

From Ownership to Access.

A Philosophical Perspective on the Rise of Access-Based Consumption

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Increasingly, consumers do not own the goods they buy, but are merely granted access to them by providers. It is important to evaluate this development from a philosophical perspective, and analyse how it will affect the values associated with the promotion of ownership. We present three criteria – efficiency, autonomy and sustainability – that can be used in such an evaluation and show how they can be applied to current access practices.

Introduction

Access-based consumption is on the rise. Increasingly, individuals do not own goods they use to satisfy their needs, but merely have access to them. In the so-called ‘sharing economy’ consumers use cars, bikes, houses, rooms, and household appliances owned by other individuals. Meanwhile, many companies adopt business models in which they lease rather than sell a product, be it a car, a refrigerator or even a pair of jeans.¹ In the area of product service systems, companies replace their product with a service, so that instead of buying a set of lamps, for example, a consumer pays for the ‘light hours’ she uses.² Furthermore, access-based consumption has become the norm in the digital sphere, where consumers don’t own the software programs, e-books, video games, music files and films they pay for, but are merely licensed to use them by providers. All these examples have in common that ownership is not transferred to consumers but remains with providers. These providers determine how a product can be used and under what conditions. The consequence is almost always that consumers have fewer rights than an owner of the same good

would have had. People who buy a license to an e-book, for example, are often not allowed to resell their book when they have had enough of it. Nor can they lend it to a friend, make back-up copies for their own use, or take the e-book with them when travelling to another country. In some cases, readers are not even allowed to write an embarrassing review, or the book will be taken away from them. These restrictions are in stark contrast with the rights of property owners. Hence, we can expect that this development will affect the values that are traditionally associated with the promotion of ownership.

In the history of political philosophy, property has been an important theme. Many philosophers have claimed that private property rights are critical for the development of individuals’ autonomy and/or for the efficient allocation of resources in society

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1 MUD Jeans, *www.mudjeans.nl* (March 20, 2018).

2 Philips Circular Lighting, *www.lighting.philips.com/main/services/circular-lighting* (March 20, 2018); A. van de Stadt, ‘Turntoo maakt de elektriciteitsrekening verleden tijd’, *Duurzaam Ondernemen* 2013, *www.duurzaambedrijfsleven.nl/energie/1394*.



Focusing on these values, this article aims to provide a *philosophical* perspective on the rise of the access-based economy. In the history of political philosophy, property has been an important theme. Many philosophers have claimed that private property rights are critical for the development of individuals' autonomy and/or for the efficient allocation of resources in society.³ Now that consumers come to own fewer products, we may wonder whether these key values are in jeopardy. We will not provide any conclusive answer to that question. Rather, our aim is to provide a tool – a set of philosophical criteria to help citizens and policy-makers evaluate what is at stake in the choice between ownership and access. It can be used both to assess isolated access practices and the aggregative effects of multiple access arrangements.⁴

The article is divided into three sections. In the first section, we introduce three normative criteria for evaluating property rights: autonomy, efficiency and sustainability. In the second section, we apply these three criteria – by way of example – to two areas where companies sell access arrangements to individuals, namely the digital economy and the area of product service systems.⁵ In the third section, we argue that, while under some circumstances the choice between access and ownership arrangements can be left to individual consumers, this is no longer the case when access arrangements become pervasive. As these arrangements come to dominate more and more of our interactions with our daily environment, it becomes necessary to evaluate and regulate access practices on a collective level.

Property in the philosophical tradition: a framework

As Honoré said in his seminal essay, ownership is 'the greatest possible interest in a thing which a mature system recognises'.⁶ In liberal societies, the greatest possible interest is captured in the institution of *full liberal ownership*, which consists of a bundle of legal incidents (rights, duties, liabilities and immunities) the owner has with regard to a thing. These incidents include the rights to possess, use, manage (i.e. to decide how it gets used and by whom), the right to derive income, and the right to the capital (which includes the rights to alienate, consume, destroy and waste). In addition, the right to security and the incidents of absence of term and residuary character ensure continuity of possession for

the owner. Finally, full owners have the incident of transmissibility (which allows them to bequeath their possessions), a liability to execution, and a duty to prevent harm.⁷

Lawyers and lawmakers have for a long time recognized that this bundle can be disaggregated and distributed over several persons: while one person has a right of use, for example, another person can have the other incidents.⁸ From this perspective, the phenomena now described under the umbrella term 'access economy' are not new: they represent just one more example of how property rights can be disaggregated. The normative question is whether disaggregation as we witness it in the access economy is a welcome development. This is not a judgment between two options, as some access practices may be more desirable than others. More precisely, then, the question should be: which bundles of rights may acceptably replace full liberal ownership with regard to which consumer products, and under which conditions?

The philosophical tradition of thinking about property is immensely complex, but it is fair to say that it includes two strands: an 'instrumentalist' or utilitarian strand and a 'self-developmental' strand

To answer this question, we first need to determine why full liberal ownership is considered valuable. The philosophical tradition of thinking about property is immensely complex, but it is fair to say that it includes two strands: an 'instrumentalist' or utilitarian strand – comprising inter alia the work of Locke, Bentham, and Mill – and a 'self-developmental' strand, with Rousseau, Kant and Hegel as major figures.⁹ Both traditions present an argument in favour of a society with widespread private property of the full liberal sort. For the instrumentalist tradition, private property maximizes overall social wealth or efficiency, while the self-developmental tradition sees the advantage of private property in terms of developing individual's capacities for autonomy. We discuss these two normative criteria below. We add a third criterion that has historically not been as prominent, but which is, in our view, indispensable to evaluate property arrangements in our current environmentally strained societies: sustainability.

