(Re)Structuring Data Law: Approaches to Data Property

Thomas Hoeren and Philip Bitter

1 Preface

In times of big data, it must be allowed to ask whether the civil legal system can provide an answer to an emerging industry 4.0 (Bräutigam & Klindt, 2015, p. 1137; Zech, 2015b, p. 1151). If data is traded on a large scale, it should be clarified which rights a person has to data beyond the existing contractual agreements. The issue is preceded by the question of a legal classification of data. According to that, scholars have already thought about structuring data rights in terms of "data ownership". Current legislation may have a few solutions to this end. The protection of goods under traditional property law in the BGB (German Civil Law Code), though, is based on corporeal objects. Intellectual property rights to certain data or rather to the content of data also already exist. However, such options do not grant a property-like right to data as such. Data is nevertheless a suitable object of purchase according to Sect. 453 (1) second alternative BGB (Beckmann, 2013, Sect. 453 para. 37). So "data ownership" was originally about how *de lege lata* a property-like right of disposal ("Verfügungsrecht") could be created (Wagner, 2017, Sect. 823 para. 296). It must be asked how the relationship between data as such, the content, and the data carrier can be further approached by means of law (Hoeren & Völkel, 2014, p. 12; Zech, 2015a, p. 138). Considerations about "data ownership" still range from a comprehensive rejection to the establishment of certain rights *de lege lata* or even exclusive rights *de lege ferenda*. And the data term is not even used consistently. Some approaches concern data at the level of signs, i.e. data as such (Arbeitsgruppe "Digitaler Neustart", 2017; Zech, 2015a, p. 138). The term can therefore be defined as "reinterpretable representation of information" in accordance with the ISO standard

T. Hoeren (✉) · P. Bitter
University of Münster, Münster, Germany
e-mail: hoeren@uni-muenster.de

P. Bitter
e-mail: philip.bitter@uni-muenster.de

K. Bergener et al. (eds.), *The Art of Structuring*,
https://doi.org/10.1007/978-3-030-06234-7_28

(ISO/IEC, 2015). In other considerations, data and information are used synonymously (Determann, 2018, p. 6). This is also the case in the GDPR (General Data Protection Regulation, Article 4 No. 1). However, the distinction is not trivial. Data as such can also be indirectly protected by the aforementioned protection of the content or the data carrier.

2 Review and Recent Developments

Based on the economic value of data, data trading seems to cry out for legal certainty on a European level. The European Commission therefore brought into play the introduction of a "data producer's right" (European Commission, 2017a, p. 13, 2017b, pp. 33 et seq.) Moreover, the main focus was on promoting competition in a European digital single market. To this end, the Commission launched the "free flow of data initiative" (European Commission, 2015, p. 15), which was specified in a proposal for a regulation on a framework for the free flow of non-personal data (European Commission, 2017b). In this context, though, the focus has shifted from the introduction of an exclusive right to data to a regulation of portability and access rights to data (European Comission, 2017d, p. 74; Drexl, 2017a, p. 257; Kerber, 2016, p. 989). The largely economic thoughts at European level were *inter alia* preceded by considerations of some scholars, who have started to investigate how to establish a property-like right *de lege lata*, for example to mobility data from the automotive industry. The initial aim was to establish rights to data in a connected car. Furthermore, it was also based on the rather German idea that a contractual deal under the law of obligations ("Verpflichtungsgeschäft") should also be followed by further, separate allocation in rem ("dingliche Zuordnung"). The approach was merely intended to point out dogmatic options of a classification of data as such detached from content and carrier medium. It was well known that the ownership of the data carrier medium and intellectual property rights to the content for example could have priority as well as data protection law and thus only a small scope of application existed (Hoeren, 2013, p. 490). Nonetheless, this led to very different approaches. The term "data property" was later associated with the requirement of legislative intervention. Subsequently, the creation of a neighbouring right to data was discussed (Ensthaler, 2016, pp. 3476 et seq.; European Commission, 2017a, p. 13, 2017c, pp. 33 et seq.). The legitimate initial question of the assignment of data to a person by establishing a property-like right *de lege lata* thus became a question of general data ownership *de lege ferenda*. Then, at least after the Report of the Working Group "Digitaler Neustart" of the German Conference of Ministers of Justice in May 2017, one seemed to agree that such considerations on general data ownership lead nowhere in the complex question of an assignment of data rights to a person. Particularly from an economic point of view and in the context of the existing rights to content and carrier, such a general ownership of data was assessed as not desirable (Arbeitsgruppe "Digitaler Neustart", 2017, p. 88; Kerber, 2016, p. 989). It could even promote misguided monopolization of data instead of preventing it.

