

THE MATERIALITY OF DATA AS PROPERTY

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This Post is the sixth in a new Frontiers series that critically explores the connection between international law and emerging technology, featuring the writing of scholars from a variety of disciplines affiliated with the Institute for Global Law and Policy (IGLP) at Harvard Law School.

Today, we can barely remember a time when data was not thought of as a thing, both in a rhetorical sense and as something endowed with its own materiality. Yet now, it is already considered to be the new oil. Seeing data as an object of trade also connects to broader shifts in production and business models—from value chain orientation, to value networks, and, in its most popularized form, platform-based business models. In this shift, both in relation to production and in relation to the organization of economic value creation, data is understood and exploited as an economic resource. Such exploitation poses new questions for law. This is especially so because data is pursued as a capital asset in different and new ways, as compared to the currently dominant ways of conceptualizing things in general and property specifically through law.

In this article, I will examine some of the specificities of how data is being actively formed into a separable object, as well as an object of property. The aim is to denaturalize the stage that legal research and practice may find itself in when encountering the effects of data as a business asset—for example, by re-erecting boundaries to protect individual privacy. I will subsequently argue that data, just like other objects of property, did not become an object that could be

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captured as property alone. Instead, I will argue, data is consistently dematerialized and produced in order to be captured in ways that make it seem to be a coherent object for the economy, as well as law.

In doing so, I will follow what can broadly be described as a new materialist stream of theory. New materialist theory is often described to include many recent theoretical novelties where matter is foregrounded.¹ Examples of such streams are object-oriented ontologies and new realisms.² The stream of new materialist theory followed here is, however, the new materialism developed through and after Gilles Deleuze and Félix Guattari.

The significance of this stream of new materialism is that it combines a new focus on how matter comes into being with a critical endeavor to visualize which forces produce such materialization.³ To put it simply, when new technologies are invented, one needs to be able to outline how they come into being and for whom. The question of how a technology materializes and which effects it has on society in a wider sense is therefore a vital new materialist question. In new materialist research, this has been expressed as a need to find ways to visualize how matter comes to matter.⁴ Research relevant to opening up matters of digitalization from a new materialist angle has been carried out in media studies, for example.⁵

¹ See, e.g., RICK DOLPHIN & IRIS VAN DER TUIN, *NEW MATERIALISM: INTERVIEWS & CARTOGRAPHIES* (2012).

² For more on the similarities and differences between new materialist streams from the perspective of jurisprudence, see ANDREAS PHILIPPOPOULOS-MIHALOPOULOS, *SPATIAL JUSTICE: BODY, LAWSCAPE, ATMOSPHERE* 3 (2014).

³ For an example of such theoretical work based on Gilles Deleuze and Félix Guattari's philosophy for our current conditions, see ROSI BRAIDOTTI, *THE POSTHUMAN* (2013).

⁴ See *id.*; KAREN BARAD: *MEETING THE UNIVERSE HALFWAY: QUANTUM PHYSICS AND THE ENTANGLEMENT OF MATTER AND MEANING* (2007); Karen Barad, *Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter*, 28 *SIGNS* 801, 803 (2003).

⁵ JUSSI PARIKKA, *A GEOLOGY OF MEDIA* 1-28 (2015).

This article's emphasis on legal theory provides an example of how one can trace the materialization processes of digital phenomena as a shift in the balance between personhood, intellectual property rights, and law.⁶

The aim is to formulate a more radical starting point than other recent focuses on privacy or regulations of "personal data." This point is to treat data as something that does not even need to have its own materiality. Subsequently, it is useful to compare data with oil—what would happen if oil stayed in the ground and thus did not become an object of property at all? The first question following new materialist theory therefore is: how can one theoretically show that data came from somewhere and subsequently did not need to be treated as an object of property at all? I argue that this is an important starting point from all perspectives of regulating data, whether one finds privacy laws pertinent or not, because it sheds light on what has already been compromised when we get to such a state. When personal data become part of regulation, the much bigger market that feeds on data as an object of trade is already there. Privacy laws can subsequently, at best, stop some of the minor intrusions that have already occurred. The materiality of data as an object is not questioned. The reason for this is that the commodification process of data in itself dematerializes it from the so-called natural person from which it is derived.⁷ The same also applies when data is "extracted" from objects and spaces.⁸ Individual rights, such as privacy rights, can only limit certain uses of said data, not the exploitation and trade in the data itself.

