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Should we ‘own’ our data?

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Topic: Should we own our personal data?

Subtopic:
Are there and should there be economic rights in personal data?

Research question:
Should we 'own' our data?

Research sub-questions:
“Are there any economic rights in personal data?”
“Should there be economic rights in personal data by individuals?”

1. Introduction

1.1. The impact of an information economy

“Generating and trading industrial data has become as important for the digital economy as oil has been for the “real” economy”.¹ Information, its production, distribution and use thereof is considered as a crucial pillar in modern economies and a key concept in modern day society. Consequently, the establishment of an information economy challenges the law and pushes legislators to take action in creating a legal framework which more efficiently accommodates the production, distribution and allocation of information, whilst at the same time dealing with information-technology inherent risks. In such a framework, property rights are of huge importance and can play a crucial role. Property rights over information are to be found in the areas of personality protection and intellectual property.² However, despite the data growth rate and its economic importance in the digital economies, the legal framework regarding the ownership, trade and access of data remains incompletely defined on a global scale.³ Commissioner Oettinger stated in 2015 that a first step in the EU strategy would be the creation of a legal basis which clarifies who owns what data.⁴

Personal data is generally protected through privacy law. However, evidence is clear that companies such as Facebook, Apple, and Microsoft, among others, are one of the most profitable companies today⁵, which have turned information management into a highly profitable economic activity, raising the question whether data subjects should not only be protected but also share in the profits. Viviane

⁴ As was said by Commissioner Oettinger: “Whereas the “EU lacks a data strategy” and “We need a virtual and digital law of property that includes data”, see: Interview with Commissioner Günther Oettinger, ‘Speech At Hannover Fair’ (2015), <http://www.compliancedigital.de/download/123622/zfc_20150202.pdf> accessed 11 April 2017.
Reding, former vice-president of the European commission, estimated this value for European personal data up to an average of 315 billions euros in 2011 and with the potential to grow to nearly €1 trillion annually in 2020⁶. Given this forecast, an important question arises: whether, or not, individuals (or hereafter: “data subjects”) should have economic rights in data relating to them, or even if they should “own” this data.

1.2. Structure of the paper

Before answering this main question, if individuals should have property or economic rights over their personal data, an analysis involving advantages and disadvantages will be made on whether or not this is possible and to what extent.

After establishing up to what extent it is possible to have property or economic rights in personal data, the research focusses on the question whether or not individuals should be able to have ownership, economic rights over the data, or any rights at all in relation to the same. To answer the research question it is important to clearly define important terms such as “data”, “ownership” and “economic rights” in order to clearly acknowledge the limits of this exploration.

Having set the boundaries to this research by clearly establishing the definitions, this paper will focus, first, on whether it is possible for data subjects to have economic rights or ownership in their personal data. After determining the possibility of owning personal data, the question is treated whether data subjects also should have such economic rights in or ownership over their personal data. In order to do so, arguments both in favour and against ownership of personal data shall be discussed and weighed against each other in light of principles of property, economics, ethics, philosophy, (intellectual) property law, and human rights law, wherein arguments can be found.

1.3. Explanatory definitions

1.3.1. Information and data

There is a tendency to use the words information and data interchangeably in everyday parlance.⁷ Yet, there are differences which are important for the understanding of this discussion.

“From a legal perspective the “nature” of information is far less important than the question of how information is treated as an object in everyday life and - closely associated with this - how information is treated as a commercial good or commodity”.⁸ Nevertheless it is important to elaborate on the meaning of information in this context to some extent, in order to understand the subject matter of the research.

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The starting point in this paper is the division of information in three categories, based on Benkler’s research: (i) semantic information level, (ii) syntactic information level and the (iii) physical information level. This distinction leads to another distinction, namely the distinction between the content layer, the code layer and the physical layer, which are connected to each other. Text can carry meaning (semantic), and be printed. In this example the semantic layer is carried by the syntactic layer, and the latter is carried by the physical layer. From a general and practical perspective and from that of an IP lawyer, these distinctions can also be applicable to the definition of information as an object, providing a useful tool to pinpoint types of information that can be treated as an object.