Nonetheless, due to the mention of the topic in the coalition agreement of the German Federal Government in 2018, the discussion has gained momentum once again.

3 Approaches to Data Property

3.1 Contractual Allocation

Contractual agreements on the use of data only apply between the parties and not to everyone (Zech, 2015a, p. 140). In addition, contractual solutions alone may entail the risk of nullity of contracts, high transaction costs, potential market failure and conflicting laws (Grützmacher, 2016, p. 486). Even if "data ownership" is contractually assigned in practice, there is no corresponding right in rem as property is only assigned by name (Boehm, 2016, pp. 379 et seq.; Jülicher, 2015a, p. 2066).

3.2 Approaches de Lege Lata

There are already various concepts to assign rights to certain data to a person under current legislation. Most of them are related to the content and therefore not to data as "representation by signs". However, the crucial point of the initial question of "data ownership" was just to approach the relationship between data, its content, and data carriers in civil law. The cases concerned were those in which the current protection regimes for the protection of content or carrier medium did not seem to provide a solution for civil law protection and classification of data as a definable entity. Dealing with the independent meaning of data as such seemed to be unavoidable. If data is a suitable object under the law of obligations, it may also have to be assigned as a right in rem. There may be even a practical need for such a right, particularly in the case of nullity of contracts that allocate certain rights to data. The question of the property-like right to dispose of data also determines whether data can be segregated in the event of the cloud provider's insolvency (Jülicher, 2015a, p. 2065, 2015b, p. 450) or how a lien on data can be justified (Court of Appeal, 2013). Hence, as regards the issue of a right in rem to data as such under civil law, the first thing to consider is the application of property law. Though the traditional law of property applies to tangible goods, it does not apply to intangibles (Althammer, 2016, Introduction to Sects. 903 et seq., para. 3 et seq.; Brückner, 2017, Sect. 903, para. 3). Referring to Sect. 903 s. 1 BGB, the owner of a "thing" has the positive rights to "deal with the thing at his discretion" and the negative rights to "exclude others from every influence", limited in statutes and the rights of third parties (Althammer, 2016, Sect. 903, para. 9 et seq.; Brückner, 2017, Sect. 903, para. 22 et seq.). Sect. 90 BGB states that only corporeal objects are "things". In contrast to data carriers, thus data as such is not regarded as "things" as defined by law (Stresemann, 2015, Sect. 90,

para. 25). Secondary protection of data may exist through the property right to the data carrier. This may be the case above all if the owner of the storage medium is also the "owner" of the data. This does not necessarily mean that ownership of the data must correspond to ownership of the storage medium. Storing data in a cloud should serve as an example. Data in a cloud should not necessarily belong to the cloud provider, as the cloud provider should not be able to handle the data at will. As a result, property law is not directly applicable.