3 Other philosophers have been critical about the contribution of private property (both in general or in the means of production) to social efficiency or individual autonomy. However important, this debate we must leave out of consideration here.

4 Throughout, we focus on property rights to consumer goods, i.e. goods intended for personal use, as opposed to productive resources such as land or factories. We also focus on the consequences of access arrangements for consumers, rather than for companies in secondary markets or libraries, even though restrictions on how e-books can be used and for how long, affect libraries as well as individual consumers.

5 We do not discuss peer-to-peer sharing practices, as these raise different concerns.

6 A.M. Honoré, 'Ownership', in: A.M. Honoré, *Making Law Bind. Essays Legal and Philosophical*, Oxford: Clarendon Press 1987, p. 161-92 (p. 162).

7 Honoré 1987, p. 166-179.

8 T. Grey, 'The Disintegration of Property', in: *Nomos Vol 22: Property*, Cambridge: Harvard University Press 1980, p. 69-85.

9 A. Ryan, *Property and Political Theory*, New York: Basil Blackwell 1984, p. 5. For other overviews of property theories, see L. Becker, *Property Rights. Philosophical Foundations*, London: Routledge & Kegan Paul 1977; J. Waldron, *The Right to Private Property*, Oxford: Clarendon Press 1988; S. Munzer, *A Theory of Property*, Cambridge: Cambridge University Press 1990; G. Alexander & E. Penalver, *An Introduction to Property Theory*, Cambridge: Cambridge University Press 2012.

Efficiency

The utilitarian tradition in moral and political philosophy is focused on the idea that morally right actions and just social policies are those that maximize overall utility, where the latter is understood as preference satisfaction.¹⁰ The utilitarian tradition has been the basis for the way modern economics thinks about property rights.¹¹ The concept of utility informs the concept of efficiency, which economists use to refer to the maximal satisfaction of preferences, given the budgetary and other constraints in a certain situation. A situation is inefficient when (more of) the preferences of (more) people could be satisfied without net costs to preference satisfaction overall.

Property rights can enhance efficiency in different ways. In the economics of property rights, scholars have argued that property rights in natural resources and the means of production ensure that the true costs of all activities are taken into consideration, that people have an incentive to labour and cultivate, and that they have an incentive to make sustainable use of resources, all of which would lead to more preference satisfaction.¹² Our focus here, however, is on consumer goods. The most significant way in which property rights to consumer goods contribute to efficiency is by regulating access to scarce resources and by enabling people to engage in mutually advantageous exchanges of goods. If we did not have property rights, people could not exclude others from the use of consumer goods. In such a situation, we could form no clear expectations of our daily lives and we would have no basis for making any agreements.¹³ Property rights, then, make clear what we can expect. They form the basis for trade and sharing practices, which, ideally, lead us to a situation where resources are used to satisfy everyone's preferences.¹⁴

However, although property rights are important for efficiency, it is an open question whether it is necessary that consumers are the *full liberal owners* of the goods they use. Where an exchange between two parties is voluntary, both parties are presumed to be better off after the exchange. Hence, we can expect that where consumers voluntarily opt for an access arrangement, this benefits them and is in line with their preferences, while at the same time benefiting the provider. Presumably, then, it is beneficial to the overall efficiency of an economic system to allow the disaggregation of the full ownership bundle. However, this view is based on an ideal situation in which there are no market failures.

Where market failures do occur, we can no longer presume that transactions are to the benefit of both parties. Such market failures include situations in which producers have monopoly power, where there are information asymmetries (so that consumers do not know what the product involves), and situations in which transaction costs (the costs individuals make to come to a trade agreement) are very high. A special case of the latter type of market failure, is a market in which all products come with idiosyncratic sets of rights to use them. In such a situation, individuals would not be able to assume that a purchase granted them a standard set of rights, but would instead have to inform themselves extensively with regard to every single purchase.¹⁵ In addition, there may be externalities in production or consumption, meaning that third parties may be affected by a transaction that they did not agree to.¹⁶ In all these cases, exchanges do not lead to an optimal level of preference satisfaction. The greater the scope of these failures, the more reason we have to doubt that exchanges are an expression of consumers' preferences.

In conclusion, while the utilitarian criterion of efficiency provides us with a powerful framework to think about property, it does not point in one clear direction with respect to the ownership arrangements which are most efficient. The precise effects of trading in subsets of the bundle of incidents, and the conditions under which this trade takes place, need to be evaluated in practice. Whether it is most efficient to allocate a particular property incident to the consumer or to the provider of a product remains to be seen.

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Autonomy

The main rival to the utilitarian tradition in political philosophy has been a tradition focusing on an ideal of citizen's freedom, autonomy, or self-development. This ideal was the basis for Rousseau, Kant, Hegel and others in thinking about public policy in general and about property arrangements in particular.¹⁷ There are great differences between the thinkers in this tradition, but

¹⁰ The classical sources are J. Bentham, *An Introduction to the Principles of Morals and Legislation*, Oxford: Oxford University Press 1996 and J.S. Mill, 'Utilitarianism', in: *On Liberty and Other Essays*, Oxford: Oxford University Press 1991, p. 131-201. For a view of how utilitarianism can function in political philosophy and the analysis of public policy, see R. Goodin, *Utilitarianism as a Public Philosophy*, Cambridge: Cambridge University Press 1995.

¹¹ For an introduction to the economics of property rights, see T.L. Anderson & F.S. McChesney (eds.), *Property Rights: Cooperation, Conflict, and Law*, Princeton: Princeton University Press 2002.

¹² H. Demsetz, 'Toward a Theory of Property Rights', *The American Economic Review* 1967, Vol. 57, Issue 2, p. 347-359; T. Eggertson, 'Open Access Versus Common Property', in Anderson & McChesney 2002, p. 73-89; L. De Alessi, 'Gains from Private Property: The Empirical Evidence' in Anderson & McChesney 2002, p. 90-111. Eggertson notes that property rights do not always produce these gains; in some situations the absence of property rights is the most efficient arrangement.