⁶ JANNICE KALL, *CONVERGING HUMAN AND DIGITAL BODIES: POSTHUMANISM, PROPERTY, LAW* (2017)

⁷ See, e.g., Jannice Käll, *A Posthuman Data Subject? The Right to Be Forgotten and Beyond*, 18 *GERMAN L. J.* 1145 (2017).

⁸ C.f. NICK COULDRY AND ULISES A. MEJIAS, *THE COSTS OF CONNECTION: HOW DATA IS COLONIZING HUMAN LIFE AND APPROPRIATING IT FOR CAPITALISM* 88-91 (2019)

The question I pose here subsequently forms an attempt to instead start from a more fundamental question of how to make such materialization processes of data as property visible. Or in other words: which discourses contribute to the understanding of data as an object, or even as suggested more recently, a raw material?⁹

This is naturally a very broad question, and this short article will only offer brief answers. However, the aim is to re-focus the idea about data as a separable legal object by pointing at questions of materiality and differences in relation to data, that to this stage are more or less lost to legal conceptualizations of data. By this, I further argue that a reconsideration and possible rematerialization of data, for means other than the market, demands ways to identify and avoid the discourses and processes utilized for market purposes. To achieve such a rematerialization, I subsequently here retrace some of the ways that data is produced as a conceptual category under advanced capitalism, and some of the broader challenges that law faces if a critical intervention is to be carried out.

I. DEMATERIALIZATION

“...a defining characteristic of the present cultural moment is the belief that information can circulate unchanged among different material substrates.”¹⁰

Bodily disconnect is a prerequisite for considering data as an object separate from persons. Such disconnection, or dematerialization, is continuously produced in modern cultural narratives where the mind is considered to be separate from the body. The so-called Cartesian split makes for a pervasive

⁹ See, e.g., NICK SRNICEK, PLATFORM CAPITALISM 39 (2016)

¹⁰ N. KATHERINE HAYLES, HOW WE BECAME POSTHUMAN 1 (1999)

philosophical basis for dividing the human mind from the body to prove that existence and superiority is based just on the capacity of the human mind. In more modern narratives, the mind takes on an even more expansive independent existence through sci-fi narratives where the mind is turned into a substrate that can circulate freely on its own, as N. Katherine Hayles argues.¹¹

In the cultural sphere of the law, the concept of the legal subject sustains the old modern idea of the split between mind and body in several instances of the Western legal order. Legal subjectivity is in its simplest form founded on the idea that when someone may be considered as a human, that person's actions can be transformed to produce legally binding commitments. When such human consciousness is lacking, contracts can be disregarded and other otherwise illegal acts can be left unpunished or ignored.

A similar tract can be found in the general ideas of intellectual property law. All intellectual property laws build on the premise that knowledge can be separated from the human mind and controlled (while limited in time, space, and other embodiments). An invention is here understood as a dematerialized form from the human mind that can be patented or copyrighted. In the ensuing debates to delimit proprietary control over code (which was made into a copyrightable work), famous narratives furthermore include popular slogans such as: *information wants to be free!*¹² Yet, what is constantly reiterated also in these narratives is that information, indeed,

¹¹ See *id.*

¹² The expression is almost impossible to give one source to, as it is used widely online and functions more as a meme or general critique of intellectual property than anything else. However, the expression has been credited to Stewart Brand for using it at a conference for hackers in 1984. Steven Levy, *Hackers at 30: "Hackers" and "Information Wants to Be Free"*, WIRED, (Nov. 21, 2014), <https://www.wired.com/story/hackers-at-30-hackers-and-information-wants-to-be-free/>.

has the capacity to be free. In this way, both knowledge and information are also continuously dematerialized in more recent discourses in law. The latest move in such dematerialization of knowledge and information is then to consider data as something that is not connected to something material. It is a resource that can be “extracted,”¹³ or it is an object that can belong to a data subject (while of course being balanced against the “free flow of personal data”).¹⁴