However, if the rules on the sale of goods (Sects. 433 et seq. BGB) apply to data as "other items" in accordance with Sect. 453 (1) second alternative, a corresponding assignment of a property-like right to dispose should still be considered. Thoughts from German criminal law, especially to Sect. 303a StGB (German Criminal Act), can be helpful here. Section 303a StGB makes the unlawful deletion, suppression, disabling or alteration of data a punishable offence. It therefore requires a person entitled to dispose (Heger, 2018, Sect. 303a, para. 4; Stree & Hecker, 2014, Sect. 303a, para. 3). For this reason, an analogy to Sect. 903 BGB was drawn in part (Hilgendorf, 1996, p. 890; Stree & Hecker, 2014, Sect. 303a, ref. 3). In the sense of the unity of the legal system, thus an analogy was also considered in civil law. However, such a property-like right would be subject to many restrictions. It would also be largely subsidiary to the rights to the data carrier and to the data content. At least, the person entitled under criminal law should also be recognised as the person entitled to dispose under civil law. Then the so-called *"Skripturakt"* (Welp, 1988, p. 447), as developed under Sect. 303a StGB, appeared to be the most suitable criterion even for the allocation of data to a person. Data ownership is therefore assigned to the technical manufacturer of the data or to the person who initiated the *"Skripturakt"* (Hoeren, 2013, p. 487). "*Skripturakt*" and case law, in particular on Sect. 950 BGB, may thus help to assign a property-like right to data (Hoeren & Völkel, 2014, pp. 34 et seq.). Anyway, a general reference to the limited number of use cases does not prevent such a property-like assignment of data to a person *de lege lata* nor does it meet the significance of data as such. The above mentioned cloud computing and segregation of data in insolvency serve as practical examples for the required discussion.

Besides that, some other rules exist for the handling of certain data. In addition to the ownership of tangible goods, absolute rights can also exist in terms of personal rights or intellectual property rights. However, the protection does not refer to data as such, but to the content of the data. Content can be protected by copyright or industrial property rights according to the creation process or investment. Data protection law protects personal data, but also relates to information.

Copyright law, for example, grants an exclusive right of exploitation and restriction (Heerma, 2014, Sect. 15, para. 2; Schulze, 2018, Sect. 15 para. 5), but presupposes a work by personal intellectual creation according to Sect. 2 (2) UrhG (German Copyright Act). Therefore a threshold of originality is required (Wiebe, 2015, Sect. 2, para. 2). Data may therefore be the representation by signs of a work protected as a form. Yet, data in this technical sense and in particular automatically generated data may not reach the required level of originality. Neither will machine-generated data be classified as personal creation (Schulze, 2018, Sect. 2, para. 8). The protection of computer programs under Sects. 69a et seq. UrhG requires a personal intellectual

creation as well, Sect. 69a (3) s. 1 UrhG. Database works according to Sect. 4 (2) s. 1 can be protected as collections, Sect. 4 (1) UrhG. According to Sects. 4 (1) and 2 (2) UrhG, though, database protection also only covers the selection or arrangement of elements as a collection that can be regarded as a personal intellectual creation (CJEU, 2012, para. 37; Dreier, 2018, Sect. 4, para. 19). Sections 87a et seq. UrhG assign a *sui generis* right to the maker of a database. In accordance with Sect. 87b (1) s. 1 UrhG, the maker thus obtains an exclusive right to the duplication, distribution and public reproduction. As a neighbouring right, though, it is not a personal creation of a database that is required, but a substantial investment made in the obtaining, verification or presentation of the content, Sect. 87a (1) s. 1 UrhG (Dreier, 2015, Sect. 87a, para. 1). In assessing the substantial investment, a distinction shall therefore be made between the relevant resources of creation and operation of the database, and the generation of data as independent materials (Dreier, 2015, Sect. 87a, para. 12 et seq.; CJEU, 2004a, para. 31, 2004b, para. 24, 2004c, para. 40, 2004d, para. 34). The latter is not taken into account. Although rights to certain data may exist in this context, data as such is not protected either (Dorner, 2014, p. 622; Zieger & Smirra, 2013, p. 419). There is no property-like right to dispose of data as such through copyright or *sui generis* right for databases.

The directive on the protection of trade secrets is a further legal framework that reveals the problems in establishing the scope of an absolute right to data. Article 12 (1) and (2) provide the holder of misappropriated trade secrets with certain rights. Article 14 states that the trade secret holder can claim damages against the infringer. According to Article 2 (1), a trade secret is information, which is a secret that is not generally known among or readily accessible to persons within the circles that normally deal with the specific information (a), which has commercial value because it is secret (b), and which has been subject to reasonable steps to keep it secret (c). The directive may thus also concern certain data or rather the contained information that is to be classified as a trade secret. Article 4 deems the acquisition (2), use and disclosure (3) of trade secrets without the secret holder's consent unlawful. According to Article 4 (2) lit. a, for instance, the acquisition of a trade secret without the consent of the trade secret holder shall be considered unlawful when it is carried out by, for example, appropriation or copying of electronic files that are lawfully under control of the trade secret holder, that contain the trade secret or from which the trade secret can be deduced. However, it is based on factual secrecy and subject to many limitations, including Article 3 on the lawful acquisition, use and disclosure or the exceptions in Article 5. It thus leads to rights to certain data but it does not grant a property-like right to data as such.