¹³ Demsetz 1967.

¹⁴ G. Gaus, 'The Idea and Ideal of Capitalism', in: G.G. Brenkert (ed.), *The Oxford Handbook of Business Ethics*, Oxford: Oxford University Press 2009, p. 73-95.

¹⁵ See T.W. Merrill & H.E. Smith, 'What Happened to Property in Law and Economics?', *The Yale Law Journal* 2001, Vol. 111, Issue 2, p. 357-398.

¹⁶ For an accessible presentation, see J. Cassidy, *How Markets Fail. The Logic of Economic Calamities*, London: Penguin Books 2009.

¹⁷ I. Kant, 'The Metaphysics of Morals', in: P. Guyer (ed.), *Practical Philosophy*, Cambridge: Cambridge University Press 1996, p. 353-603. G.W.F. Hegel, *Elements of the Philosophy of Right*, Cambridge: Cambridge University Press 1991.

broadly speaking they claimed that societies should not be organized to maximize efficiency but to ensure every person a space for living freely or autonomously. We provide an extremely simplified, contemporary update of this complex tradition, so as to be able to evaluate access practices later in this article.

To live autonomously is to live according to your own, reflectively held values. Autonomy is valuable because it allows people to be the deciders of our own lives, instead of having their life choices decided by others. According to many contemporary theorists, the capacity to live autonomously requires at least two conditions.¹⁸ Both of these conditions, it has been argued, depend on the availability of a system of private property rights.

According to many contemporary theorists, the capacity to live autonomously requires at least two conditions. Both of these conditions, it has been argued, depend on the availability of a system of private property rights

First, individuals need a degree of *negative freedom*.¹⁹ A person is negatively free to the extent that other people do not interfere with her choices. Interferences may consist of physical actions (a person blocks my way when I try to walk somewhere), or of laws and rules restricting my behaviour (I am not allowed to walk on private land without the owner's permission). A larger extent of negative liberty, then, refers to a wider set of possible actions (options) that are open to individuals to choose from, in which they will not be hindered by others. It is not difficult to see that private property rights promote negative freedom. In every action an individual undertakes, she makes use of space and usually also of material things.²⁰ If these spaces and things do not belong to her, then the permissibility of her actions is subject to the consent of those who own these goods. If they forbid her from engaging in certain actions, her negative freedom is restricted. However, if she would own some space and things of her own, then this would give her a number of rights

that allow her to do what she wants, without any interference by others. In my own house, I can act as I wish (only subject to the duty – also in the bundle of incidents – that I do no harm to others). Of course, the other side of the coin is that the freedom of non-owners is restricted. If I can exclude you from my land, you don't have a right to enter it. In order to promote freedom among *all* citizens, then, we should ensure that everyone holds some property (and in addition that some things stay in the public or common realm).²¹

Second, to become autonomous, individuals need to be able to reflect on their values, principles and desires, and on the process through which these came into being. This reflection is the central aspect of individual *positive freedom*.²² In so reflecting, an individual can adopt, reject or change her values, and so in the end truly call the values she holds her own. Without this positive ability, individuals could not question the desires that they have.²³ In such a situation, a person may have the negative freedom to act on her desires without being interfered with by others, but these desires would not be her own.²⁴ Consequently, she would not be the decider of her own life.²⁵ Positive freedom can also be enhanced by private property.²⁶ For in order to reflect on your values, you need to have a relative degree of independence from others, so that you are not unduly influenced (or manipulated) by them. Private property grants owners this independence; it allows them to provide for their own needs and grants them a space of their own. Private property here is a guarantee not against direct interferences with a person's options and choices, but against outside interferences with the internal process in which a person 'makes up her own mind'.

Like efficiency, the normative criterion of autonomy does not unequivocally point to full liberal ownership as the best property arrangement. John Christman has convincingly argued that what he calls 'control rights' are central to our autonomy.²⁷ He defines control rights as a subset of the full ownership bundle, including the following incidents: the rights to possess, use, and manage a thing, as well as the right to security. These rights grant individuals a measure of control over the things they own, which is necessary to control their own environment. And having control over one's environment, as we have seen, is

18 See, for example, J. Raz, *The Morality of Freedom*, Oxford: Clarendon Press 1986; S. Wall, *Liberalism, Perfectionism and Restraint*, Cambridge: Cambridge University Press 1998; J. Christman, *The Politics of Persons. Individual Autonomy and Socio-Historical Selves*, Cambridge: Cambridge University Press 2009; J. Christman and J. Anderson, *Autonomy and the Challenges to Liberalism*, Cambridge: Cambridge University Press 2005.

19 Negative freedom in this sense has most famously been defended by Isaiah Berlin, see: I. Berlin, 'Two Concepts of Liberty', in: I. Berlin, *Liberty*, Oxford: Oxford University Press 2002, p. 168-217.

20 J. Waldron, 'Homelessness and the Issue of Freedom', *UCLA Law Review* 1991, Vol. 39, p. 295-324.

21 Waldron 1991; G.A. Cohen, *Self-Ownership, Freedom and Equality*, Cambridge: Cambridge University Press 1995, p. 53-61; P. van Parijs, *Real Freedom for All. What, If Anything, Can Justify Capitalism?*, Oxford: Oxford University Press 1997, p. 20-24; G.A. Cohen, 'Illusions about Private Property and Freedom', in: J. Mepham & D.H. Ruben (eds.), *Issues in Marxist Philosophy IV*, Brighton: Harvester 1981, p. 225-228.

