4.1). Moreover, "Upon request by a user, or by a party acting on behalf of a user, the data holder shall make available the data generated by the use of a product or related service to a third party, without undue delay, free of charge to the user, of the same quality as is available to the data holder and, where applicable,

[19] See F. Casolari, C. Buttaboni, L. Floridi, *The EU Data Act in Context: A Legal Assessment,* September 26, 2023, available at *https:// ssrn.com/abstract=4584781*.
[20] See Draft DA, *Explanatory Memorandum*, 13, and DA, recital 20.

continuously and in real-time" (Article 5.1). Thus, users can also transfer the data to third parties which may in turn offer a competitive service in an aftermarket. The Data Act contains another new control right for data designed with the aim of allowing the switching between data processing services. According to Article 23 "Providers of data processing services shall take the measures…to enable customers to switch to a data processing service, covering the same service type, which is provided by a different provider of data processing services, or to on-premises ICT infrastructure, or, where relevant, to use several providers of data processing services at the same time."

The brief review of the new rights introduced by the Data Act seems to confirm the shift indicated by the aforementioned Recital 6 from exclusive data rights – such as property ownership rights – to a more general approach of right to data access, which is in line with the aim of ensuring that "users of a connected product or related service in the Union can access, in a timely manner, the data generated by the use of that connected product or related service and that those users can use the data, including by sharing them with third parties of their choice" (Recital 5).

However, when we continue to read the text of the regulation, we find contradictory elements that make the choice to move away from the idea of creating exclusive rights not so clear. Indeed, there is a specific provision according to which data holders (typically the company that makes the connected product or that provides a related service) cannot use any non-personal data generated by the product without the user's agreement. Article 4.13 stipulates that data holders "shall only use any readily available data that is non-personal data on the basis of a contract with the user. A data holder shall not use such data to derive insights about the economic situation, assets and production methods of, or the use by, the user in any other manner that could undermine the commercial position of that user on the markets in which the user is active."

Thus, the Regulation adopts a "user-centric concept that assigns the rights over IoT data exclusively to the users."[21] This idea of exclusivity has been criticized by

[21] These are words by M. Eckardt, W. Kerber, *Property rights theory, bundles of rights on IoT data, and the EU Data Act*, in *European Journal of Law and Economics*, 2024, p. 125.

scholars: “the fact that data is in the exclusive legal sphere of the user shows that the declared option to abandon the property discourse in favour of the creation of rights of access to data is not satisfied. As the new rights have a proprietary flavour, what was intended to go out the door went back from the window leaving unsolved the main problem of affording the legal status of data.”[22] Thus, while the Data Act is considered positive as its effects of avoiding “unfair contracts in relation to B2B data sharing and mak[ing] it easier for SMEs to access data are remarkable” and for being “in line with the assertive approach enshrined in the notion of EU digital sovereignty,”[23] one cannot ignore that a further effort is needed in order to untangle the knot of the legal status of data as far as attribution and circulation issues are concerned.

3. China: the modularized system of rights over data

On the other side of the Eurasian continent, in China, after having declared that data is the new factor of production and having stressed the need to foster the growth of a data-driven economy (in October 2019, the Fourth Plenary Session of the 19th Central Committee of the Communist Party defined data as a “factor of production” [生产要素]), and the Chinese government started designing a system of data property rights across several levels that is functional to the development of a data market. The first reference to the issue of data linked to that of property was made in the Civil Code,[24] where we find, in the first book, *Minfa zongze* (General principles of civil law) (民法总则),[25] a very general provision establishing the principle of the protection of data (数据) and virtual property (网络虚拟财产) (Article 127 Civil Code). Almost two years after the entry into force

[22] E. Calzolaio, *From Data Property to Data Access and Back Again? Comparative Remarks on the Eu Data Act*, cit., p. 48.
[23] See F. Casolari, C. Buttaboni, L. Floridi, *The EU Data Act in Context: A Legal Assessment*, cit., p. 16.
[24] The first step of the elaboration of the Civil Code was the approval of the General Principles of Civil Code, (中华人民共和国民法总则) passed on March 15, 2017, during the 5th Session of 12th National People’s Congress.
[25] Article 127 of Civil Code of China: “Where there are laws particularly providing for the protection of data and online virtual assets, such provisions shall be followed.”

