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SMART CONTRACTS: A SHORT JOURNEY INTO THE FUTURE OF CONSUMER CONTRACTS

The smart contract is a computer program that facilitates the automation of processes related to human bargaining. The topic is receiving some attention in doctrine perhaps by virtue of its curious name and perhaps because the concept is closely linked to the idea of the automation of law, a hotly debated topic. Having said that, it is not clear whether this innovation will be fully applied in the next few years in the field of consumer mass bargaining. On the one hand, the issue lends itself to an initial reflection on the evolution of the standardisation of consumer contracts in the global and digital economy. Our hypothesises is the smart contract constitutes a form of 'extreme standardisation' of consumer contracts, or rather, of their total or partial execution. This form is immediately very particular and critical for the interpreter, since it is intimately linked to the technological medium (i.e. Blockchain technology) and straddles the digital world and the real one. On the other hand, the paper considers whether the automation process, which is fully realised by the smart contract after the advent of electronic commerce and digital platforms, will be an opportunity to reduce the costs of justice in consumer disputes, or, on the contrary, will constitute a risk to consumer freedoms.

Key words: *smart contracts, EU consumer law, crypto economy, smart consumer contracts, enforcement of consumer rights*

INTRODUCTION

European law provides consumers with quite a wide range of rights. In particular, in November 2019, the European Parliament and the Council approved Directive 2019/2161, which strengthens and updates European consumer protection law.[1]

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[1] Directive (EU) 2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Parliament Directives 98/6/EC, 2005/29/EC and

This is just one of the latest measures adopted in this area, confirming the strategic importance held by consumer protection for the European Union (EU) in order to improve the quality of life of its citizens. Moreover, the commitment of the European institutions to ensure a high level of consumer protection is enshrined in the most significant legislative acts, such as the Treaty on the Functioning of the EU (Articles 12, 114 and 169) and the Charter of Fundamental Rights of the EU (Article 38). This legislation is constantly evolving: it is sufficient to cite as an example Directive 2019/771, established in May 2019 to regulate the electronic commerce of goods and services.[2] Now, the decision to intervene with the aforementioned Directive 2019/771 resulted from the check of the effectiveness of current legislation in protecting consumers, carried out in 2016 and 2017 by the European Commission.[3]

The results of this empirical research confirm, once again, that substantive law rules are generally *fit for purpose* (according to the bureaucratic language of the EU Commission), but that the application of these rules is somewhat compromised by insufficient knowledge of the legislation and of the tools to be activated in order to exercise these rights, as well as consumers' low propensity to act in protection of these rights. This is despite the fact that the EU has also adopted, over time, a whole series of procedural instruments aimed at promoting the exercise of consumer rights. In illustration of this, the EU has established a European procedure for small claims,[4]

2011/83/ EU European Union and of the Council for a better application and modernization of Union rules on consumer protection, OJ L 328, 18 December 2019, 7-28.

[2] Directive (EU) 2019/771 of the European Parliament and of the Council of 20 May 2019 relating to certain aspects of contracts for the sale of goods, amending Regulation (EU) 2017/2394 and Directive 2009/22 / EC, and repealing Directive 1999/44 / EC, OJ L 136, 22 May 2019, 28-50.

[3] EU Commission, *REFIT: the commitment to simplify European legislation*, 2019. Since 2002, the European Union has set itself the goal of simplifying, improving and making its legislation more understandable with the "Better Lawmaking" program. Over the years this initiative has grown, always with the aim of verifying that European law ensures the expected benefits to citizens, businesses and society, while eliminating bureaucracy and reducing regulatory burdens. The REFIT platform, established in 2015 by the Commission, fits into this framework to evaluate the effectiveness of European legislation and make recommendations on the suggestions made by citizens and stakeholders. The platform is chaired by Frans Timmermans, first vice-president of the Commission, and is composed of two groups (representatives of governments, representatives of the business world, the social partners and civil society, the European Economic and Social Committee and the Committee of the Regions). Each year, the Commission publishes the REFIT Scoreboard online and, thanks to these analyzes, has promoted ten new legislative initiatives in 2019.