22 J. Christman, 'Liberalism and Individual Positive Freedom', *Ethics* 1991, Vol. 101, Issue 2, p. 343-359. Note that this use of the term diverges from Berlin's concept of positive liberty. Berlin understood positive liberty as denying that people who acted immorally, were free. In addition, his understanding of positive liberty was akin to collective self-determination. Christman, however, has brought forward a concept of positive liberty that is individualistic and that does not deny that immoral actions can be freely undertaken. On his view (which we share) the point is that individuals' actions are self-chosen.

23 Philosophers working on the subject of positive freedom take different positions on whether *having* the reflective capacities or *exercising* these capacities is what makes a person free. Theorists who think that positive freedom is an exercise concept can treat autonomy and individual positive freedom as synonyms, where positive freedom requires a degree of negative freedom and reflective abilities. We do not take a position on this matter here, but have adopted a general perspective that is broad enough to accommodate either view.

24 Christman 1991, p. 345.

25 Isaiah Berlin claimed that positive freedom is concerned with the question 'Who governs me?', a question that is, in his interpretation, not the concern of proponents of

negative liberty (Berlin 2002). Gideon Elford, however, has argued that the importance of being the decider in our own lives is what binds the negative and positive concept of freedom (G. Elford, 'Reclaiming Two Concepts of Liberty', *Philosophy, Politics and Economics* 2012, Vol. 12, Issue 3, p. 228-246). See also the synthesis of both dimensions in terms of 'agency', in R. Claassen, 'An Agency-Based Capability Theory of Justice', *European Journal of Philosophy* 2017, Vol. 25, Issue 4, p. 1279-1304 and R. Claassen, *Capabilities in a Just Society. A Theory of Navigational Agency*, Cambridge: Cambridge University Press 2018. For the application of this framework to property, see R. Claassen, 'The Capability to Hold Property', *Journal of Human Development and Capabilities* 2015, Vol. 16, Issue 2, p. 220-236.

26 A. Gewirth, *The Community of Rights*, Chicago: The University of Chicago Press 1996, p. 173; J. Christman, *The Myth of Property. Toward an Egalitarian Theory of Ownership*, Oxford: Oxford University Press 1994, p. 167; Munzer 1990, p. 90-98; Waldron 1988, p. 295-300; L. Lomasky, *Persons, Rights, and the Moral Community*, Oxford: Oxford University Press 1987, p. 120.

27 Christman 1994.

28 United Nations, 'Our Common Future: Report of the World Commission on Environment and Development' 1987. The debate on the proper definition of sustainability is ongoing and this definition, while much in use, is still highly controversial. For our purposes, however, it is sufficiently general to cover the concerns in this article while open enough to include stronger concerns.

29 There is nothing inefficient in destroying natural habitats if this satisfies more interests (inter-generationally) than maintaining them. Yet many environmentalists would maintain that these habitats should be preserved. In addition, extending autonomy considerations can justify preventing climate impact and waste insofar as this affects the autonomy of future humans. With regard to animals, however, the picture is less clear. It depends on whether the agency displayed by animals is of the kind we value in autonomous agents.

30 This does not mean that political theories from the past cannot be reinterpreted as arguing for a type of sustainability. See for example Clark Wolfe's 'Contemporary Property Rights, Lockean Provisos, and the Interests of Future Generations', *Ethics* 1995, Vol. 105, p. 791-818.

31 Debates on the right to waste have been mostly concerned with wealth, means of production and

needed to ensure that our values, preferences and desires are authentic, and that we are not subject to manipulation. By contrast, 'income rights' (the right to sell and derive income from a thing) do not allow us this great extent of control over our environment. This is because the content of income rights is conditional on many factors outside the owner's control. Whether I sell my house or not, and the exact income I derive from selling my house depends on a multitude of contingent factors (e.g. the quality of the neighbourhood, scarcity, the conditions of financial markets, buyers' personal tastes) over which I have no control and that are difficult to predict. This is very different from the right to decide who enters my house, the result of which depends only on the strength of government enforcement and my own will.

In conclusion, the tradition of focusing on autonomy provides a powerful second criterion to evaluate property arrangements. Like the utilitarian tradition, its application to the access-based arrangements will require a fine-grained analysis of when the unbundling of certain incidents of ownership diminishes people's capacity for autonomy. A central suspicion here is that the link between control rights and autonomy is (much) more substantial than the link between income rights and autonomy. Furthermore, much will depend on the object of the access arrangement. A restriction of our rights to some things will impact on our negative liberty, independence and ability to reflect more than others. Due to the limited scope of this article, we will not set out a precise framework for the discrimination of different consumer goods. Instead, our evaluation of access practices in section two will show how one might approach this issue.

Sustainability is an often-overlooked criterion in the philosophical traditions, which, historically, have ignored the problem of future generations

Sustainability

Sustainability is the requirement that in meeting the needs of the present, we do not compromise the ability to meet our needs in the future, or the ability of future

generations to meet their own needs.²⁸ The present and future needs that are to be counted are those of humans, but also of animals. These needs are threatened in many ways, but to fix our minds, we will focus here on the emission of greenhouse gasses (GHG) and waste production.