Even though the classification of information is explanatory at this stage, it already adds a minor argument in the discussion on whether data subjects should be able to own their data. Being able to exercise an exclusive right on the use of semantic information (for example, specific knowledge) covers a broader range of exclusive competences than, as compared, having such right over syntactic information (for example, a text). In this case, the text is just one possible way to affix certain knowledge, whereas there are a multiplicity of other options left open. In short, the public domain suffers more from the notion of semantic information as property as compared to syntactic information as property. For this reason, a stronger justification is required for creating a property right over semantic information. Furthermore, the public domain suffers even less from real property rights, assigning structural information, as compared to property rights on syntactic information. In that case, the information is not a public good as it is identical with the physical embodiment. Hence, assigning such structural information actually solely means assignment of already rival and exclusive competences. In fact, legal allocation of exclusive competences takes place, rather than legal creation of new exclusivities. As can be seen, mentioned distinction carries consequences both for construction as well as justification of property rights over the categories and possible contractual exchange of the information involved.

Data, on the other hand, can be understood as encoded information, whereas the information is encoded in a manner that machines can process it. After processing, information can be derived from the data. As a starting point, data is raw. This raw data has not yet been interpreted, processed, shaped or organised. Shortly, computers can use data, whereas information is required by humans: information provides for context and meaning whereas data can be considered as a building block. Data consists generally of “zero’s” and “one’s” which humans cannot read.

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10 Which means the information carries a certain meaning (e.g. the news or contents of a book).
11 Which are signs and their mutual relationship (or information that is represented through a number of signs, e.g. the handling of a file or text).
12 Information that is caught on e.g. a physical carrier, or in a broader sense, where a physical object’s structure represents the information (e.g. a printed book or CD); See Herbert Zech, ‘Information as Property’ (2015) 6 Jipitec p. 194.
14 Ibid, p. 196.
15 Ibid, p. 197.
1.3.2. (Personal) Data

In order to get a better understanding of the implications involved, it is important to clearly define the term “data” in light of this research. In this paper “data” therefore refers to personal data, unless indicated differently. Personal data is defined in line with the European Union General Data Protection Regulation (hereafter: “GDPR”)\(^{17}\), which defines personal data in Art. 4(1) as "any information relating to an identified or identifiable natural person ('data subject'); An identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one or more factors specific to his physical, physiological, mental, economic, cultural or social identity.” In this research, the definition is technology neutral: the way of storage of the data is irrelevant.

1.3.3. Economic rights and/or ownership

From an economic perspective, it has to be established that legal ownership of information, ought to be constructed according to the bundle of rights theory. According to this theory, property rights come in bundles of rights which may be fragmented among various partial entitlement.\(^{18}\) Replacing the outdated theory of property set out by Blackstone, the bundle of rights theory had the advantage to deal with the complex scheme of property on land.\(^{19}\) When applied to - for example - a piece of land, several rights can be identified such as the right to possess, to exclude others, to transfer or to use.

Because ownership carries out a complex set of rights attributable to various entities, the bundle of rights’ theory, or “bundle of sticks” has traditionally been put forward in order to enable the assignment of those rights.\(^{20}\) If the theory was originally applied to tangible property in order to assign the rights of possession, control, exclusion, enjoyment and disposition of land it has been recognised as a standard concept that can be applied to the concept of property in general.

As mentioned above, data subjects have a bundle of rights on the de facto held data, as, e.g., the right to store, use and sell them, as well as the right that it is not destroyed, misappropriated, or compromised by others\(^{21}\). In this regard, it is possible to refer to this as “ownership” of data, bearing in mind that this form of ownership would not involve any exclusive right. Thus the possession and use of personal data can be protected without the traditional right to exclude found in tangible property or intellectual property.

The terms property rights, economic rights, and entitlements are often treated as nearly interchangeable synonyms. But the reality is far more complex. As Wiebe observes, there is a shift...