of the Civil Code, a few weeks after the close of the 20th Chinese Communist Party Congress, a core policy document on the data market was released, such document being specifically designed to address the issue of data property rights. The document, the result of the combined action of the Central Committee of the Chinese Communist Party and the State Council, is entitled *Opinions on Building Fundamental Data System to Better Utilize the Role of the Data Factor.*[26]

This type of policy document plays a highly strategic role in the Chinese legal system, having been at the forefront of major legislative reforms over the past decade. It does not have the force of statutory law, but offers a point of reference for legal actors (courts and local legislators). Moreover, it is implemented at the local level.[27]

After having acknowledged the role of data as a key driver in digital growth and the digital economy, the opinions classify three types of data, namely public data (公共数据), corporate data (企业数据), and personal data (个人数据). While the corporate and personal data will be treated in "a market-oriented manner," encouraging their "common use and benefit sharing," in order to activate the creativity of the data factor (Article 3 of the 2022 Opinions), public data, which are generated by public organizations and governments, will be treated according

[26] CPC and State Council 2022 Opinions of the Central Committee of the Communist Party of China and the State Council on Building a Data Fundamental System to Better Utilize the Role of the Data Factor (中共中央 国务院关于构建数据基础制度更好发挥数据要素作用的意见), *http://m.news.cn/2022-12/19/c_1129220019.htm*.

[27] Local policy makers made effort to enforce that important national level policy. Some provinces, such as Jiangsu, one of the most developed provinces, promulgated their own opinions with an almost identical title Implementation *Opinions of Jiangsu Provincial Committee of the CPC, Jiangsu Provincial People's Government on Building a Data Fundamental System to Better Utilize the Role of the Data Factor* (中共江苏省委、江苏省人民政府关于推进数据基础制度建设更好发挥数据要素作用的实施意见), published in December 2023, *https://www.jiangsu.gov.cn/art/2024/1/18/art_87820_11128580.html*. Other provinces cited that Opinions as the authoritative basis of related institutions in the field of data, especially their registration. For instance, with the citation of that Opinions, Hainan Big Data Administration Bureau issued *Implementation Rules for Confirmation and Registration of Data Products in Data Products Supermarket of Hainan Province (Interim)* [海南省数据产品超市数据产品确权登记实施细则(暂行)] in December 2023, *https://dsj.hainan.gov.cn/sjzy/sjcpcs/zxdt/202312/t20231215_3551229.html*; while Shanxi Province, led by Shanxi Administration of Market Regulation (山西省市场监督管理局), issued their *Measures for the Administration of Data Intellectual Property Registration (for Trial)* [数据知识产权登记管理办法（试行）] recently in June 2024, *http://scjgj.shanxi.gov.cn/zwgk/jgfl/wjtz/202407/t20240712_9608673.shtml?siteId=shanxi*.

to their purposes of use, i.e., when used for public benefit they will be under "conditional use without compensation"[28]; when used for commercial purposes they will be under "conditional use with compensation" (Article 4 of the 2022 Opinions).[29] In order to implement these uses of data the 2022 Opinions provide for attribution criteria for data, introducing three separate but related rights, designed as data processors' rights: (a) the right to hold data resource (数据资源持有权), (b) the right to process and use data (数据加工使用权), and (c) the right to manage data product (数据产品经营权) (Article 3 and Article 7 of the 2022 Opinions). These rights, which have been conceived for commercialization purpose, are subordinate to the "first-order statutory rights" of the data subjects, i.e., those entities (both natural and non-natural persons) that generate data. The latter have their rights and interests in the framework of the Personality rights book of the Civil Code, the Personal Information Protection Law, and the rules protecting copyrights, patents, and trade secrets. These are considered first-order rights, and the consent of data subjects is requested by data processors in order to collect, use, or license the data carrying information.[30]

In accordance with these data subjects' rights, the Opinions lay the groundwork to establish a set of rules on attribution criteria for data, identifying the three aforementioned rights for commercial purposes that may vest with the same or multiple data handlers (Article 7 of the 2022 Opinions). The first right, i.e., the right to hold data resources, belongs to data controllers that have originally

