

Data, ordinary merchandise?

Henri Isaac,

PSL Université Paris-Dauphine, Dauphine Recherches Management

Abstract:

Many economic agents see data as the 21st. century's new raw material. The catchment, possession and use of data are, accordingly, a new source of wealth, evidence of this being the success of digital firms. Owing to their characteristics however, electronic data are not ordinary merchandise. Besides, the use and exchange values of data depend on the legal framework with its regulations about producing and exchanging data.

The world is being digitized... "datafied", a process that has continuously expanded and now covers nearly all human activities. The proliferation of data is generating a new economy whose agents are grabbing this new raw material (data) to produce ever more digital services. Data are becoming the new merchandise of this 21st century.¹

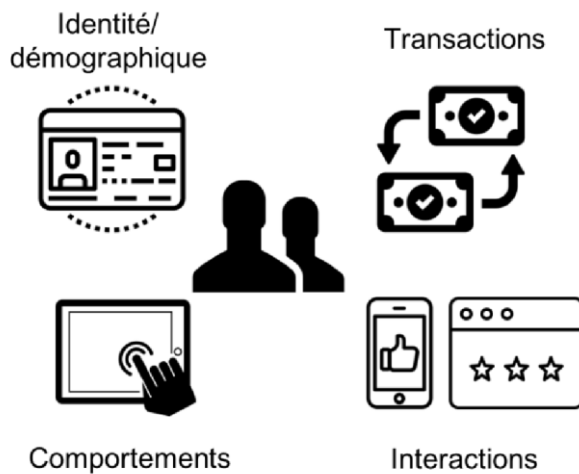


Figure 1: Expansion of the scope of personal data during the digital era

Generating, capturing, owning and processing data are seen as sources for creating value. As a consequence, many people consider data to be a merchandise, a good for transactions, a source of wealth. Some companies, such as Datacoup, are offering users to commercialize their personnel data (ELVY 2017); others, such as Dawex, are organizing a data marketplace where firms buy and sell sets of data; and still others, such as Wysker, are trying to monetize consumer data directly with advertisers.² Many economic agents now see electronic data as a raw material for the digital economy — a fact that most data brokers had already understood in the mid-1970s at the start of direct marketing (FTC 2014).

¹ This article, including quotations from French sources, has been translated from French by Noal Mellott (Omaha Beach, France). The translation into English has, with the editor's approval, completed a few bibliographical references.

² Respectively: <https://datacoup.com>, <https://www.dawex.com/fr/> and <https://www.wysker.com>

Owing to their characteristics however, data are far from being a merchandise like other goods. When we closely examine these characteristics, we notice that the production of data during the digital era often turns out to be an operation too complex for data to be placed under the concept of “commodity” (ISAAC 2018). Furthermore, it turns out to be much more complex to define the use value of data than of ordinary goods. Some pundits have even likened the production of electronic data not to a merchandise but to a form of work (ARRIETA IBARRA *et al.* 2017). Finally, data are subject to legal rules and regulations (personal data, open data), especially in Europe, that definitively place them outside the category of merchandise.

Data: Their use and exchange values

To consider data to be a merchandise, we have to indicate the concept of merchandise to be applied to them. Several definitions exist. Deleplace (1979) uses the concept of merchandise when “*something is the subject of a transaction on a market with three characteristics: a buyer, a seller and a price. The minimalist position: merchandise is ‘what is transferred from one individual to another in exchange for the money received’*”. This definition, like Polanyi’s (1983) “*merchandise is empirically defined as objects produced to be sold*”, makes it easy to understand why many data do not fall under the category of merchandise. In the digital realm, such data are produced without the purpose of selling them, since they are produced unawares to their producers. For example, the data from a cybernaut’s use of a search engine on an e-business website are not “data” for the cybernaut. However they are useful for a secondary processing of search queries for the purpose of revealing what the cybernaut wants to “consume” on the website. In this case, value is generated after the exchange; and the use value is set neither during the exchange nor by the producer.

The Marxist approach to merchandise is useful for inquiring into the status of data in relation to their use and exchange values. A commodity is a good that has both a use and an exchange value. The use value is in the good, and exists prior to using it. For Marx, people do not create a use value; it is completely in the good. Through their activities, people expose the good’s properties and make them more accessible. In no case does work create a use value; it discovers it. “*The utility of a thing makes it a use value. But this utility is not a thing of air. Being limited by the physical properties of the commodity, it has no existence apart from that commodity. A commodity [...] is therefore, so far as it is a material thing, a use value, something useful. This property of a commodity is independent of the amount of labor required to appropriate its useful qualities.*”³ In contrast, the exchange value is determined by the quantity of labor incorporated in the good. In other words, it is set in the sphere of production. However a product also has to have a use value for someone else: a social use value.