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\(^{17}\) Regulation (EU) 2016/679 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) [2016] OJ L119/1.


from data protection, as a bundle of rights to use, to data as remuneration. He mentions the “acknowledgment of data as an economic commodity constituting its own category of remuneration”\textsuperscript{22}.

Companies such as Google and Facebook show a clear example of free flow of data as a business model and the absence of economic rights arising.\textsuperscript{23}

That said, even if the conclusion can be drawn that personal data can be owned it does not resolve the issue of determining who actually owns it. Is the individual wherefrom the data originates the owner, or the entity that collects, analyses and disseminates this data? This question will be left for future research.

Noting that personal data increases in value when combined with personal data from other data subjects. Thus one individual’s claim to ownership would result in a rather weak revenue.\textsuperscript{24} Accordingly, there is no certainty that personal data automatically results in personal ownership.

2. Advantages and disadvantages of granting ownership or economic rights to individuals in personal data.

2.1. Advantages of granting ownership or economic rights to individuals in personal data

The main idea of granting ownership over personal data is for a purpose of control, but in the sense of understanding control as a tool that deter third parties to misuse the personal data. The advancement of technology, and especially the internet, makes people feel that their privacy is increasingly compromised. Granting people said control over their personal data would give individuals an opportunity to achieve respect for their privacy against predators of information. The propertization of personal data would be a useful tool for achieving self-determination of personal information. Self-determination means individual freedom, a value that is a pillar of western civilization. This could only be achieved through a special legal framework.\textsuperscript{25}

Another challenge imposed by the management of personal data is responsibility in the misuse or handling of the data. Granting rights on the personal data would generate \textit{erga omnes} effects that would make any person interested in obtaining personal data responsible for the handling of this data, or if they obtained the data without the rightholders’ authorisation.\textsuperscript{26}

\textsuperscript{22} Andreas Wiebe, ‘Should we ‘own’ our data ? - Economic rights in personal data’ (18th EIPIN Congress Munich, 2017).

\textsuperscript{23} Wolfgang Kerber, ‘A New (Intellectual) Property Right for Non-Personal Data? An Economic Analysis’ (2016) 11 GRUR Int, p. 989 - 999 <https://ssrn.com/abstract=2858171> accessed 11 April 2017, p. 13. “Google and Facebook, which have collected huge amounts of data about their users, do not sell these data or grant direct access to them for a fee. Instead they use these data for the service of targeted advertising, i.e. they offer -based upon the analysis of their data - a superior service for advertisers, one which cannot be provided by competitors without these data.”


\textsuperscript{25} Nadezhda N. Purtova, 'Property Rights In Personal Data' (PhD, Tilburg University 2011), p. 246.

\textsuperscript{26} Ibid, p. 251.
Another reason for which it is convenient to recognize personal data as a property, is because it is directly related to the identity of the data subject. Given that personal data reflects a person's identity and even reveals personal aspects, it is inevitable that the discussion on this topic enters into the field of human rights and not just from the perspective of privacy issues. The fact that personal data enters into the area of fundamental rights poses a major challenge to the economic activities of companies that handle personal data as part of their business core. Besides being problematic to companies, personal data also poses challenges for states and their legal systems as they must guarantee the observance of fundamental rights derived from personal data such as privacy and personality defense.

Yet, recognizing ownership over personal data and establishing a special legal framework would also open up an opportunity to resolve disputes related to this issue of personal data more easily, extrajudicial transactions, compensation for damages or even a simple apology could save time, resources to individuals, companies and even states. However, if conflicts related to personal data become a subject exclusively of human rights, the solution of any controversy is and will be more complex. This is mainly because fundamental rights are not negotiable, the states are obliged to guarantee them. They have to assume an active role: any violation must be punished and must be carried to the final consequences. Failure to observe or mismanage the administration of justice in the matter of personal data can be brought to supranational levels which means long and complex judicial processes.