[28] Though currently there is not any legislation or policy about the detailed scope of public data eligible to conditional use without compensation, several practitioners have listed disaster relief, poverty alleviation, assistance to the disabled, environmental protection, and, especially, public health as five scenarios with significant urgency of adopting such path of authorized data usage. See Zhao Caijing (赵蔡晶), Ji Lina (计丽娜), *Opening and Operation: Dual Paths of Public Data Value Realization* (开放与运营：公共数据价值实现的双路径), in *Information and Communications Technology and Policy* (信息通信技术与政策), 2023, pp. 27-33.

[29] This means that some condition (about which the document does not give more specific information), such as some specific approval process, will be put on the usage of public data. When the public data should be kept confidential, it would not be open to public. In this way, though public data and non-public data are operated and treated in different ways, the multi-layered utilization will always be acknowledged and encouraged, because all the three sorts of data are useful for "promoting circulation and use of data under a both compliant and efficient way and empowering the real economy", which is the mainline of this policy document.

[30] See B. Xiong, J. Ge, L. Chen, *Unpacking data: China's "bundle of rights" approach to the commercialization of data*, in *International Data Privacy Law*, 2023, p. 102.

collected or acquired raw data (personal and non-personal data). However, the possession of data is not an end in itself. Thus, a separate right has been outlined, i.e., the right to use data, including after processing. Finally, a right to manage and to make profit from data is provided in order to regulate other commercial uses of data, such as using data as financial assets for investment or as a security interest.[31] Looking at the basic regime designed by the Opinions with respect to the issue of data attribution, we see that this regime was developed by "thinking outside the box of ownership" (跳出所有权思维定式).[32] This is in keeping with the opinion of the majority of scholars, who, as in Europe, expressed scepticism about the idea of data ownership due to the difficulty in associating the concepts of absoluteness and exclusivity to data, and have suggested that only certain powers over data be allowed, such as the power to control, access, transfer, and delete data.[33] Following this line of reasoning, a system of "bundled rights" (权利束) over data

[31] See Sun Jing, Wang Jiandong (孙静，王建冬), *The Overall Vision of Forming a Closed-Loop Policy of Resource Utilization, Assetization and Capitalization of Data Factor under the Multi-Level Market System* (多级市场体系下形成数据要素资源化、资产化、资本化政策闭环的总体设想), in *E-Government* (电子政务), 2024, pp. 12-20; Chengang, Yan Binbin, Tang Ke (陈刚，颜斌斌，汤珂), *Data Factorization and Assetization: Theoretical Analysis and Practical Exploration* (数据的要素化与资产化：理论辨析与实践探索), in *International Economic Review* (国际经济评论), 2024, pp. 9-32. That topic is also acknowledged as a crucial part of "New quality productive forces" (新质生产力), one of the most political and economic concepts in current China, see Zhang Xiaheng, Feng Xiaoyu (张夏恒，冯晓宇), *Development of New Quality Productive Forces: Overall Framework and Promotion Measures of Data Factors Empowerment* (论新质生产力发展：数据要素赋能的整体架构及推进举措), in *Journal of Hohai University (Philosophy and Social Sciences)* [河海大学学报(哲学社会科学版)], 2024, pp. 120-130.

[32] See the official introductory comment to the document made by the National Development and Reform Commission (国家发展和改革委员会), *Accelerate the construction of a data foundation system with Chinese characteristics to promote the sharing of the dividends of the development of the digital economy by all people* (加快构建中国特色数据基础制度体系　促进全体人民共享数字经济发展红利), in *Qiushi Net* (求是网), *http://www.qstheory.cn/dukan/qs/2023-01/01/c_1129246978.htm*.