In the case of data, the transfer of ownership is not at all simultaneous with the utilization of their use value; nor is either of these actions performed by the producer of the data. This is, in fact, one of the characteristics of the digital era now under way: to personal data for the purpose of identification and transactions are added the data that, produced by digital procedures (on websites or via mobile apps, cameras, sensors, connected devices, etc.), are merely the tracks left by browsing and other activities. This has given rise to a “*marketing of traces*” (KESSOUS 2011). These data are mostly secondary technical data, a “*by-product of computing*” (Chapter 1 in SCHNEIER 2015). For the person at their origin, they have no direct value. Most of these data have a short useful life span. For instance, search queries on an e-business website or browsing data on the site leaves tracks that, when processed, describe the consumer’s behavior but only during the period while he/she is browsing the website.⁴ Their use value is, therefore, very limited in time —

³ Karl Marx (1872) *Capital*, Paris, 1872, part one, chapter one: translation from <https://www.marxists.org/archive/marx/works/1867-c1/ch01.htm>.

⁴ Their use value is very limited in time. In some cases, it is limited even more because it is expressed only during real-time auctions, as during online advertising in the case of programmed online purchases (ALARY & BALUSSEAU 2018).

even more so when it is formulated only during real-time auctions (for online advertising) via programmed purchases (ALARY & BALUSSEAU 2018).

Table 1

Typology of data production		
	Exists prior to transactions	Produced through transactions
Produced by users	The individual's identification data	Transactional data Data produced by users
Produced by the processes involved in exchanges	Contractual data	Industrial data (B2B) Browsing data Data on behavior patterns Data as a by-product

The crucial point is that, the use value of many data of this sort is produced after the exchange as they are processed, aggregated and made anonymous in order to be turned into a commodity for transactions, in particular on the digital advertising market where economic agents use their own databases and combine them with data from other suppliers and editors.

An analysis of the digitization of transactions brings to light the wide variety of types of data produced. As the table shows, there are data that exist, along with their use value, prior to any transaction: they have the status of merchandise. In contrast, many data (*e.g.*, the profile of a customer's purchase) are produced only during or after the transaction. The use value of such data is revealed only over time, even more so as artificial intelligence, which depends on sets of data accumulated over time, develops. This is obvious in the cases of self-learning algorithms (machine learning) or deep learning, which rely on an accumulation of a huge quantity of data to build decision-making models that improve automatically as they incorporate new data (ISAAC 2018). As a consequence, these data cannot be considered, under our definition, to be merchandise, since, at the time of the transaction, their use value might not even exist or, in any case, cannot be set; it is only revealed when the data are put to use.

As this economic analysis shows, many data cannot be considered to be merchandise. This conclusion is bolstered by the numerous legal arrangements that prevent us from considering certain types of data to be a commodity.

Legal systems and the value of data

Data fall under three distinct legal categories: personal data, open data, and, when the data are neither personal nor public, under the usual contractual arrangements for transactions.

Data in the first two categories are considered, on quite different legal grounds, not to be a commodity. Personal data fall under the law on persons; and open public data, under a specific set of legal arrangements that define them not as merchandise but as a common good accessible to everyone. The individual's personal data are not considered to be property; instead, they are a right pertaining to the person. This conception provides the grounds of the 1978 French Act on Information Technology and Freedom and the 2016 EU Regulation on Data Protection.

Under EU legislation, users have the right to demand that the collection and processing of their data be interrupted; and they now have the right to minimize the processing of their data, to take their data with them (the "portability" of data) and to be "forgotten". Citizens have the fundamental right to exercise control over their personal data, even though they allow a digital service operator to use them. This operator is not the owner of the data but the user subject to conditions. There is no transfer of property rights, and this exchange cannot be considered to be

an act of trade, a transaction, according to both the French Conseil d'État (2014) and the Conseil National du Numérique (2017). However data may be the subject of a transaction when the user gives his consent to the operator. Furthermore, personal data, when made anonymous and aggregated, may be the subject of transactions and thus become merchandise in a market with specialized operators, data brokers.

Furthermore, information does not fall under the laws on copyrights or intellectual property. It belongs, by default, belong to the public domain. Nonetheless, since the 1990s in Europe, laws on databases have gradually tended toward a proprietary conception of data. This conception has constantly advanced, widening the scope of commercial or scientific databases. It should be pointed out that data in isolation hardly have any inherent value and are far from being a commodity.