Data protection law also protects the content that can be presented by data. Article 4 No. 1 GDPR states that "personal data" means any information relating to an identified or identifiable natural person. Moreover, current data protection law does not appear to be able to provide comprehensive ownership of data (Dorner, 2014, p. 624; Specht, 2017, p. 1041 et seq.). It rather has a defensive function against processing of personal data by others. In defining the right to informational self-determination, the BVerfG (German Federal Constitutional Court) stated that "information, even if it is personal, is an image of social reality that cannot be attributed exclusively to

the person concerned". In view of the increasing economic importance of personal data, though, there are different approaches to establishing personal rights and data protection law as property-like rights (Buchner, 2006, pp. 201 et seq.; Ladeur, 2000, p. 1980; Schwartz, 2004).

3.3 Approaches de Lege Ferenda

Finally, the creation of a neighbouring right for data *de lege ferenda* was discussed (Ensthaler, 2016, pp. 3476 et seq.; European Commission, 2017a, p. 13, 2017c, pp. 33 et seq.). However, an exclusive general data ownership right is not considered to be economically reasonable (Dorner, 2014, p. 617; Drexl, 2017a, p. 257; Hugenholtz, 2018; Kerber, 2016, p. 989; Spindler, 2016, p. 805). This is already shown by the aforementioned developments at European level. Moreover, to prevent a "super IP right" (Drexl, 2017b, p. 343; European Commission, 2017c, p. 34; Wiebe & Schur, 2017, p. 470), there should be no protection of the content beyond the limits of the existing intellectual property rights. Comparable to the solution via contractual regulations only, the creation of a general data ownership right even poses a risk of misguided monopolisation.

4 Conclusion

Legislative action on general data ownership, for example in terms of a new neighbouring right, is incapable of solving the initial "data property" issue. On the one hand, it is not considered economically reasonable. On the other hand, it could not help to clarify the original question of a property-like right to dispose of data ("Verfügungsrecht") *de lege lata*. Instead, the approach by means of the "Skripturakt" may have allowed an approximation to the relationship between data, content and data carrier in civil law. In addition, there are already many protection regimes for certain data, for example due to the data carrier or the content. Current legislation can therefore be seen as a largely sufficient basis. A comprehensive restructuring of data law *de lege ferenda* does not seem to be indicated in this context. However, further research questions seem to arise in relation to data possession and access regulation to data.

References

Althammer, C. (2016). In K.-H. Gursky (Ed.). *Staudingers Kommentar zum Bürgerlichen Gesetzbuch—Buch 3: Sachenrecht* (rev. ed. 2016). Berlin: Sellier—de Gruyter.

Arbeitsgruppe "Digitaler Neustart". (2017). *Bericht vom 15. Mai 2017*, Retrieved from https://www.justiz.nrw.de/JM/schwerpunkte/digitaler_neustart/zt_bericht_arbeitsgruppe/bericht_ag_dig_neustart.pdf.

Beckmann, R. M. (2013). In M. Martinek (Ed.). *Staudingers Kommentar zum Bürgerlichen Gesetzbuch—Buch 2: Kaufrecht* (rev. ed. 2013). Berlin: Sellier—de Gruyter.

Boehm, F. (2016). Herausforderungen von Cloud Computing-Verträgen: Vertragstypologische Einordnung, Haftung und Eigentum an Daten. *ZEuP*, *2,* 358–387.

Bräutigam, P., & Klindt, T. (2015). Industrie 4.0, das Internet der Dinge und das Recht. *NJW, 16,* 1137–1142.