In part, sustainability concerns can be theoretically represented as extending the efficiency and autonomy concerns discussed above, to future generations. For example, in determining whether an outcome is efficient, we can take the (expected) preferences of current and future generations into account. In addition, we can justify preventing climate impact and waste insofar as this affects the autonomy of future generations. There are two reasons, however, for presenting sustainability as a separate criterion. The first is that efficiency and autonomy concerns are not exhaustive of all the concerns that can fall under the heading of sustainability. Neither criterion can, for example, account for the intrinsic value that some philosophers and activists attach to inanimate nature. Furthermore, it is controversial whether either perspective can ground an extensive set of rights for animals.²⁹ In order to encompass a wide range of views, we had therefore better remain neutral on the theoretical grounding of sustainability and introduce it as a separate category. The second reason for discussing sustainability separately is pragmatic; it is an often-overlooked criterion in the philosophical traditions, which, historically, have ignored the problem of future generations.³⁰

As with autonomy and efficiency, the essential point for this article is that full liberal ownership of consumer goods is not necessarily the most sustainable property arrangement.³¹ Of special interest here is one incident in the bundle of property rights: the right to waste or destroy goods. Granting this right may lead to unsustainable forms of use where the materials from which these goods are made are scarce.³² Consumer products that can no longer be used can often be recycled, so that the materials from which they are made are not wasted. Furthermore, destroying or discarding items that could still be used (by others, or by that person herself) leads to a greater need for producing new items, which leads to more GHG emissions. An access arrangement that restricts the right to waste or destroy may therefore be more

sustainable, but only if good use is made of the resources that are not wasted. This leaves open the question whether the other property incidents should be assigned to consumers or producers.

In conclusion, sustainability provides a third lens through which we can view property and access arrangements. As with efficiency and autonomy, it remains open whether sustainable use of consumer goods casts a favourable or problematic light on access arrangements. This may differ, depending on the specifics of these arrangements, some of which we will discuss below.

Evaluating the access economy

This section illustrates how the three normative criteria discussed above might be applied to access practices. By way of example, we will discuss practices in the digital economy and in the area of product service systems in relation to efficiency, autonomy and sustainability. This discussion is not meant to draw any overall conclusions about the desirability of access practices as such, but merely gives an example of how these criteria might be applied, hopefully sparking in-depth evaluations by other researchers and policy makers.

From an efficiency perspective, the central question is whether access practices lead to higher or lower degrees of efficiency than ownership-based consumption

Access and Efficiency

From an efficiency perspective, the central question is whether access practices lead to higher or lower degrees of efficiency than ownership-based consumption. More specifically, the question is whether certain property incidents are best transferred to consumers or left with the producers. In the following we discuss the efficiency of access practices in the digital economy.³³

Many goods in the digital economy can only be accessed, rather than owned. These goods include software programs, e-books, digital music files, films, videogames and other copyrighted items. Providers stipulate in End User License Agreements

(EULAs) that consumers are merely licensed to use them. Additionally, EULAs stipulate how goods should and should not be used. Often, these actions are not just forbidden in the license. Companies also use digital rights management (DRM) to enforce these restrictions: technologies that can regulate how products are used, e.g. by blocking a machine or program from working if this is used in 'the wrong way'. The use of EULAs and DRM has been claimed to lead to several types of inefficiencies.

First, EULAs lead to high transaction costs. Not only are they very long, but they are also idiosyncratic; different EULAs will include different rights and restrictions. For consumers, this means that they have to carefully read each agreement before committing to it, making the transaction very costly.³⁴ If on the other hand consumers choose not to read the license, the market suffers from an information asymmetry. Consumers will then not know what they agreed to, so that we can no longer assume that the transaction is in line with their preferences.

Secondly, in some cases this information asymmetry is inevitable, as consumers often don't know what the terms and conditions of use are, until they have actually purchased a product.³⁵ The exact terms will be in the package that contains the hard disk, or, in case of a download, they will only become visible as you install the program on your device.³⁶ Furthermore, providers use misleading language, by saying things like 'Buy now!' on the purchase webpage, giving the consumer the idea that she will own whatever she pays for.³⁷ Most importantly, many EULAs grant companies the right to unilaterally change the terms and conditions of the license.³⁸ This means that consumers cannot know in advance what they agree to.

Thirdly, these practices limit the accessibility and affordability of goods, because consumers very often don't have the right to resell their items.³⁹ In secondary markets, people can often get items for more affordable prices than if they buy them directly from the copyright holder, meaning that more people can get access to goods than if only one party could sell the item. Although copyright holders might also engage in price discrimination, they may not be as efficient in this respect as decentralised secondary markets are.⁴⁰ Furthermore, restricting secondary markets means that

natural resources. Thus, Edward J. McCaffery discusses different legal theorists who treated this subject in relation to land, while he himself is concerned with wasteful use of wealth (E.J. McCaffery, 'Must We Have the Right to Waste?', in: S. Munzer (ed.) *New Essays in the Legal and Philosophical Theory of Property*, Cambridge: Cambridge University Press 2001, p. 76-105). The property right to waste or destroy consumer goods is not discussed as frequently. There is a wealth of literature on individual duties in environmental ethics, but these are not often not discussed through the lens of ownership theory.

³² This is why, in international law, we find an emerging principle of sustainable use that limits the right to destroy natural and agricultural resources (see J.G. Sprankling, *The International Law of Property*, Oxford: Oxford University Press 2014, p. 302-304).

³³ Our evaluation relies heavily on Aaron Perzanowski and Jason Schultz' analysis of the benefits of exhaustion of copyrights and the changing rights of consumers in the digital economy. See in particular A. Perzanowski & J. Schultz, 'Digital Exhaustion', *UCLA Law Review* 2011, Vol. 58, p. 889-946 and A. Perzanowski & J. Schultz, *The End of Ownership: Personal Property in the Digital Economy*, Cambridge: MIT Press 2016.

³⁴ R. Anthony Reese, 'The First Sale Doctrine in the Era of Digital Networks', *B.C. Law Review* 2003, Vol. 44, p. 577; M.S. Van Houweling, 'The New Servitudes', *The Georgetown Law Journal* 2008, Vol. 96, p. 885-950. See also Thomas W. Merrill & Henry E. Smith (2001), who argue that idiosyncratic sets of property rights greatly increase the cost of information processing in sales.