[4] Regulation (EC) n. 861/2007 of the European Parliament and of the Council, of 11 July 2007, establishing a European procedure for small claims, OJ L 199, 31 July 2007, 1-22.

recommended that Member States introduce collective redress systems[5] and, more recently, turned its attention to out-of-court dispute resolution tools.[6]

Lastly, the EU has adopted the aforementioned Directive 2019/2161, which should be transposed by 28 November 2021 by the Member States, partially modifying the existing legislation.[7] The measure is focused, above all, on three aspects: the penalties applied in the event of infringements; the remedies that can be invoked by consumers, and customer protection in remote transactions.[8]

Unfortunately, none of these initiatives appear to be very effective in achieving the objective of ensuring the effectiveness of consumer rights. These mechanisms appear to be somewhat complex to activate by the average and vulnerable consumer. Furthermore, the diversity of these tools and the fragmentation of the solutions confuse even further the overall picture of the remedies available to be activated in the Member States. It follows that the gap between substantive rights and their application, namely the exercise of these rights in practice, is still very wide, so much so that the problem of the limited effectiveness of consumer law currently

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[5] Directive 2020/1828 of the European Parliament and of the Council of 25 November 2020 on representative actions for the protection of the collective interests of consumers and repealing Directive 2009/22/EC.

[6] Directive 2013/11/ EU of the European Parliament and of the Council of 21 May 2013 on alternative dispute resolution for consumer disputes, amending Regulation (EC) No. 2006/2004 and Directive 2009/22/EC (Directive on ADR for consumers), OJ L 165, 18 June 2013, 63-79.

[7] In particular, the provision amends the directives on unfair commercial practices (2005/29/EC), on consumer rights (2011/83/EU), on unfair contract terms (93/13/EEC) and on the indication of prices. (98/6/EC).

[8] The provision of adequate sanctions is essential to discourage infringements and effectively punish those that may be committed. In this regard, however, there was a discrepancy between the various Member States, which do not always guarantee the imposition of effective, proportionate and dissuasive financial penalties against those who commit widespread infringements or infringements in the single market. To overcome this situation, Directive 2019/2161 has indicated common non-exhaustive criteria for the application of sanctions by the competent national authorities, administrative or judicial (such as, for example, the nature, gravity, extent and duration of the infringement, its repetition, any possible reparation proposed to the consumer for the damage suffered) infringement. The other front is that of the availability of proportionate and effective remedies for consumers harmed by unfair commercial practices, such as compensation for the damage suffered and the reduction of the price or the termination of the contract. Member States may maintain or introduce the right to other remedies, such as repair or replacement, to ensure that harmed consumers are completely eliminated from the effects of such practices. Finally, there are the provisions relating to *online* transactions with the equalization of protection in the cases of contracts for paid digital services and those in which the consumer provides his personal data, and the obligation of clear and understandable communication for the cases. where a professional has paid, directly or indirectly, the online search feature provider to get a better ranking of a product within the search results.

has no solution. Even doctrine does not seem to have found the correct way of interpreting the problem, despite the efforts made in comparative studies of the solutions and methods present in national legal systems.[9] The EU is now focusing on regulating large platforms in digital markets.[10]

SMART CONSUMER CONTRACTS

However, the picture briefly outlined above could alter in the near future. The wind of change is blowing among consumers, and technological evolutions may drive a series of innovations.[11] In fact, various technological tools, more precisely, digital, can promote the protection of consumer rights: just consider the possibility of using web applications to submit to companies and to manage, at no particular cost, complaints relating to any disservices. It may also be possible for some companies, which would like to apply the technology to legal practice (often referred to with the English expression: "*Legal Tech*"), to work alongside consumer associations, allowing them to find new ways of supporting consumer disputes economically: this may be the case, for example, where such firms want to bear the costs and legal risks of consumer litigation, especially in mass litigation, for a success fee. This phenomenon has recently emerged in air transport where companies present in the *Legal Tech sector* already handle compensation procedures in the event of flight delays. The technology makes it possible to verify, quickly and without additional costs, the existence of the requirements with respect to the right to compensation, as well as to verify flight data.[12] A further example concerns

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[9] *Enforcement and Effectiveness of Consumer Law* (eds. Hans-W. Micklitz, Geneviève Saumier), New York, 2018. The volume cited here contains a comparative law study on public and private consumer protection mechanisms in a number of jurisdictions.

[10] Proposal for a Regulation of the European Parliament and of the Council on contestable and fair markets in the digital sector (Digital Markets Act), COM/2020/842 final, *https://eur-lex.europa.eu/legal-content/en/TXT/?qid=1608116887159&uri=COM%3A2020%3A842%3AFIN,* 16.05.2022. For a comment, see Nicolas Petit, "The Proposed Digital Markets Act (DMA)", *A Legal and Policy Review*, *https://ssrn.com/abstract=3843497* or *http://dx.doi.org/10.2139/ssrn.3843497*, 14.05.2022. See also Andrej Savin, "The EU Digital Services Act: Towards a More Responsible Internet", *Copenhagen Business School, CBS LAW Research Paper*, No. 21-04.