Much the same can be said about public data, which are, by default, open since the 2016 Act on the Digital Republic.⁵ This opening of public data is part of a broader trend. The Open Government Partnership (OGP) seeks to make public actions more transparent, in particular by making public data available in an automatically reusable format (CHIGNARD 2012). Although the licence associated with public data does not allow public administrations to sell them, third parties may use such data for commercial services. It is not therefore, possible to consider such data to be a merchandise.

What about the data, neither public nor personal, that are not currently subject to any regulation, for instance, the data related to farming implements, drones or connected devices and, more broadly, the raw data generated by machines?

Legal arrangements in Europe and France strictly limit the possibility of data becoming a commodity. Since this is not the case in areas with other legal systems, such as the United States, Europeans are trying to negotiate with Americans an agreement on a privacy shield for preserving the warranties attached to personal data when they are transferred to a different venue (MANNE, & SPERRY 2015).

Conclusion

As the General Data Protection Regulation (GDPR) comes into effect,⁶ demands are being raised for attaching a property right to personal data so that individuals may commercialize them, in particular on the big Internet platforms. Such demands for “patrimonializing” personal data consider them to be a merchandise like other commodities (DUCH-BROWN *et al.* 2017). They take no account of the nature of the data used by digital operators — data that, mostly by-products of other services, are produced in real time and have no direct value (neither as a property nor for commerce) for the user who produces them. In many cases, it would be possible to consider personal data and open public data to be a “fictive merchandise” as defined by Polanyi (AZAM 2007)].

⁵ French Act n°2016-1321 of 7 October 2016 for a “digital republic” available at <https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000033202746&categorieLien=id>.

⁶ The GDPR (General Data Protection Regulation): “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”. Available via: <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1478961410763&uri=CELEX:32016R0679>.

References

- ALARY J. & BALUSSEAU V. (2018) editors of *La Publicité à l'heure de la data: Ad tech et programmation expliqués par des experts* (Paris: Dunod).
- ARRIETA IBARRA I., GOFF L., JIMÉNEZ HERNÁNDEZ D., LANIER J. & WEYL E.G. (2017) "Should we treat data as labor? Moving beyond 'free'", *American Economic Association Papers & Proceedings*, 1(1), 5p. Available via: <https://ssrn.com/abstract=3093683>.
- AZAM G. (2007) "La connaissance, une marchandise fictive", *Revue du MAUSS*, 29, pp. 110-126. DOI 10.3917/rdm.029.0110.
- CHIGNARD S. (2012) *Open data. Comprendre l'ouverture des données publiques* (Limoges: FYP Éditions).
- CONSEIL D'ÉTAT (2014) *Le Numérique et les Droits fondamentaux* (Paris: La Documentation Française).
- CONSEIL NATIONAL DU NUMÉRIQUE (2017) *Avis du Conseil National du Numérique sur la libre circulation des données dans l'union européenne*, April, 8p. Available at: https://cnnumerique.fr/files/2017-10/AvisCNNum_FFoD_VFinale.pdf.
- DELEPLACE G. (1979) *Théorie du capitalisme: une introduction* (Paris: PUG-Maspero).
- DUCH-BROWN N., MARTENS B. & MUELLER-LANGER F. (2017) "The economics of ownership, access and trade in digital data", *JRC Digital Economy Working Paper*, 2017-01, 57p. Available at: <https://ssrn.com/abstract=2914144>.
- ELVY S.A. (2017) "Paying for privacy and the personal data economy", *Columbia Law Review*, 117(6), pp. 1369-1454. Available via: <https://ssrn.com/abstract=3058835>.
- FTC (2014) *Data Brokers: A Call For Transparency and Accountability*, (Washington, DC: Federal Trade Commission), 110p. Available via: <https://www.ftc.gov/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014>.
- ISAAC H. (2018) "La donnée numérique, bien public ou instrument de profit", *Pouvoirs*, 164 (special issue devoted to "La Datacratie"), pp. 75-86.
- KESSOUS E. (2011) "L'économie de l'attention et le marketing des traces", Actes du colloque *Web social, communautés virtuelles et consommation*, 79th international ACFAS congress, UQAM, Sherbrooke University, May, 11p. Available at: manuel.boutet.free.fr/Kessous2011attention.pdf.
- MANNE G.A. & SPERRY B. (2015), "The law and economics of data and privacy in antitrust analysis", *TPRC Conference Paper*, 39p. Available at: <https://ssrn.com/abstract=2418779>.
- POLANYI K. (1983) *La Grande Transformation. Aux origines politiques et économiques de notre temps* (Paris: Gallimard).
- SCHNEIER B. (2015) *Data and Goliath: The Hidden Battles to Collect your Data and Control Your World* (New York: W.W. Norton & Company).