Consumers contracting with other consumers in the sharing economy: fill in the gaps in the legal framework or switch to the blockchain model?

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Abstract
Numerous legal provisions were enacted at an EU level in order to protect consumers contracting with professionals, especially in a digital environment (see, in particular, the protection measures provided by directive 2011/83/EU on consumer rights; directive 2005/29/EC on unfair commercial practices; directive 2000/31/EC on electronic commerce, etc.). With the development of the web 2.0 and the so-called “sharing economy”, consumers are now entitled to easily conclude agreements with other consumers through intermediation platforms. EU Consumer Acquis shall normally be applicable to the relationship between the platform and each of the peers (the seller or the provider on one hand, and the buyer or the recipient on the other hand), with the exclusion of C2C relationships.

The objective of this paper is to highlight the potential issues and gaps in the context of consumer protection (lack of information, warranty issues, no right of withdrawal, etc.), resulting from the fact that C2C agreements are normally out of scope of the EU Consumer Acquis (and only governed by the traditional contract law). Some propositions de lege ferenda will also be made, in order to ensure a higher level of consumer protection (with additional legal duties prescribed for the intermediaries, for instance). Blockchain technology and smart contracts shall also be taken into account, since they should normally give rise to a “disintermediation” process. It should however be assessed whether or not consumer protection will benefit from this disintermediation.

Keywords
Sharing economy, consumer protection, platforms, information duties, C2C agreements, Blockchain

Topic
Sharing economy
Consumidores que suscriben contratos con otros consumidores en la economía colaborativa: ¿hay que cubrir los vacíos del marco legal o pasarse al modelo de cadena de bloques?

Resumen
A escala europea se han promulgado numerosas disposiciones legales para proteger a los consumidores que suscriben contratos con profesionales, especialmente en el entorno digital (véanse, en concreto, las medidas de protección previstas en la Directiva 2011/83/UE sobre derechos de los consumidores; la Directiva 2005/29/CE sobre prácticas comerciales desleales; la Directiva 2000/31/CE sobre comercio electrónico, etc.). Con el desarrollo del web 2.0 y la denominada economía colaborativa, los consumidores ahora están facultados para suscribir fácilmente acuerdos de igual a igual con otros consumidores a través de unas plataformas de intermediación. En condiciones habituales, se aplica el acervo normativo europeo en materia de consumo a la relación entre la plataforma y cada uno de los iguales de este tipo de economía (el vendedor o proveedor, por un lado, y el comprador o destinatario, por el otro), con exclusión de las relaciones de consumidor a consumidor (C2C).

El objetivo del documento es destacar los posibles problemas y vacíos legales dentro del contexto de la protección del consumidor (falta de información, problemas con las garantías, ausencia del derecho de retractación, etc.) debido al hecho de que los acuerdos C2C suelen situarse fuera del alcance del acervo comunitario en materia de consumo (y solo se rigen por el derecho contractual tradicional). También se expondrán algunas propuestas de cara a la redacción de una futura legislación para garantizar un mayor nivel de protección en beneficio de los consumidores (con obligaciones legales adicionales exigidas a los intermediarios, por ejemplo). La tecnología de cadena de bloques (blockchain) y los contratos inteligentes (smart contracts) también deben tenerse en cuenta, puesto que en condiciones normales deberían generar un proceso de «desintermediación». Sin embargo, debe evaluarse si, al final, la protección del consumidor saldrá beneficiada o no de esa desintermediación.

Palabras clave
economía colaborativa, protección del consumidor, plataformas, deber de información, acuerdos C2C, de consumidor a consumidor, cadena de bloques, blockchain

Tema
economía colaborativa
Introduction – context and purposes of the paper

The phenomenon of the so-called “sharing economy” or “collaborative economy” is growing rapidly and in various sectors (short-term accommodation, like Airbnb; passenger transportation, like Uber; sale of goods, like eBay; collaborative finance, in some crowdfunding platforms, like Seedrs; etc.). Schematically speaking, three main actors are usually involved in any sharing economy model: (i) the providers of the services (or the seller of the goods), (ii) the recipients of the services (or the buyers of the goods) and (iii) the platform, connecting providers and recipients, so that they can enter into contract.