This discussion also opens another interesting aspect of recognizing property over personal data, and its exchange value, that is its economic value. People in general are more careful when managing, or they find themselves in situations in which they are exposed to something that belongs to another person, specifically to private property. Respect for private property is given among other things because any damage to the property carries a consequence usually of a pecuniary nature. Also because society is aware that the law protects private property and, apart from monetary reparation, they could also face other kind of sanctions like criminal sanctions. In other words, recognizing ownership of data subjects in their data generates a deterring effect to any potential offender. Therefore, the ownership of the data is a first defense for the protection of personal data. Consequently, the damage caused by the infringement of the private property right of our personal data would mean the demand for damages, which could influence upon individuals to assume a more proactive role in the exercise of rights over their personal data.

Certainly, the right of ownership over data could impose undesirable barriers to the flow of information, which is useful for the dynamism of the economy. But it could also be argued that it is the technological development itself the one that creates more devices to acquire data in non-traditional and conventional ways, being one of the reasons why Data Mining (the process of acquiring information) has become a very aggressive and invasive activity. One more time, the right of property could provide the possibility of establishing clearer rules for the control of Data Mining, that even could encourage technology developers and Data Mining practitioners, moved by the concern of infringing property rights, to take an active role in the promotion of a legal framework that guarantees the rights over personal data. Therefore, having clear rules regarding the acknowledgement of ownership over personal data would become in an incentive of the economy instead of a barrier.

Similar to the rights of exclusion derived from the rights of Intellectual Property, the right of ownership over personal data can become an incentive for competition and innovation. Recognizing

27 Andrew M. Wilson, Lehana Thabane and Anne Holbrook, 'Application Of Data Mining Techniques In Pharmacovigilance' (2003) 57 British Journal of Clinical Pharmacology
ownership over the data offers economic benefits that favor the dynamism of the economy. On the other hand, it can be a control tool for the management of personal data. Another positive aspect of recognizing ownership over personal data is that it would facilitate the resolution of legal disputes over these issues through extrajudicial agreements or other means of alternative dispute resolution, which means saving resources.

2.2. Disadvantages of granting ownership or economic rights to individuals in personal data.

Ownership of data is mainly motivated on the basis that data subjects want and need to have control over their personal information as set out throughout the chapter of advantages. However, having this control does not necessarily mean that a new property right or a legal system thereof needs to be created. This is why analyzing the disadvantages is important in order to understand what data ownership would imply both to legislators and data subjects and therefore, understand that owning personal data does not entail them having more control, or even so, more protection.

Prior to establishing the disadvantages of data ownership, it must be borne in mind that one of the main principles in IP Law is the fact that no exclusive rights should be granted on “semantic information, therefore there are great concerns in the legal discussion that an IPR on data might also protect the content of information and therefore monopolize information.”28 On one hand, there is protection through patent law which protects inventions and incentivises innovation, and, on the other hand, copyright protects creative works.

With the above in mind, in the first place, the lack of a clear legal framework can be discussed as a first disadvantage for data ownership. Furthermore, the IP system as we know, is a numeros clausus type of system, which means that the schemes of protection are already delineated and established, outside of which the use of information is free.

The lack of legal framework also leads to the conclusion that, as mentioned throughout the introduction, economies challenge legislators to take action in creating a right. And therefore also to “accommodate”, as much as possible, the production and distribution of information. This is very difficult, and, consequently this is the reason why the debate of personal data is one of the biggest discussions today at an international level.

Data subjects already have protection through existing schemes of IP like copyright and the database sui generis right29, therefore, the creation of a new data right over personal data could overlap and conflict with both and - due to the broadness of personal data - it would be very difficult to implement.

Another disadvantage consists in the difficulty that legislators face due to the fact that since “data is the state of information during processing, storage and communication”30 data protection law requires of physical fixation, and if legislators would take data as the protected subject matter, what

29 In fact, copyright protects works created by humans which cannot be devoid of any creativity or individuality, on the other the sui generis right created ad hoc by the EU legislator to protect the database maker’s investment covers a far more interesting and dynamic field.
you would clearly be protecting is that part of the communication process where information is in the state of data as the own definition above establishes.