[11] For an example, see Oscar Borgogno, Cristina Poncibò, "The Day After Tomorrow of Banking - On FinTech, Data Control and Consumer Empowerment", *Oxford Business Law Blog, https://www.law.ox.ac.uk/business-law-blog/blog/2018/04/law-and-autonomous-systems-series-day-after-tomorrow-banking-fintech*, 04.05.2022.

[12] Martin Fries, "Law and Autonomous Systems Series: Smart consumer contracts" - The end of civil procedure?", *Oxford Business Law Blog*, *https://www.law.ox.ac.uk/business-law-blog/blog/2018/03/smart-consumer-contracts-end-civil –procedure*s, 04.05.2022.

the recent Italian legislation on the use of information technologies to manage the civil process effectively and, more specifically, mass litigation.[13]

Although technology has great potential for multiple applications to reduce the gap between consumer rights and their effectiveness, the evolution of these innovations must be observed very carefully and it must be verified whether - and to what extent - they can be combined with compliance with the main purposes of consumer law.

In this contribution we focus specifically on the figure of the *smart contract*.[14] This terminology dates back to 1994 when Nick Szabo coined the expression when stating that "New institutions, and new ways to formalize the relationships that make up these institutions, are now made possible by the digital revolution. I call these new contracts 'smart', because they are far more functional than their inanimate paper-based ancestors".[15] The term gained some popularity among professionals, and also among the general public, with the introduction of the *Ethereum blockchain and smart contract* models that are used by the community present on *Ethereum*.[16] Now, the goal of the main supporters of *blockchain technology* is to entrust the regulation of global networks to a computer code (precisely: the *smart contract*)

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[13] Law of 28 February 2020 n. 8 is conversion into law, with amendments, of the decree-law of 30 December 2019, n. 162, containing urgent provisions regarding the extension of legislative deadlines, the organization of public administrations, as well as technological innovation, GU General Series, n. 51 of 29 February 2020 - Suppl. Ordinary n. 10.

[14] After careful reflection, the author believes that the concept is untranslatable into the Italian language, since it is a term (and concept) of a technical nature (i.e. proper to computer science) that has a clear and precise meaning for professionals independently by the jurisdiction to which it belongs. It is therefore believed that creating a neologism in Italian could contribute to creating confusion about the concept under consideration. On the problem of legal translation and untranslatable concepts, see Rodolfo Sacco, "Language and Law", *Ordinary Language and Legal Language* (ed. Barbara Pozzo), Milan, 2005, 1-21.

[15] Nick Szabo, *Smart Contracts: Building Blocks for Digital Markets, www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart_contracts_2. html*, 05.04. 2022.

[16] The bibliography relating to the relationship between law and *blockchain technology* is rich and constantly evolving given that the topic, although recent, is the subject of attention in the doctrine under different profiles (philosophy of law, constitutional and public law, law and technology, comparative law, just to name a few). Here we limit ourselves to indicating in chronological order some texts which, at present, can be considered fundamental (at least according to the author's judgment), namely: Primavera De Filippi, Aaron Wright, *Blockchain and the Law: The Rule of Code*, Cambridge, Massachusetts, 2018; Michele Finck, *Blockchain Regulation and Governance in Europe,* Cambridge, 2018; Philipp Hacker, Ioannis Lianos, Georgios Dimitropoulos, Stefan Eich, *Regulating Blockchain. Techno-Social and Legal Challenges*, Oxford, 2019. See also, Benedetta Cappiello, Gherardo Carullo, *Blockchain, Law and Governance*, Springer Cham, Switzerland, 2020.

that lends itself to being immutable, in the sense that this programme cannot subsequently be changed. Ideally, this concept could be seen as the full realisation of the principle of the freedom to contract between people (in technical language: nodes) who are able to make transactions without waiting for the legitimacy of a third institution (e.g. the State), or the intervention of a third party (e.g. the judiciary) when entering into and/or executing the agreement.

In particular, what distinguishes the *smart contract* from previous electronic contracts is the automated execution of the program on the *blockchain network*.[17] In fact, automated execution is considered a peculiar feature of the *blockchain* and particularly of public and free-access networks, since no single party or group of players can interfere with the execution of the *software* in this very particular (and virtual) context. Therefore, the *smart contract* is essentially a piece of *software* that runs automatically and whose execution cannot be interrupted unless this possibility is specifically integrated into the program at the time of its initial processing.