Providers and recipients could be either professionals or consumers, which means that the platforms can facilitate the conclusion of B2B, B2C, C2B, or C2C agreements.

Sharing Economy obviously has significant business potential but it also raises various legal issues, especially in the field of consumer protection. Consumers contracting with other consumers could indeed suffer from a lack of information on the product or on their rights (ignoring for instance that they cannot benefit from a right of withdrawal); some issues could also occur with regard to the conformity of the product, or with its delivery or payment. The accommodation could be materially different from the description given on the platform or the reservation could be cancelled by the owner a few days before the beginning of the rental period, without due compensation. On crowdfunding platforms, consumers could finally lose the invested sum, without being aware of such risk.

After a short overview of the applicable legal framework protecting consumers and its scope, in the context of the sharing economy (see point 1 below), this paper will discuss the potential issues for the consumers contracting through the platforms and resulting, among other reasons, from regulatory gaps (see point 2 below). The analysis will mainly be carried out under the EU Law, with some occasional references to the specific rules in some Member States. Some propositions de lege ferenda will also be made, in order to ensure a higher level of consumer protection, with additional legal duties prescribed for the intermediaries, for instance (see point 3.1 below). Blockchain technology and smart contracts will also be considered, since they should normally give rise to a “disintermediation” process. It should however be assessed whether or not the consumer will benefit from this disintermediation (see point 3.2 below).

1. Overview and scope of the legal framework protecting consumers

Several EU directives or regulations aim at ensuring a high level of consumer protection. They prescribe either
Unfair Commercial Practices Directive is applicable to “business-to-consumer commercial practices”,
expired by a “trader” to a “consumer”. The Unfair Commercial Terms Directive is prohibiting unfair contractual terms of “sellers” or “suppliers” contracting with consumers. Pursuant to Article 3 (1) of the Consumer Rights Directive, it shall “apply [...] to any contract concluded between a trader and a consumer”. These regulations shall therefore not be applicable in the relationship between the participants when the provider and the recipient are both consumers. The qualification of a party, as “seller”/”trader”/”supplier” or as “consumer” could give rise to debate. According to the European Commission, “a supplier will qualify as a “trader” under the UCPD if he is acting for purposes relating to his trade, business, craft or profession (Article 2(b)). According

15. As defined in Article 2 (d) of the Directive.
16. As defined in Art. 2 (b) of the Directive.
17. As defined in Art. 2 (a) of the Directive.
18. As defined in Art. 2 (c) of the Directive.
19. As defined in Art. 2 (b) of the Directive.
20. Both concepts are defined in Art. 2 (1) and 2 (2) of the Directive.
to this definition, the mere fact that a person engages in an activity in the collaborative economy will not mean that that person automatically qualifies as a “trader”: under the UCPD, the qualification of whether a person is a “trader” or not is the outcome of a case-by-case assessment, which has to take all factual aspects into account, such as whether an essential part of that person’s income stems from a given collaborative economy activity”.21 A misleading qualification (as consumer instead of trader) could give rise to penalties under the applicable tax regulation, or under the Unfair Commercial Practice Directive.22

The Directive on electronic commerce has a broader scope. It applies to B2B (when the service provider and the recipient of the service are not acting for purposes which are outside their trade, business or profession) and to B2C (when the service provider is acting in the course of his trade, business or profession and the recipient of the service is an individual consumer) relationships. The definition of “service provider” does not explicitly prohibit a consumer from providing an information society service. However, with regard to the concept of “service” (to be understood as a “service” as defined in Art. 57 of the TFEU), it may be argued that the European legislator has not considered that the service provider could be a consumer. Hence, those articles of the directive on electronic commerce only apply in B2C and B2B relationships.

In the relationship between the consumer and the platform, the aforementioned directives will normally be applicable. A case-by-case assessment must however be made, as illustrated by the Uber case before the ECJ: In its judgment dated 20 December 2017, the ECJ considered that “an intermediation service such as that at issue in the main proceedings, the purpose of which is to connect, by means of a smartphone application and for remuneration, non-professional drivers using their own vehicle with persons who wish to make urban journeys, must be regarded as being inherently linked to a transport service and, accordingly, must be classified as ‘a service in the field of transport’ as defined in Article 58(l) TFEU. Consequently, such a service must be excluded from the scope of Article 56 TFEU, Directive 2006/123 and Directive 2000/31”.23 In other words, with services governed by distinct legal frameworks, some of them could be excluded.