³⁵ Importantly, we are not concerned with the current legal status of such terms, but with how these can be evaluated from a philosophical point of view. Having said that, we do want to note that the EU directive on unfair terms in consumer contracts states that contracts cannot be irrevocably binding if the consumer had no real opportunity of becoming acquainted with the terms before the conclusion of the contract. In addition, the directive also limits the legal possibilities for companies to unilaterally change the terms of the contract, though it doesn't take away this possibility altogether (Directive 93/13/EEC of 5 April 1993 of the Council on unfair terms in consumer contracts).

³⁶ EULAs on paper that are only visible when you open the package are called shrinkwrap licences, while terms that require assent

through clicking are called click-wrap licenses, and those that do not require explicit consent but take use as signifying consent, are called browsewrap licences (P.J. Morrow, 'Cyberlaw: The Unconscionability/Unenforceability of Contracts (Shrink-Wrap, Clickwrap, and Browse-Wrap) on the Internet: A Multijurisdictional Analysis Showing the Need for Oversight', *Pittsburgh Journal of Technology Law & Policy* 2011, Vol. 11, Issue 7, p. 1-29).

37 A. Perzanowski & C.J. Hoofnagle, 'What We Buy When We Buy Now,' *University of Pennsylvania Law Review* 2017, Vol. 165, p. 315-378.

38 Perzanowski & Schultz 2016, p. 70.

39 Perzanowski & Schultz 2011; Reese 2003.

40 Perzanowski & Schultz 2011, citing W. Gordon, 'Intellectual Property as Price Discrimination: Implications for Contract', *Chicago Kent Law Review* 1998, Vol. 73, p. 1367-1390 and A. Ghose, M.D. Smith & R. Telang, 'Internet Exchanges for Used Books: An Empirical Analysis of Product Cannibalization and Welfare Impact', *Information Systems Research* 2006, Vol. 17, p. 3-19.

41 Perzanowski & Schultz 2011.

42 Perzanowski & Schultz 2016, p. 6.

43 Perzanowski & Schultz 2016, p. 149-150.

44 Perzanowski & Schultz 2016.

45 Perzanowski & Schultz 2016, p. 144-145.

46 Perzanowski & Schultz 2011.

47 There is an alternative, non-efficiency based moral argument that companies have used to lobby for more copyright restrictions, but that can also be used to defend restrictions placed in EULAs. This is that, when people have not bought a product from the copyright holder, but are still benefiting from this product (for example when their friends share the product with them, or when there is a public viewing), they are somehow free-riding. They are incurring benefits while not having paid for them. However, this argument takes a very extreme view on benefits and free-riding, one that we would never apply to physical property. Mark Lemley has compared this view to that of a homeowner who would charge passersby for enjoying the sight of the apple tree in his garden. The view also completely disregards the fact that intellectual property should be about using private incentives to attain public benefits, not about maximizing private incentives at the cost of public benefits. See on this M.A. Lemley, 'Property, Intellectual Property, and Free Riding', *Texas Law Review* 2005, Vol. 83, p. 1031-1075.

48 Perzanowski & Schultz 2016.

49 Perzanowski & Schultz 2016, p. 42-43 and 93. Sometimes the removal is unintentional; if the company

consumers who bought an item directly from the copyright holder, cannot recuperate some of the costs they made in buying the game by selling it again. This decreases their purchasing power and therefore the affordability of goods in the long run.⁴¹ EULAs and DRM that forbid lending a product to a friend or family member⁴² also restrict accessibility.

Finally, producers use DRM to eliminate competition. Keurig coffee machines, for instance, only work if consumers use Keurig coffee pods. When the inbuilt software recognises other pods, the machine simply stops.⁴³ Similar strategies are used for cartridges and e-readers.⁴⁴ In another example, John Deere (a tractor producer) used DRM to ensure that farmers could neither repair their tractors on their own, nor bring it to an independent repair shop. Instead, the only option was to bring the tractor to the John Deere dealer. The company defended this strategy by claiming that the farmers did not own their tractors; they were merely licensed to use them.⁴⁵ In this way, companies create monopolies that enable them to maximise revenue, but at the cost of retarding innovation and raising product prices for consumers. Innovation is also retarded by terms that forbid consumers from changing certain products.⁴⁶

The basic argument for the restrictions described here goes something like this. Producers and providers will only offer products to consumers if they have an incentive to do so. This incentive consists of the profit they can make when selling certain items. However, if people can resell items themselves, then the companies' sales will drop and there will be no incentive to produce. Thus, buying second-hand goods would supposedly mean the end of creative production. It is therefore in our interest to place restrictions on activities that could somehow lead to lower incentives, like the restrictions placed in EULAs and through DRM. There is no evidence, however, indicating that financial incentives have to be at the level that these companies would like. Intellectual property is about striking a balance between private incentives and public benefits, and using these private incentives *insofar as* they contribute to these public benefits. Further than that, there is no good justification for placing restrictions on secondary trade and sharing.⁴⁷

None of this should be taken to mean that access arrangements will always be inefficient. Rather, certain features of current access arrangements can lead to inefficiencies. This can be resolved through regulation (demanding, for example, that companies no longer use misleading language) rather than disallowing these arrangements altogether. However, this regulation may be costly, and it can only be justified on the grounds that access arrangements in the digital economy lead to efficiency benefits or to other benefits. So far, neither claim has been substantiated.

If companies can delete our books, films and music files, they can cut off our access to ideas needed for autonomous reflection. This goes much further than the power companies ever had with regard to tangible products

Access and Autonomy

As discussed in the previous section, the autonomy of consumers is limited in access arrangements if their control rights are restricted (when compared to ownership). We discuss below how the negative freedom and reflective abilities of consumers (the two requirements for autonomy) may be affected in the digital economy and in the sphere of product service systems.