In a similar manner, the dominant narratives of data, including those considering data as a raw material, tend to disconnect data from other types of physical matter—such as geological ones.¹⁵ Subsequently in the construction of data as an individual object, it is dematerialized both from the human mind, as well as from other processes that are required for its production. However, as Jussi Parikka points out, the geology of data can be detected from the fact that cloud computing has very little to do with the cloud itself and everything to do with keeping servers cool.¹⁶ Abstract metaphors of the seemingly immaterial kind—the data is in the cloud—can in this way be reconnected back to the way that data and the digital economy are thoroughly dependent on so called natural resources, just like any other commodity. When data is pictured as a resource that can be extracted in itself, such infrastructures necessary for its objectification are made invisible. This dematerialization of data is furthermore picked up through law when law related to data does not deal with, for example, the exploitation of minerals or labor.

¹³ SRNICEK, *supra* note 9, at 40.

¹⁴ Regulation 2016/679 of Apr. 27, 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), 2016 O.J. (L 119) 1 (EU) [hereinafter GDPR].

¹⁵ See generally PARIKKA, *supra* note 5.

¹⁶ See *id.* at 24

II. COMMODIFICATION

Dematerialization processes, where data becomes a separable object from the human, precedes, as well as are entangled with, how data is turned into a commodity. As Karl Marx expressed in *Capital*, the separation of something into a commodity is connected to perceiving the commodity as having vitalist capacities.¹⁷ However, commodification is still distinct from dematerialization—it is the stage at which something becomes coded as property in law. This coding, in its simplest understanding, makes it possible to trade with an object and convert it into capital value. The exact expressions of data commodification are not obvious, as the legal concepts of data commodification are still being created.

However, data is also already commodified through ever-expanding intellectual property laws, as well as through contracts packaging pieces of data into pieces of trade. In intellectual property law, we have by now gotten used to thinking of computer programs—built up on code—as objects of copyright, and genetic information as something that can be extracted and captured as a patentable invention, as long as enough creativity can be invented so as to fulfill patent law’s criteria of moving the object from a discovery to an invention. The creation of data as an object of property is however also established through contracts, where companies in boilerplate contracts one-sidedly stipulate that individuals agree to data collection to access the service being offered. Property in data also comes about discreetly when it is stipulated that the free flows of data need to be weighed against privacy rights of data subjects.¹⁸

Subsequently, in the commodification of data, it is further distanced from the processes that are required for its

¹⁷ KARL MARX, *CAPITAL* 46-47 (Wordsworth Classics 2013) (1867).

¹⁸ See GDPR, *supra* note 14, at 3-6.

production. This implies a flattening out of differences between the objects that may be considered as data, through law. If we think about copyright again, there is generally no difference made in law between whether a literary work is of core interest to the society and its cultural bindings, or if it is a work that no one will ever open. Copyright is granted to both works equally. This implies an equalizing between these two types of works, as they are made into objects of intellectual property.

Dematerialization of data is furthermore a process that should not necessarily lead to legal conceptualization of data as a property object. As is widely known, there are elements that have become dematerialized from personhood, but are not considered property. Examples of such objects include aspects related to the human body such as organs, which are not necessarily traded. Intellectual property law also teaches that objects can be private property first, but then return to a state of communal holding, such as when works pass over to the public domain as intellectual property rights expire. When data is treated as an object of property, just as it is not placed under any clear property category, there are no such specific ways of returning that data to a non-property state.