That said, it is not normally in this context that most issues occur: the purpose of the services provided by the platform is usually limited to connecting the parties and facilitating the conclusion of the agreement between them. In addition, the terms and conditions of the platform usually state that it is not party to the agreement concluded between the participants, with a denial of any liability, should there be any dispute between them with regard to such an agreement, or should any damages occur.

Issues will mainly arise with regard to the relationship between the consumers. In this context, consumers cannot benefit from the EU protection rules: right of withdrawal, information duties, formal requirements, prohibition of unfair contract terms or unfair commercial practices and conformity requirements and guarantees, prohibition of additional payments, passing of risks, etc.

This does not mean that there are no applicable protection rules at all. The general contract law applicable in each Member State remains applicable (information requirements, good faith, consent, rules of proof, etc.). Nevertheless, in most cases, these rules do not take into account the specific difficulties encountered by the contracting parties and their potential vulnerability. According to these rules, the parties are indeed supposed to be on an equal playing field, although it is far from being the case in practice (in most cases, the rules are therefore not sufficient to protect consumers).

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21. Commission staff working document guidance on the implementation/application of Directive 2005/29/ec on unfair commercial practices accompanying the document communication from the commission to the european parliament, the council, the european economic and social committee and the committee of the regions. A comprehensive approach to stimulating cross-border e-Commerce for Europe's citizens and businesses, COM (2016) 320 final, point 5.2.5.

22. See point 22 of Annex I and Article 5 (5) of the Unfair Commercial Practices Directive. One could also wonder when a person selling several goods on an online marketplace shall be considered as a trader (on the criterions to be taken into account, see ECJ, 4 October 2018, case C-105/17, Komisia za zashtita na potrebitelite).

23. ECJ, 20 December 2017, case C-434/15, Asociación Profesional Elite Taxi. Please see also ECJ, April 10, 2018, case C-320/16, Uber France SAS.
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2. Gaps and main issues to be addressed from a consumer Law perspective

From a consumer Law perspective, the following issues need to be addressed:

• Discrimination between consumers depending on the (non-)professional purpose under which the other contracting party is acting (see point 2.1. below);

• Low level of duties imposed on the platforms (see point 2.2. below).

2.1. Discrimination between consumers depending on the (non-)professional purpose under which the other contract party is acting?

There is an obvious difference between, on one hand, consumers contracting with professionals (including on a sharing economy platform), who will benefit from the legal framework granting them, at least from a theoretical point of view, a high level of protection and, on the other hand, the same consumers, contracting with other consumers through the same platforms.

However, they are both at a disadvantage.

In the EU Consumer Acquis, the ratio legis for protection measures lies specifically in the weak position of a consumer entering into a relationship with a supplier, a seller or a trader (acting in their commercial or professional capacity).24 European Legislator assumes that consumers mainly suffer from a lack of knowledge as regards legal or factual data related to the agreements and do not have the same bargaining power as the other party to the contract. The disadvantage for the consumer mainly arises from the object of the agreement and the means used to conclude the contract (at a distance and by electronic means). The average consumer is therefore the weaker contract party (compared to a professional) because (s)he cannot negotiate the contract nor impose his or her own terms. In these circumstances, the professional party to the contract can take advantage of the consumer’s weak position to impose unfair contract terms (unbalanced liability exemptions, for instance) or use unfair commercial practices (misleading acts or omissions and/or aggressive commercial practices).