However, it should be noted immediately that such programs are neither particularly intelligent (as inferred by the name) nor necessarily legally binding contracts. Such programs are not intelligent in the AI sense, as they are unable to understand natural language (such as contractual terms) or to verify independently whether an event relevant to the execution of the contract has occurred. For these purposes, "*oracles*" are required. An oracle can consist of one or more people, groups, or programs which provide the *software* with relevant information, such as whether a natural disaster has occurred (to issue an insurance payout), or whether goods have been delivered *online* (to enable payment).

Furthermore, the *smart contract* cannot be qualified as a contract in the legal sense, unless specific circumstances exist. On this point, it can be said in an extreme nutshell that European and American doctrine now discusses whether the *smart contract* can configure a valid and binding contract between the parties. Generally, *common law scholars* and, in particular, some American scholars seem to be more inclined to admit the possibility that this program could configure a real contract, given that the consent of the parties can be expressed without particular formalities when the bargaining takes place with the digital medium. On the other hand, their colleagues in continental Europe (e.g. Germany, France, Italy, Spain) are more cautious

[17] Larry A. DiMatteo, Michel Cannarsa, Cristina Poncibò, *The Cambridge Handbook of Smart Contracts, Blockchain Technology and Digital Platforms*, Cambridge, 2019; Kevin Werbach, *The Blockchain and the New Architecture of Trust*, Cambridge, Massachusetts, 2018; Kevin Werbach, Nicolas Cornell, "Contracts *Ex Machina*", *Duke Law Journal*, No. 2, Vol. 67, 2017, 313-382, *https://scholarship.law.duke.edu/dlj/vol67/iss2/2*, 04.05.2022; Lauren Henry Scholz, "Algorithmic Contracts", *Stanford Technology Law Review*, Vol. 20, 2017, 128 ff.

as they believe that the *smart contract* cannot constitute a real contract, but that the latter represents a mere executive act of a contract.[18] In the writer's opinion, it is interesting to note how this case - the result of the innovative capacity of technology - is difficult for the jurist to understand, regardless of the legal family of reference. Technology poses such challenges as to make the traditional approach of the comparatist, which has been (and indeed still is) based on the territorial conception of law (e.g. national state and legal family), appear obsolete.[19] From a different point of view, it should be noted that the case in question is of global nature, given that it is the result of the virtual world and therefore does not have particular links with a specific legal system. In other words, it is a contract with global value based on technology.

It is difficult to predict what the effects of this innovation will be on consumers, although some initial doctrinal reflections can be identified. Some authors highlight that this technology is likely to have multiple applications of interest to consumers.[20] In truth, the *smart contract* has mainly been used to carry out simple transactions related to the circulation of cryptocurrencies, a sector for professional or quasi-professional investors,[21] but this program could come to regulate the execution of many different types of transactions between companies and consumers in the near future. In fact, doctrine is divided between authors who consider this innovation an opportunity for improvement with respect to the effectiveness of consumer law and those who fear the consequences of bargaining automation on the freedom and exercise of consumer consent in the act of purchasing consumer goods and services.[22]

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[18] For a description of the different doctrinal positions on the case in question, see Cristina Poncibò, *Il Diritto Comparato e la Blockchain*, Napoli, 2020, 112 ff.

[19] C. Poncibò, 2020, in the introductory part (on the subject of the deterritorialization of law).

[20] Manuel Schlegel, Liudmila Zavolokina, Gerhard Schwabe, "Blockchain Technologies from the Consumers' Perspective: What Is There and Why Should Who Care?", *Proceedings of the 51st Hawaii International Conference on System Sciences*, 2018, 1-10. The article offers a very interesting overview of the effects that *blockchain technology* could have on the consumer, summarizing multiple aspects in a useful table on page 5 of the text cited here. See also Vera Cappelli, "Blockchain and energy supply. Reflections on liability between decentralization and consumer protection", *Observatory of civil and commercial law*, 2019, 335-364. The doctrine is just beginning to study the relationship between *blockchain* and competition and consumer law: Thibault Schrepel, "Collusion by Blockchain and Smart Contracts", *Harvard Journal of Law & Technology,* No. 1, Vol. 33, 2019, 117 and following; Asress Adimi Gikay, "European Consumer Law and Blockchain Based Financial Services: A Functional Approach against the Rhetoric of Regulatory Uncertainty", *Tilburg Law Review*, No.1, Vol. 24, 2019, 27-48.