In view of the above, since data comes to us in an unstructured form and lacks of physical fixation, it cannot be easily put into structured tables with rows and columns, thus, it is an intangible good which cannot be owned nor structured in a protectable way\textsuperscript{31}. Consequently, seen as the protection is hardly achieved, the enforcement of the same is a complicated aspect of the matter, which still has not found its solution both nationally and internationally. For many years the debate in ICT \textsuperscript{32} concerned unqualified indirect protection of data, closely connected to the carrier (i.e. in contracts, for instance information is treated as property and valued much higher), which does not occur anymore as cloud computing has entered in the ICT world \textsuperscript{33}.

It seems therefore that a new property right could be an impediment for innovation and no clear future for personal data ownership can be seen yet. However data can certainly be controlled and protected through different ways like, for instance the free flow of data. This latter in fact, would allow common benefits for everyone and seems to be a much more reliable way to keep the flow within a policy of open innovation instead of developing a new legal framework which would only lead society to legal uncertainty and to monopolize information, creating therefor impediments for the free flow which has a crucial role in the digital economy.

3. Conclusion and observations

Striking a balance between the multiple possibilities of data ownership and understanding how a new legal framework would fit in the already existing IP protection schemes (i.e. copyright law) draws to the conclusion that, no economic rights or ownership would arise. And most importantly, it seems that no IP right can be created in order to protect said data. It has to be established that data therefore is unlikely able to be owned as such. As a matter of fact, ownership of data would only limit access to the latter. The European Commission’s approach on industrial data seems to be more inclined on preferring general interests over private ones, by allowing a free flow system and having an open data concept, whereas the Commission’s view on personal data is in favour of its protection through the creation of a new right in combination with privacy protection.

The free flow system appears to be less conflicting and most beneficial for data holders with big companies such as Google and Facebook that are clear examples, which only generates equal benefits for the collectivity\textsuperscript{34}.

Regardless of how this field will evolve in the future, it is certain that questions, barriers and problems will arise. The question if people can and should own their data is just the beginning rather than the end of countless academic and practical discussions. If the ownership of personal data by the data subject will indeed be possible in the future, how will the data market evolve? And how will data subjects commercialize their data? Can this be done through a license or a transfer of ownership and

\textsuperscript{31} The only protection achievable for structured data (and not data subjects) is the actual layout of a database, established in the EU database directive.

\textsuperscript{32} ICT stands for Information and Communication Technology.


\textsuperscript{34} The benefits for the collectivity would result in the absence of economic interests in personal data (both on its actual creation and consequent trade) hence more freedom for the internet users’ community in opposition to the introduction of more restrictive laws which would only lead to further confusion and minor flexibility of the use of internet.
up to what extent? How could the subject matter of such transfer, or license, be determined? It will certainly be difficult to distinguish what portion of the data would fall under the agreement.

Another interesting question that passed the venue of this research is the ownership topic and who will own what, in cases where there are multiple data gatherers and there is a data subject. The data gatherers invest in obtaining data through all kinds of means, but obviously the data subject is the source of the data. Will there be split ownership? The fact that it is hard to distinguish the subject matter regarding personal data (due to its intangibility), brings forth a lot of these questions.

Hence, ownership or economic rights in personal data may not be the most feasible option, even if possible at all. Could a stronger privacy regulatory framework offer solace? Arguably, this can hardly be the case. One might argue that in the case of economic rights, ownership, or even by strengthening privacy regulations, society, as a whole, and individuals are unable to comprehend what happens to their data downstream. Also, due to the large amount of information (and data) that exists, it becomes very hard to accommodate and allocate it in such a way that data subjects can have control over the same.

Conclusively, as the concept of data is not specific enough and therefore hardly qualifiable for becoming (intellectual) property subject matter, the research question should be answered negatively. Legislators and society are not ready.

“Big Data is really about big questions”

- Matt Young, TechWorld
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