This difference in treatment could be justified by an objective reason: the contracting party is a consumer and not a professional and, therefore, it could be considered as disproportionate to impose the correlative duties on the other consumer. In my opinion, this argument is obviously relevant. It does not mean, however, that consumers contracting with other consumers could not benefit from some protection measures, it being agreed that the duties

24. On the weakness of a contractual party, see H. JACQUEMIN (2010). See also the Case Law of the European Court of Justice: “the system of protection introduced by the Directive is based on the idea that the consumer is in a weak position vis-à-vis the seller or supplier, as regards both his bargaining power and his level of knowledge. This leads to the consumer agreeing to terms drawn up in advance by the seller or supplier without being able to influence the content of those terms” (E.C.J., October 26, 2006, C-168/05, Mostaza Claro, ECLI:EU:C:2006:675, point 25; see also E.C.J., June 27, 2000, aff. C-240/98 à C-244-98, Oceano Grupo, point 25; E.C.J., June 4, 2009, aff. C-243/08, Pannon GSM Zrt, point 22; E.C.J., October 6, 2009, aff. C-40/08, Asturcom Telecomunicaciones SL, points 29-31; E.C.J., November 9, 2010, aff. C-137/08, VB Pénzügyi Lizing Zrt., points 46-48; E.C.J., March 15, 2012, aff. C-453/10, Perenicevá et Perenica; E.C.J., October 3, 2013, aff. C-59/12, BKK Mobil, point 35 or E.C.J., September 3, 2015, aff. C-110/14, Horățiu Ovidiu Costea, point 18).
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should fall to the platform, not the contracting party (see points 2.2. and 3.1. below).

2.2. Low level of duties imposed on the platforms

a) Low level of duties of platforms towards consumers

The duties prescribed for the platform by the applicable legal framework, for the benefit of the consumers (either providers or recipients of the services) are rather limited. Indeed, they only relate to the intermediation services provided by the platform to the consumers. In this context, they shall mainly provide broad information duties prescribed by the Directive on electronic commerce, if applicable—see e.g. the Uber case—or by the Consumer Rights Directive. In most cases, their intermediation activity is not regulated as such: under Belgian Law for instance, the platform should normally be considered as a broker and, except in some specific matters (credit, insurance, travel, etc.), this activity is not regulated as such and the general contract law (in the Civil Code) is applicable.

This is also confirmed by the terms of the services.

In the case of Airbnb, for instance, it is clearly stated that:

“1.2. as the provider of the Airbnb Platform, Airbnb does not own, create, sell, resell, provide, control, manage, offer, deliver, or supply any Listings or Host Services. Hosts alone are responsible for their Listings and Host Services. When Members make or accept a booking, they are entering into a contract directly with each other. Airbnb is not and does not become a party to or other participant in any contractual relationship between Members, nor is Airbnb a real estate broker or insurer. Airbnb is not acting as an agent in any capacity for any Member, except as specified in the Payments Terms.

1.3 While we may help facilitate the resolution of disputes, Airbnb has no control over and does not guarantee (i) the existence, quality, safety, suitability, or legality of any Listings or Host Services, (ii) the truth or accuracy of any Listing descriptions, Ratings, Reviews, or other Member Content (as defined below), or (iii) the performance or conduct of any Member or third party. Airbnb does not endorse any Member, Listing or Host Services”.25

This means that Airbnb does not assume any liability or warranty—and, therefore, does not assume any legal or financial risk—with regard to the performance of the agreement concluded between the Hosts and the Members.

By virtue of the general theory of contract law (under Belgian civil law,26 for instance), this is absolutely consistent: both contracts (concluded between the participants and the platform, on the one hand, and between the participants, on the other hand) are independent from each other. The platform is a third party with regard to the agreement concluded between the participants and no duties can be imposed on it by virtue of this agreement.

Nevertheless, one can easily understand how unfair this solution is: the platform provides an intermediation service, earns (a lot of) money for it, is subject to only a few duties and, should there be any issue or dispute between the participants, does not assume any legal of financial risk. The objective of legal regulation is to ensure a balanced and fair allocation of risk. In my opinion, the platform should not necessarily assume all and any risk in the case of breach of its duties by a party to the contract concluded through its intermediation. However, the current level of duties is too low (at least at EU level) and additional duties should be imposed on the platform.

b) Exceptionally, in some specific matters, additional regulatory measures must be observed

In some specific matters, intermediaries’ activities are however subject to a specific legal framework, prescribing, for instance, additional duties in order to access to the market (for instance, prior authorization) or to carry out such activities (for instance, information duties to consumers).