[21] The doctrine reports the first litigation cases related to cryptocurrencies in the US courts, see: Georgios Dimitropoulos, "Global Currencies and Domestic Regulation?", *Regulating Blockchain. Techno-Social and Legal Challenges* (Eds. P. Hacker, I. Lianos, G. Dimitropoulos, S. Eich), Oxford, 2019.

[22] Cosimo Accoto, *Il mondo ex machina: Five short lessons in the philosophy of automation*, Egea, 2019.

From an initial point of view (paragraph 3 below), some authors fear the risks associated with the contract automation process (specifically, the general contract conditions), assuming that, sitting in front of a computer, the consumer will not be able to understand the contractual terms and knowingly express valid consent as technology advances.[23] From a second point of view (paragraph 4), other authors, taking a different stance, believe that the *smart contract* could contribute to improving the effectiveness of consumer rights, reducing or even eliminating the costs of justice.[24]

In the writer's opinion, both perspectives have valid aspects, as they focus on the nuances that characterise the automation ideology that is gaining ground in social sciences.

STANDARD CONTRACTS AND BLOCKCHAIN TECHNOLOGIES

General contract conditions (also referred to as *standard* contracts, membership contracts or mass contracts) were initially applied in the field of international trade law and, in particular, in maritime law with the standardisation of letters of credit. The turning point towards their generalised application took place with the advent of the mass production society. In fact, the *standard contract* is generally used by companies in order to regulate the sale of goods and services to consumers.[25] It is known that such contracts generally make use of standardised clauses, drawn up unilaterally by the manufacturer or commonly used and written by one party with the expectation of acceptance by the other, often without the latter having actually read the terms.

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[23] Tatiana Cutts, "Smart Contracts and Consumers", *LSE Legal Studies Working Paper*, *West Virginia Law Review*, No. 2, Vol. 122, 2019, 1.

[24] Oscar Borgogno, "Smart Contracts as the (new) Power of the Powerless? The Stakes for Consumers", *European Review of Private Law (ERPL)*, Vol. 26, Issue 6, 2018, 885-902; Oscar Borgogno, "Usefulness and Dangers of Smart Contracts in Consumer Transactions", *The Cambridge Handbook of Smart Contracts, Blockchain Technology and Digital Platforms* (Eds. L. Di Matteo, M. Cannarsa, C. Poncibò), 2019, 288-310.

[25] Cesare Massimo Bianca, *Le condizioni generali di contratto*, Milano, I, 1979, II, 1981; Guido Alpa, "Contratti di massa a) Profili generali", *Enc. dir. Agg., I,* Milano, 1997, 403; Cesare Massimo Bianca, "Condizioni generali di contratto: I) Diritto civile", *Enc. giur. Treccani*, VII, Roma, 1988, 2; C. Massimo Bianca, "Condizioni generali di contratto (tutela dell'aderente)", *Dig. Civ.*, III, Torino, 1988, 397 ss.; Giorgio De Nova, "Le condizioni generali di contratto", *Tratt. Rescigno*, X, Obbligazioni e contratti, t. 2, Torino, 1997, 127; Natalino Irti, "Scambi senza accordo", *Riv. trim. dir. proc. civ*., 1998, 1 ss.; Giorgio Oppo, "Disumanizzazione del contratto?", *Riv. dir. civ*., 1998, 525 ss.; Salvatore Patti, *Le condizioni generali di contratto*, Padova, 1996; Stefano Rodotà, "Il controllo sulle condizioni generali di contratto", *Il controllo sociale delle attività private*, (eds. Giuliano Amato, Sabino Cassese, Stefano Rodotà), Genova, 1972, 239 ss.; Gino Gorla, "Standard Conditions and Form Contracts in Italian Law", *The American Journal of Comparative Law*, No. 1, Vol. 11, 1962, 1-20.

General terms and conditions (hereinafter also 'GTCs'), on the basis of their standardised clauses, are generally exempt from negotiation, in view of the fact that they manage the daily transactions of millions of people. Around the mid-twentieth century, the capitalist system promoted the widespread adoption of these large-scale contractual models, making such contracts a fundamental tool for promoting the mass exchange of goods and services, which later became a useful and flexible tool for a wide range of transactions. GTCs have many positive aspects for the industry as they encourage trade by increasing the efficiency of transactions and, as they are presented on the basis of a 'take it or leave it' logic, they significantly reduce transaction costs. Therefore, GTCs represent, quantitatively, the vast majority of consumer contracts.