Buchner, B. (2006). *Informationelle Selbstbestimmung im Privatrecht*. Tübingen: Mohr Siebeck.

Brückner, B. (2017). In F. J. Säcker, et al. (Eds.). *Münchener Kommentar zum Bürgerlichen Gesetzbuch Band 7* (7th ed.). Munich: Beck.

CJEU. (2004a). 9 September 2004—C-203/02, ECLI:EU:C:2004:695—The British Horseracing Board Ltd und andere gegen William Hill Organization Ltd.

CJEU. (2004b). 9 September 2004—C-338/02, ECLI:EU:C:2004:696—Fixtures Marketing Ltd v Svenska Spel AB.

CJEU. (2004c). 9 September 2004—C-444/02, ECLI:EU:C:2004:697—Fixtures Marketing Ltd v Organismos prognostikon agonon Podosfairou AE (OPAP).

CJEU. (2004d). 9 September 2004—C-46/02, ECLI:EU:C:2004:694—Fixtures Marketing Ltd v Oy Veikkaus Ab.

CJEU. (2012). 1 March 2012—C-604/10, ECLI:EU:C:2012:115—Football Dataco Ltd and Others v Yahoo! UK Ltd and Others.

Court of Appeal. (2013). EWCA Civ 281—Your Response Ltd v Datateam Business Media Ltd.

Determann, L. (2018). No one owns data. *UC Hastings Research Paper, 265,* Retrieved from https://ssrn.com/abstract=3123957.

Dorner, M. (2014). Big Data und "Dateneigentum". *CR,9,* 617–628.

Dreier, T. (2018). In T. Dreier & G. Schulze (Eds.). *Urheberrechtsgesetz* (5th ed.). Munich: Beck.

Drexl, J. (2017a). Designing competitive markets for industrial data—between propertisation and access. *JIPITEC, 8,* 257–292.

Drexl, J. (2017b). Ein Plädoyer für einen wettbewerbspolitischen Ansatz—Teil 1. *NZKart, 7,* 339–344.

Ensthaler, J. (2016). Industrie 4.0 und die Berechtigung an Daten. *NJW, 48,* 3473–3478.

European Commission. (2015). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "A Digital Single Market Strategy for Europe", 6 May 2015, COM(2015) 192 final.

European Commission. (2017a). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "Building a European data Economy", 10 January 2017, COM(2017) 9 final.

European Commission. (2017b). Proposal for a regulation of the European Parliament and of the Council on a framework for the free flow of non-personal data in the European Union, COM(2017) 495 final.

European Commission. (2017c). Staff Working Document on the free flow of data and emerging issues of the European data, 10 January 2017, SWD(2017) 2 final.

European Commission (Ed.). (2017d). *Study on emerging issues of data ownership, interoperability, (re-)usability and access to data, and liability*. Luxembourg.