This is the case, for instance, in the credit market. One could, however, wonder whether the peer-to-peer lending platforms should be considered as credit intermediaries and therefore be subject to the correlative duties. If it remains
a third party to the loan agreement (which is normally the case), the peer-to-peer service provider cannot be considered as a creditor, as defined in directive 2008/48/EC on credit agreements for consumers (art. 3, b). Indeed, it does not grant or promise to grant credit to the borrower. It is only the lender who does so. In some specific cases, the peer-to-peer service provider could be considered as a “credit intermediary”. This is defined as “any natural or legal person who is not acting as a creditor and who, in the course of his trade, business or profession, for a fee, which may take a pecuniary form or any other agreed form of financial consideration:

(i) presents or offers credit agreements to consumers;
(ii) assists consumers by undertaking preparatory work in respect of credit agreements other than as referred to in (i); or
(iii) concludes credit agreements with consumers on behalf of the creditor” (art. 3, f), of directive 2008/48/EC on credit agreements for consumers).

According to this definition, a person could be considered as a credit intermediary even if it is not a party to the credit agreement (see point ii in particular). Regardless, a credit agreement (as defined in art. 3, c), of directive 2008/48/EC on credit agreements for consumers) must be granted or promised to be granted. This is only the case when the lender is a creditor (as defined in art. 3, b), of directive 2008/48/EC on credit agreements for consumers) and the borrower a consumer (as defined in art. 3, a), of directive 2008/48/EC on credit agreements for consumers). If both lender and borrower are consumers, no credit agreements as defined in directive 2008/48/EC are granted and the peer-to-peer service provider cannot be considered as a credit intermediary.

This does not mean that the activity is not regulated as such: for instance, peer-to-peer lending, between consumers, remains prohibited under Belgian law.

**c) Does the platform benefit from the liability exemption prescribed by Article 14 of the directive on electronic commerce?**

One could wonder whether, in addition to the low level of duties prescribed for the platforms, they could also benefit from the liability exemptions prescribed by Directive 2000/31/EC on electronic commerce.

Providers of information society services can benefit from a (criminal and civil) exemption liability for three kinds of activities: mere conduit (Art. 12), catching (Art. 13) and hosting (Art. 14). Regarding the activities of the platforms in the context of the sharing economy, only the last case will be analyzed.

Pursuant to Article 14 (1) of Directive 2000/31/EC on electronic commerce, “where an information society service is provided that consists of the storage of information provided by a recipient of the service, Member States shall ensure that the service provider is not liable for the information stored at the request of a recipient of the service, on condition that: (a) the provider does not have actual knowledge of illegal activity or information and, as regards claims for damages, is not aware of facts or circumstances from which the illegal activity or information is apparent; or (b) the provider, upon obtaining such knowledge or awareness, acts expeditiously to remove or to disable access to the information”. In addition, there is no general monitoring obligation.

It could be considered that the platform is storing information provided by the recipient of the service (i.e. the platform participants, mainly the provider/seller). In the context of web 2.0, it is indeed obvious that the activities listed in Article 14 (1) of the Directive also refer to this kind of storage: in the L’Oréal case, the ECJ judged that “with regard to the online marketplace at issue in the main proceedings, it is not disputed that eBay stores, that is to say, holds in its server’s memory, data supplied by its customers. That storage operation is carried out by eBay each time that a customer opens a selling account with it and provides it with data concerning its offers for sale. Furthermore, eBay normally receives remuneration inasmuch as it charges a
percentage on transactions completed on the basis of those offers for sale”.  

The platform will only benefit from the exemption of liability, provided that it falls within the scope of this provision.

First of all, it must be considered as an “information society service”, as defined in the Directive (as previously mentioned, this will not necessarily be the case for any intermediary of the sharing economy—see the Uber case, as discussed before). If so, it must also be demonstrated that the platform is an “intermediary provider”. The ECJ stated that it “is not the case where the service provider, instead of confining itself to providing that service neutrally by a merely technical and automatic processing of the data provided by its customers, plays an active role of such a kind as to give it knowledge of, or control over, those data”.  