III. AFFECTIVE CONTROL

Another characteristic of data as a possible form of materializing property is that it is endowed with a capacity which is at least in theory unknown to traditional property objects. This characteristic can be described as “affective control.”¹⁹ While humans often perceive physical things and property objects as passive, their liveliness in the market sphere is

¹⁹ Sarah Keenan puts forward a similar position of how property in general can be understood as *holding up bodies as space*, which implies a theory of affective belonging between bodies as a form of control rather than picturing property as ownership over a specific thing. SARAH KEENAN, SUBVERSIVE PROPERTY: LAW AND THE PRODUCTION OF SPACES OF BELONGING (2014)

produced through marketing, including branding. Data, however, is an object that can produce and govern effects at the same time. This is apparent in the way that data is often collected to be repackaged as information about the consumer's behavior in order to further nudge that behavior in a certain direction. As Brian Massumi argues, this type of person-product-marketing continuum is characteristic of an intangible economy where "[l]ife movements, capital and power become one continuous operation – check, register, feed-in, processing, feedback, purchase, profit, around and around."²⁰ Furthermore, digital techniques facilitate how the product and the marketing sphere can converge. Not only are the feeds of social media personalized after one's "personal" data, but influencers, who are neither just private persons nor strict commodities or advertisers, populate digital spheres to create both commercial and political effects.

Subsequently, data as an object has a clear capacity to transgress typical ideas about property objects. Data's status as both an object and a means for affective control will provide novel legal challenges.

IV. REMATERIALIZATION

The recent discourses on bringing back power to citizens over "their" data in the form of personal data protection could be understood as an answer to the dematerialization of data from those who produce it. The forms of law enabling such rematerialization, such as the General Data Protection Regulation ("GDPR"), can furthermore be understood to construct a legal concept that makes this possible. However, the question will still be whether such concepts can disrupt the processes of dematerialization, commodification, and affective control that currently make data into a very specific form

²⁰ BRIAN MASSUMI, POLITICS OF AFFECT 28 (2015)

of property (or property-to-be). Some will answer the question in affirmative, pointing at the strong potential that lies in privacy rights under, for example, the GDPR.²¹ However, in relation to such quests for regulation of data privacy, we need to remember that this type of data regulation significantly iterates already taken for granted concepts of persons and things vested in the dominant concepts of law. As Roberto Esposito points out, entrance of objects “intermingled with human elements, solidified and made interchangeable for others,”²² as “people are in their turn traversed by information, codes, and flows arising from the continuous use of technical objects,”²³ implies that a crack between persons and things might be appearing, putting into question fundamental assumptions about modern law and society.²⁴ A reification of personhood in the form of, for example, privacy rights as a boundary against things or commodifiable objects, may therefore only approach on a surface level the more fundamental challenge the digital economy poses.²⁵

Subsequently, data, even when pictured as an object, has to be understood as much more pervasive in the way that it becomes both the prerequisite for, and result of, new materializations of our life-worlds. Accounting for such aspects of materiality of data is a primary role for law if the aim is to provide a response to the continuous dematerialization and commodification of information. A rematerialization of data as a critical response to the current technological and economic trends that run through existing forms of law can therefore only imply a partial change in how data is produced as a property object. A more critical form of rematerialization needs to be able to understand both the prerequisites for the

²¹ See GDPR, *supra* note 14.

²² See ROBERTO ESPOSITO, PERSONS AND THINGS: FROM THE BODY'S POINT OF VIEW 136 (2015)

²³ *Id.*

²⁴ See *id.* at 3

²⁵ See ESPOSITO, *supra* note 22.

production of data as well as its mechanisms for producing affective control.

V. CONCLUSION

Ironically, the idea that data is the new oil might not be a bad metaphor from the perspective of critical studies of law. Just like oil, data is perceived of as something that is merely out there to be extracted for the human good, producing new materialities of value for society. In critical hindsight, we know that oil has carried both colonialist and destructive effects on life. In the same way, data as an object may further the end of what we consider as human subjectivity by producing a posthuman life-form as persons and things become increasingly mixed together.²⁶ As a possible property object, data furthermore has a pervasive capacity to produce positions of control over thinking as well as life, which may render legal ideas of the sovereignty of the free individual obsolete. The affirmative aspect of this development is that it may help us reconnect with those that suffered from preceding forms of colonialism and capitalism; that is, those who were previously considered non-human, and those who still remain as such.²⁷

²⁶ See generally KÄLL, *supra* note 6.

²⁷ See BRAIDOTTI, *supra* note 3, at 1; DONNA HARAWAY, SIMIANS, CYBORGs, AND WOMEN: THE REINVENTION OF NATURE 178 (1991)