In the digital economy, control rights are certainly affected. EULAs often ban consumers from lending a product to a friend, copying it for their own use, writing an embarrassing review about it, repairing an item, changing it for their own use, taking it with them when travelling to another country, and using complementary products that are not made by the provider.⁴⁸ This means that our rights to use and manage a thing, and thereby our negative freedom, are severely restricted. The right to security of possession is also affected, as providers have the power to delete digital files from afar. This is possible because things like e-books are not physically with the user; they are on company servers, enabling providers like Amazon to delete books that people have already purchased.⁴⁹ This has important adverse effects on people's ability to reflect on their values, i.e. on their posi-

tive freedom. If companies can delete our books, films and music files, they can cut off our access to ideas needed for autonomous reflection. This goes much further than the power companies ever had with regard to tangible products. It is one thing to refrain from selling a book, but no bookseller would actually go to people's houses to take away copies.⁵⁰

Autonomy is also affected in the case of Product Service Systems (PSSs). A PSS is a business model in which the focus is not on the sale of a product, but on using a combination of services and products to attain a desired result.⁵¹ This can take on several forms, of which the product lease is probably best known. Additionally, there is the 'functional result service' (FRS) type of PSS, in which companies offer a service to attain a result where formerly the consumer would have achieved that result by buying a product.⁵² Instead of selling a refrigerator, for example, companies can sell cooling hours. A cooling installation is placed with the consumer, who doesn't own the product but pays a regular fee to use it. Proponents of these PSSs claim that we do not need to own as many things as we do. Rather, the point of buying something is often that we want to use it, and for that, full liberal ownership isn't necessary.⁵³ This may have important sustainability advantages, which we discuss below. However, the autonomy of consumers suffers where access arrangements pose restrictions on control rights. When buying cooling hours, for example, clients do not have the freedom to destroy or adjust (parts of) the cooling system, or to use it in any other way the company prescribes. This restricts the negative freedom of consumers. In addition, their continued access to these goods depends on their ability to pay in the future, so that financial problems may lead to more insecurity than with a person who owns all the goods she uses. Insofar as these goods are necessary for a person's livelihood, this can have severe consequences for her independence and reflective abilities, and hence for her positive freedom.

How severely these restrictions on use and security in possession affect our autonomy, may depend on the type of product to which they apply and the exact incident they restrict. Security in possession for goods that help communicate ideas or that are necessary for one's livelihood, are more important for autonomy than security of

possession in, say, a lawn-mower. In addition, having extensive rights to use or change a lawn-mower are not as important as having those rights with an object that affects central areas of our life, such as one's house. A differentiated regulatory approach is called for if one wants to safeguard certain products from all-too-intrusive forms of producer control.

In an economy based on ownership, producers don't have an incentive to sell durable goods

Access and Sustainability

With regard to sustainability, the relevant question is which property arrangement will minimize GHG emissions and waste production. Here we find a very important argument in favour of certain access-based arrangements.

Of the many different types of PSSs, the FRS is most likely to achieve sustainability benefits.⁵⁴ In an economy based on ownership, producers don't have an incentive to sell durable goods.⁵⁵ Since their earning model is based on selling products, they need to make sure consumers will continuously need new products. By contrast, if companies are paid to provide *access to light*, they have an incentive to produce durable products. In addition, producers could be made responsible for the costs of electricity, which would give them an additional incentive to create energy-efficient products. Finally, the fact that producers retain ownership gives them an incentive to reuse product materials and cut production costs in this way.⁵⁶ The consequence is that companies will design products for use and for reuse at the same time, and set up a circular economy in which waste is reduced.⁵⁷ One example of this development is the concept of 'circular lighting' introduced by Philips⁵⁸ and by the start-up Turntoo.⁵⁹ These companies design light systems to be durable, energy efficient, and easy to dismantle, so that materials can be reused. The customer no longer buys a lamp, but instead pays for 'light hours'.⁶⁰ Such constructions can only work if customers don't have the right to destroy, sell, dismantle or change the light system themselves. Otherwise, the company will not be able to take the materials back and reuse them.

owning the material goes out of business, the consequence will also be that people lose access to things they paid for.

50 Perzanowski & Schultz 2016, p. 110.

51 S. Fischer, M. O'Brien, H. Wilts, S. Steger, P. Schepelmann, N.D. Jordan & B. Rademacher, 'Waste Prevention in the Leasing Society', *International Journal of Waste Resources* 2015, Vol. 5, Issue 1, p. 1-9.

52 A. Tukker, 'Eight Types of Product Service Systems: Eight Ways to Sustainability? Experiences from SusProNet', *Business Strategy and the Environment* 2004, Vol. 13, p. 246-260.

53 For a popular example, see T. Rau & S. Oberhuber, *Material Matters*, Haarlem: Betram + de Leeuw Uitgevers 2016.

54 A. Tukker, 'Product Services for a Circular and Resource Efficient Economy. A Review', *Journal of Cleaner Production* 2015, Vol. 97, p. 76-91; Fischer et al. 2015; Tukker 2004. Both papers demonstrate that lease and renting services are less likely to have this positive effect.

55 Fischer et al. 2015.

56 Fischer et al. 2015.

57 Fischer et al. 2015; Tukker 2015.

58 Philips Circular Lighting 2018.

59 Van de Stadt 2013.

60 Philips Circular Lighting 2018.

As of now, PSSs are more common in the business-to-business than in business-to-consumer context, but this may change in the future. Given the potential environmental benefits, one might even argue that we should stimulate such constructions.