For other activities it is carrying out, the platform cannot be considered as a host service provider; consequently, the exemption of liability is excluded. It does not mean, however, that the platform will necessarily be held liable: it must indeed be proven that the requirements of the liability regime are fulfilled in the case at hand. Should there be any complaint brought by a third party against the platform (e.g. grounded on libelous content in the listings or the sale of counterfeiting goods, violating intellectual property rights), the platform will claim for the liability exemption under Article 14 of the Directive and, depending on the application of the neutrality criterion, it may or may not benefit from it.

The liability exemption is not applicable should the claim be brought by the participants (either the provider or the recipient of the service), when the claim is based on the violation, by the platform, of its duties towards the participants (by virtue of the applicable law or the contract concluded between the platform and the participants). Indeed, in that case, the platform is not acting as an intermediary but as the provider of the service.

3. Propositions to ensure a higher level of consumer protection

3.1. Prescribe additional duties for the platforms

Consumers contracting with other consumers on the platform could suffer from a lack of information. Since both parties are consumers, the EU Consumer Acquis is not applicable. This is not disputable: it would obviously be disproportionate to impose information duties on a consumer, when (s)he is contracting with another consumer.

Additional duties, prescribed by law (ideally, at EU level), could however rely on the platform. As explained below, in most cases, they have relatively few duties. The platform should have a duty to inform the consumers about how it operates and the risks for the participants, the criteria taken into account for the rating, and, if applicable, the additional duties prescribed for them (from a tax point of view, for instance). Platforms should also build the website in order to ensure that the parties provide each other with the main information. They should be much more involved in the case of a dispute between participants, in order to provide them with records or proof, and to help them to reach an amicable settlement. Platforms should also take additional actions against participants that do not comply with the rules and breach their duties towards the other party. Some platforms are already implementing these kinds of measures, while others are still a long way off.

In this sense, it must be pointed out that the French Code of Consumers Rights prescribes specific information duties for platforms (especially when their purpose is to connect parties in order to facilitate the conclusion of contracts) in relation to: the terms and conditions of the service proposed by the platform; the contract relationship, the capitalistic link or the remuneration of the platform, as soon as it has an impact on the referencing or the rating of the service; the quality of the listing’s author, and the rights and duties of the parties from a civil or a tax point of view, should the platform facilitate a relationship with professionals or non-professionals (Art. L-111-7, II). This information should be

29. ECJ, 12 July 2011, case C-324/09, L’Oréal e.a., § 110.
30. ECJ, 12 July 2011, case C-324/09, L’Oréal e.a., § 110.
31. For example, this is the case for the assessment of the sellers or the help granted to create better listings.
fair, clear and transparent. Specific information should also be given, when the consumers are entitled to provide their opinion on the contracting party (Art. L-111-7-1). Additional information duties are also prescribed in the context of the New Deal for Consumers, in the proposal for a directive dated 11 April 2018\textsuperscript{32} (see prop. of new art. 6bis of Directive 2011/83/UE).

Following the consultation of the European Commission, “a clear majority of consumer respondents felt that reputation or rating systems were very important in facilitating transactions on collaborative economy platforms. One professional services association echoed this, saying that consumer reviews might be a useful tool in maintaining high standards in online service provision”.\textsuperscript{33} These kinds of tools must therefore be promoted, with clear information on how they operate and on the rights and duties of the parties using it.

3.2. What about Blockchain and smart contracts? Could this be the solution?

With artificial intelligence and big data, Blockchain is one of the most discussed topics in the IT community. People indeed predict that it could give rise to a new digital revolution, as the Internet did 25 years ago. It can be defined as a “distributed, shared, encrypted-database that serves as an irreversible and incorruptible public repository of information”.\textsuperscript{34} Bitcoin, as cryptocurrency, is probably the most famous application relying on this technology, but it is not the only one. The potential of Blockchain could indeed be exploited in the context of financial services (including banking and insurance services), e-government (including e-voting), intellectual property rights management, supply chain, etc.