[33] Qian Ziyu (钱子瑜), *On the Construction of Data Property Right* (论数据财产权的构建), in *The Jurist* (法学家), 2021, pp. 75-91, Jin Yao (金耀), *The Limits and Possibilities of Data Property Right under the Logic of Digital Governance* (数字治理逻辑下数据财产权的限度与可能), in *Jinan Journal (Philosophy & Social Sciences)* (暨南学报(哲学社会科学版)), 2022, pp. 29-43, Fu Xinhua (付新华), *A Critic of the Theory on Enterprise Data Property Rights Protection* (企业数据财产权保护论批判——从数据财产权到数据使用权), in *Oriental Law* (东方法学), 2022, pp. 132-143.

was conceived and introduced into the 2022 document.[34] Thus, the Chinese solution for the enigma of property rights over data for commercial purposes is vested in this system of modularized rights that provides and connects modules of rights of data subjects and data processors.

However, the Opinions need to be supplemented by detailed rules, and in the meantime leave some crucial questions unanswered. For example, one of the main uncertainties outlined by scholars is that "there is no clear legislative guidance in respect of claims between data controllers who have jointly contributed to the generation of data, especially in the absence of prior data-related agreements. In fact, China has already encountered such disputes and urgently needs effective rules to address them."[35] Here the reference is to the dispute between the players of one of the largest and most powerful partnerships in China's e-commerce market – Alibaba's Cainiao logistic affiliate and SF Express, China's largest parcel carrier – over the terms of access to and sharing of each other's propriety data.[36] This and other issues remain in the grey area of the data property rights regulations under construction.

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[34] An authoritative explanation of the nature of data rights regulated in the 2022 Document, see Wang Liming (王利明), *The Expression of Data Rights and Interests in Civil Law* (数据权益的民法表达), in *Jingchu Law Review* (荆楚法学), 2024, pp. 19-29.

[35] See B. Xiong, J. Ge, L. Chen, *Unpacking data: China's "bundle of rights" approach to the commercialization of data*, cit., p. 105.

[36] The dispute between those two giants happened in 2017, the concentration was on the accessibility to data about express service information possessed by Shunfeng, which was required by Cainiao (a leading delivery service aggregation platform) but suddenly refused by Shunfeng. After two days of stalemate, with the intervention of administrative power from State Post Bureau of China, the dilemma was resolved from both "political" and market perspectives, recovering the mutual data transmission between the two parties. Although Shunfeng justified their closure of the access permission for Cainiao with reasons of privacy and security, analysts still deemed that the major concern was in fact on potential business value of the treasury users' information. For that reason, that event was considered as the first battle for big data in Chinese business society. An in-depth and neutral report, see Hou Jun (侯隽), *Shunfeng vs Cainiao: The Battle for Big Data* (顺丰VS菜鸟：大数据争夺战), in *China Economic Weekly* (中国经济周刊), 2017, pp. 32-34. That case also inspired relevant legal study about the property nature of data. See Meng Tao (孟涛), *On the Legal Attributes and Protection Routes of Data Property from the Perspective of "Data Battle between SF Express and Cainiao Network"* (基于"丰鸟数据之争"的数据财产的法律属性与保护路径), in *Journal of Dalian University of Technology (Social Sciences)* [大连理工大学学报（社会科学版）], 2019, pp. 77-84.

4. Concluding remarks

In this first exploration of the regulatory approaches to data property issues in the EU and China we see a typical scenario of a work in progress. The EU Data Act and the basic regime outlined by the 2022 Chinese *Opinions on Building Fundamental Data System to Better Utilize the Role of the Data Factor,* two legal documents that are very different from each other (as the second does not have the force of statutory law, even if it is a point of reference for courts and local legislators), introduce new proposals but still leave several questions unanswered, beginning with the association of the legal category of ownership with respect to data. Ownership seems to be no longer under discussion either in the EU or China. However, some room for the idea of exclusivity, which is in contradiction with the nature of data as goods, is still pending.

The presence of grey areas is typical of times when the regulatory power of the legislature is chasing facts. Law today is dominated by the force of facts, and facts have a technological nature. Technology, its technical rules, (also) shape legal solutions. So do contractual practices. In this scenario jurists should invent the law: "An effort is needed in order to imagine new paradigms, aiming at classifying data in a way being able to ensure an effective protection of the rights on it."[37]

[37] E. Calzolaio, *From Data Property to Data Access and Back Again? Comparative Remarks on the Eu Data Act*, cit., p. 51.

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