Individual Choice and Collective Evaluation

The whole analysis so far has assumed that a normative evaluation of access arrangements from an independent point of view makes sense. Where it leads to a negative evaluation, for example because consumers lose control rights important to their autonomy, this would then provide an argument for governmental regulation or even prohibition of access practices. However, consumers may well accept access arrangements *despite* the detrimental effects on their autonomy. They may make a conscious, autonomous choice to give up certain rights important for their (long-term capacity for) autonomy.⁶¹ If so, can a government still legitimately regulate these arrangements?

This objection rests on an individual-choice approach, which, we want to argue, becomes less appropriate as access regimes become more pervasive. Before elaborating on this, we will first explain what we mean by ‘pervasive’. Access practices can become more pervasive in two senses.

First, they can come to include *more types* of consumer goods. Currently access is standard practice when it comes to digital copyrighted items, but with the rise of PSS and the sharing economy, we will see more physical items becoming the subject of access relations. Another important thing to note is that software is increasingly integrated into objects other than computers and mobile phones. With the advent of the Internet of Things, almost all of our household equipment and furniture can have software on it that will likely be subject to restrictive EULAs and connected to the providing company’s server. Perzanowski and Schultz provide a wealth of examples of products where this is already the case, including coffee machines, tractors and cars, but also pacemakers and even mattresses.⁶² This development will almost certainly, then, contribute to the spread of access practices beyond their current domain.

Second, the prevalence can increase as there are fewer ownership-based alternatives available *per product category*. One

example here is products such as software programs, which are almost exclusively provided through licensing programs. For these there is an alternative, however, which is to make use of open source programs such as Linux. These give users more rights than many commercial companies do, including the right to adjust, copy and retain possession.⁶³ By contrast, digital alternatives to traditionally analogue items have become so popular that production of analogue items, such as CDs, DVDs and video games is becoming far less prominent. It is still possible to purchase hard copies, for the moment, but this may be a matter of time. This rough sketch shows that, while there still are alternatives to the rights packages offered in EULAs, there aren’t many of them and in some cases, they are waning.

When almost all of our daily interactions are regulated through restrictive access regimes, the social consequences go beyond the effects of an access regime with regard to any specific object

To the extent that access arrangements become more pervasive in these two senses, and to the extent that access arrangements severely restrict our control rights, our autonomy is severely limited. When almost all of our daily interactions are regulated through restrictive access regimes, the social consequences go beyond the effects of an access regime with regard to any specific object. Not owning my lamp only restricts my permissible actions with regard to that lamp. Not owning anything in my daily environment, and not having a say in how access contracts with regard to my daily environment are constructed, restricts *all* of my actions. That this is the result of voluntarily undertaken decisions does not make me any freer than before. Compare this problem to that of someone who voluntarily sells herself as a slave or becomes a bonded labourer. We can dispute whether this choice is free or not in a given situation, but what no one would deny is that you are not free thereafter, and that is the real issue. It is for this reason that liberal philosophers dispute that all rights should be alienable.

⁶¹ This problem is essentially the same as when individuals voluntarily give up certain of their rights to bodily integrity, in practices of dangerous sports, when they give up rights to free expression when becoming civil servant, etc.

⁶² Perzanowski & Schultz 2016, p. 139-154.

⁶³ The Open Source Definition, <https://opensource.org/osd> (March 20, 2018).

If alienability leads rights-holders to sell-out certain key features of their future autonomy, then making these rights inalienable would be justified.⁶⁴

The question then becomes whether market interactions would lead to a result where autonomy is diminished. And this is very likely the case. In making individual market choices, consumers do not reflect on the possible end result for all members in society. Their decisions are based on the perceived benefits and costs of the single transaction, not on the actual costs of the cumulative effects of all consumers making similar decisions. Thus, a consumer may accept restrictive access regimes to a software program, if she believes that this is somehow more beneficial to her than the alternative, but if everyone acts like that, alternatives to restrictive access regimes may be outcompeted. This does not mean, however, that these very same consumers would accept that end-result, in which our autonomy is diminished. This is why, as the access economy becomes more pervasive, it becomes inappropriate to let the fate of the access economy be decided by an approach based on individual choices. If we are right, this creates the legitimacy for a regulatory approach based on the three criteria discussed in this article.

Conclusion

In this article we started from the philosophical tradition in thinking about property rights, to derive three criteria for evaluating ownership and access arrangements: efficiency, autonomy and sustainability. We have identified important sustainability benefits of access, but also pointed to market failures and risks for autonomy. Our approach does not provide a wholesale acceptance or rejection of

access, but points to the need to discriminate between different types of access arrangements, allowing (and regulating) some and rejecting others. The risks can probably be countered, but we have not discussed how this can be done. One option here is government regulation of access contracts, but consumer collectives and non-governmental organisations could also step in to negotiate access terms with companies, or even to provide alternative arrangements themselves.

The rise of access-based consumption comes with promises and problems, and we need to decide consciously which of these we want to embrace

Further research can focus on the relation between the three criteria we have discussed, and on how to balance different considerations. In addition, we hope this article sparks more evaluative research on the practices discussed here and on those outside the scope of this article. We haven't discussed peer-to-peer practices in the sharing economy. Future work can analyse these practices and focus not only on the effects of access arrangements on consumers, as we have done, but also on owners who grant others access to their homes, cars and other personal belongings. It may turn out that such analyses will profit from a set of additional criteria. Such research is needed because, as we have argued, we should not leave the outcome of this development to the discretion of isolated consumers. The rise of access-based consumption comes with promises and problems, and we need to decide consciously which of these we want to embrace.

64 D. Satz, *Why Some Things Should Not Be for Sale: The Moral Limits of Markets*, Oxford: Oxford University Press 2010; E. Anderson, *Value in Ethics and Economics*, Cambridge: Harvard University Press 1993; M.J. Radin, 'Property and Personhood', *Stanford Law Review* 1982, Vol. 34, Issue 5, p. 957-1015.