The high level of security of the Blockchain, notably against hacking, is achieved through the use of asymmetric cryptography and mining. With mining, transactions (or, more precisely, a selection of them) are recorded into a block (which also includes a reference to the previous block), which is then added to the other blocks to form a long chain. All blocks are validated by a Proof-of-Work—a complex mathematical problem that must indeed be solved by the miners—or any other mining process (like a Proof-of-Stake, for instance).\textsuperscript{35} Trust is also ensured thanks to decentralization: contrary to the traditional model, where information is recorded in a unique ledger, fully controlled by an intermediary, with the Blockchain, ledgers are decentralized in all the nodes of the network. More precisely, the Blockchain is replicated in real time on all the computers in the network with the same database. Blockchain is also fully transparent as data are fully visible to all users (and potentially controlled by them). Data are however anonymized and, at least with regard to Bitcoin, it is nearly impossible to identify the natural person behind the Bitcoin address.

Blockchain could be public and open, like Bitcoin or Ethereum, or permissioned and private. In the latter case, “a limited group of actors retain the power to access, check and add transactions to the ledger. This enables ‘mainstream’ actors such as banks and governments to maintain substantial control over the blockchains. Permissioned blockchains are less transparent and decentralized than their permissionless counterparts and, as such, they embody a somewhat different social and political value”.\textsuperscript{36}

Apart from cryptocurrencies, so-called “smart contracts” are the other disruptive application of Blockchain. With the “smart contract”, the purpose is not only to record a transaction (e.g. a transfer of money from A to B, as is the case with Bitcoin), but also to automatically execute some transactions, when specific requirements are met. The transaction is therefore self-executed, automatically and without any human intervention (unlock the door of

\textsuperscript{32} See add. references in footnote 2.
\textsuperscript{33} European Commission (2016, p. 27).
\textsuperscript{34} A. Wright and P. De Filippi (2015, p. 2). On the Blockchain in general, and its legal implications, please see also STOA (2017); Blockchain France (2016).
\textsuperscript{35} See also A. Wright and P. de Filippi (2015, p. 6): “a Blockchain is simply a chronological database of transactions recorded by a network of computers. Each Blockchain is encrypted and organized into smaller datasets referred to as “blocks”. Every block contains information about a certain number of transactions, a reference to the preceding block in the Blockchain, as well as an answer to a complex mathematical puzzle, which is used to validate the data associated with that block”.
\textsuperscript{36} STOA (2017, p. 5).
an accommodation when the fees are paid; award the consumer with compensation when the flight is delayed, etc.).

With this technology, the intermediary providers of the sharing economy become useless: business models that rely on Blockchain are implemented in order to avoid the intermediaries (and their fees, which benefit them and not the users of the system). Slock.it is an example of solution relying on Blockchain (Ethereum), without any need for intermediation: according to its website, "the sharing economy's story doesn't end with taxis and vacation rentals. It’s expanding to touch consumers and companies, employees and employers. We believe that Airbnb’s will soon become fully automated, and small business owners will prefer to rent work spaces on demand rather than commit to complex leases". Other examples are also developing in the field of ridesharing, such as Arcade City and La’Zooz.

One could therefore consider that, with the Blockchain, the intermediary providers of the sharing economy will be "uberized".

Does this mean that, with the Blockchain, the consumer acting on the platforms will benefit from a higher level of protection? From an economical point of view, this could be the case, since no fees will be paid to the platform. They could also be much more involved in the functioning of the platform. However, the self-executing feature of the contract is not necessarily consistent with the main principles governing contract law in civil law countries, nor with the EU Consumer Law Acquis. Indeed, since the conclusion of the agreement is automated, there is normally no room to contest unfair contract terms, unfair commercial practices, violation of information duties, breach of the contract, conformity issues, etc.

In some specific cases, Blockchain technology could be a good solution for consumers (for instance, to automatically grant compensation to the passengers of a delayed flight, or in the context of automated processing with limited potential uncertainty or risk, where there is no doubt about the information and the consent of the consumer regarding such automation and its consequences). In other cases, additional legal measures should be implemented, in order to counterbalance the potential negative effect of the self-execution, and ensure a high level of consumer protection.

References


37. See on that topic, and the level of the fees, Blockchain France (2016, p. 9).
40. Please see <http://lazooz.org>.
41. On this topic, please see Zolynski (2017, p. 385 and ff).


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