Grützmacher, M. (2016). Dateneigentum—ein Flickenteppich.*CR, 8,* 485–495.
Heger, M. (2018). In K. Lackner & K. Kühl (Eds.). *Strafgesetzbuch: Kommentar* (29th ed.). Munich: Beck.
Heerma, J.-D. (2014). In A.-A. Wandtke & W. Bullinger (Eds.). *Praxiskommentar zum Urheberrecht: UrhR* (4th ed.). Munich: Beck.
Hilgendorf, E. (1996). Grundfälle zum Computerstrafrecht. *JuS*, 890–894.
Hoeren, T. (2013). Dateneigentum—Versuch einer Anwendung von § 303a StGB im Zivilrecht. *MMR, 8,* 486–491.
Hoeren, T., & Völkel, J. (2014). In T. Hoeren (Ed.). *Big Data und Recht*. Munich: Beck.
Hugenholtz, P. B. (2018). Against "data property". In H. Ullrich, et. al. (Eds.). *Kritika: Essays on Intellectual Property*, *3*, 48–71.
ISO/IEC. (2015). 2121272. In *ISO/IEC 2382:2015(en)*.
Jülicher, T. (2015a). Die Aussonderung von (Cloud-)Daten nach § 47 InsO. *ZIP, 43,* 2063–2066.
Jülicher, T. (2015b). Daten in der Cloud im Insolvenzfall—ein internationaler Überblick. *K&R*, *7*, 448–452.
Kerber, W. (2016). A new (Intellectual) property right for non-personal data? An economic analysis. *GRUR Int., 11,* 989–998.
Ladeur, K.-H. (2000). Persönlichkeitsschutz und "Comedy"—Das Beispiel der Fälle SAT 1/Stahnke und RTL 2/Schröder. *NJW, 28,* 1977–1981.
Schulze, G. (2018). In T. Dreier & G. Schulze (Eds.). *Urheberrechtsgesetz* (5th ed.). Munich: Beck.
Schwartz, P. M. (2004). Property, privacy and personal data. *Harvard Law Review, 117,* 2055–2128.
Specht, L. (2017). Das Verhältnis zwischen Datenrechten und Datenschutz. *GRUR Int., 12,* 1040–1047.
Spindler, G. (2016). Digitale Wirtschaft—analoges Recht: Braucht das BGB ein Update? *JZ,17,* 805–816.
Stree, W., & Hecker, B. (2014). In A. Schönke & H. Schröder (Eds.). *Strafgesetzbuch: Kommentar* (29th ed.). Munich: Beck.
Stresemann, C. (2015). In F. J. Säcker, et al. (Eds.). *Münchener Kommentar zum Bürgerlichen Gesetzbuch Band 1* (7th. ed.). Munich: Beck.
Wagner, G. (2017). In F. J. Säcker, et al. (Eds.). *Münchener Kommentar zum Bürgerlichen Gesetzbuch Band 6* (7th ed.). Munich: Beck.
Welp, J. (1988). Datenveränderung (§303a StGB)—Teil 1. *IuR*, 443–449.
Wiebe, A. (2015). In G. Spindler & F. Schuster (Eds.). *Recht der elektronischen Medien: Kommentar* (3rd ed.). Munich: Beck.
Wiebe, A., & Schur, N. (2017). Ein Recht an industriellen Daten im verfassungsrechtlichen Spannungsverhältnis zwischen Eigentumsschutz, Wettbewerbs- und Informationsfreiheit. *ZUM, 6,* 461–473.
Zech, H. (2015a). Daten als Wirtschaftsgut—Überlegungen zu einem "Recht des Datenerzeugers". *CR*, *3,* 137–146.
Zech, H. (2015b). "Industrie 4.0"—Rechtsrahmen für eine Datenwirtschaft im digitalen Binnenmarkt. *GRUR, 12*,1151–1160.
Zieger, C., & Smirra, N. (2013). Fallstricke bei Big Data-Anwendungen—Rechtliche Gesichtspunkte bei der Analyse fremder Datenbestände. *MMR*, *7*, 418–421.

Dr. Thomas Johann Hoeren is a Professor of Information, Media and Business Law at the University of Münster and Head of the Institute for Information, Telecommunication and Media Law. The ITM combines civil, public and criminal law and conducts research concerning international competition regulation. Professor Hoeren, who earned doctorate degrees in law and theology, works as a legal advisor of the European commission with the "Legal Advisory Board on Information Technology". He is member of the Task Force Group on Intellectual Property of the European Commission and of the expert committee for copyright and publishing law at the German Union for Intellectual Property Protection. Thomas Hoeren, honored with the ALCATEL-SEL research award "Technische Kommunikation", serves as a Scientific Counsellor of the DENIC eG and as a WIPO Domain Name panelist and panelist for ".eu" domain disputes. Since 1998, he works as a co-editor of the legal journal "Multimedia und Recht".

Philip Bitter is a research assistant and doctoral candidate at the Institute for Information, Telecommunication and Media Law, Civil Law Department (Prof. Dr. Thomas Hoeren). After studying law with a focus on German and European corporate law at the University of Münster, he took over the legal coordination of the sector studies for finance, insurance and transport in the interdisciplinary research project "ABIDA—Assessing Big Data" funded by the Federal Ministry of Education and Research.