Despite this, doctrine on the subject of contracts does not seem to have developed a completely full and satisfactory descriptive or normative theory of this institution. In fact, GTCs continue to rely on the doctrine of the freedom to contract, which aims to allow individuals to carry out transactions *without* the interference of third parties (e.g. the State). In this sense, contract law can be seen as an expression of the tension between the freedom to contract and the ability - or the need - for the State to limit this freedom in order to safeguard general purposes. Liberalism, for example, views contractual freedom as an expression of a minimal state, in which people pursue their interests individually. GTCs are, in a sense, the greatest embodiment of this argument, since the hierarchy of interests in business and industry predominantly controls the nature of these transactions and firms are the entities that exercise this *freedom*, not consumers. This is particularly true in consumer contracts, where power imbalances and information asymmetries continue to exist between the parties.

In all likelihood, the reader's reluctance to read GTCs is even stronger and more problematic in the digital environment (consider electronic commerce), where interface design choices, such as discrete hyperlinks and underlining, promote this trend.

Indeed, recent advances in digital technologies are contributing to major and unprecedented changes in many aspects of our social and economic life, which, in turn, radically change the way we communicate, create and consume. This phenomenon is known as digitisation.[26] In all honesty, it must be said that it is not known whether digitisation will have any positive or negative effects on the effectiveness of consumer rights. The discussion is underway under the aegis of the EU Commission which, after the failure of CESL,[27] has definitely turned its

[26] Manuel Schlegel, Liudmila Zavolokina, Gerhard Schwabe, 2018, 1 -10.

[27] Proposal for a Regulation of the European Parliament and of the Council on a Common European Sales Law, COM / 2011/0635.

attention to the issue of protecting European consumers in the digital market. Furthermore, it is also correct to note that the most advanced technologies, such as the aforementioned *blockchain technology*, are not easily accessible to consumers. In fact, this technology mainly supports transactions of the most qualified financial operators in the exchange of cryptocurrencies. It is therefore a matter of reflecting on a hypothetical future and assuming that such technologies may also become accessible on a large scale in consumer relations, also through intermediaries.

Now, in this context, the *smart contract* executed on the *blockchain* can be seen - in our opinion - as a further evolution of the doctrine of GTCs with respect to the digital environment, since it achieves an extreme standardisation of the *standard* consumer contract. In this sense, doctrine praises the fact that the *smart contract* is easily (and perhaps naturally) the subject of a standardisation process by programmers. More specifically, this process gives us a *standard contract model* (assuming that we can speak of a contract) which corresponds to a series of algebraic expressions and which is actually very cheap and, therefore, according to the cited authors, preferable to more elaborate - and more expensive - contractual models. In particular, one author argues that "(...) Just as we moved from an earlier era of expensive, highly tailored clothing toward mass-produced garments with limited personalization, with the growing adaptation of blockchain technology and other contract automation tools, we may witness a shift from expensive and bespoke contracts to low-cost and highly standardized legal agreements with limited avenues for customization".[28]

COMSUMER STANDARD CONTRACT AND BLOCKCHAIN TECHNOLOGIES

To be clear, with the advent of the *smart contract*, GTCs will consist of a formula of numbers, letters and symbols which, as such, is easily repeatable countless times.

More specifically, there may be two possible standardisation processes. The first is the one already underway at the ISDA ("*International Swaps and Derivatives Association*"), which consists of a sort of translation and subsequent standardisation of some clauses of the contractual model for the sale and purchase of financial derivatives in the form of a *smart contract* on *blockchain*.[29] The second process, which is also

[28] Primavera De Filippi, A. Wright, op. cit.

[29] Joanne P. Braithwaite, "Standard Form Contracts as Transnational Law: Evidence from the Derivatives Markets", *Modern Law Review*, Vol. 75, Issue 5, 2012, 5. ss. The case of the aforementioned ISDA is perhaps one of the most interesting in order to observe the process of *translation* of a contract (or part of it) in the form of a *smart contract*. The association has prepared, among other

already underway, concerns the case where the standardisation of the *smart contract* takes place directly in the *blockchain network* by the community of programmers.[30]

The result of both processes does not change for the consumer: if we could see what lies behind an electronic commerce platform or, in the future, behind a *blockchain network*, we would find an incomprehensible series of numbers and signs that could represent a contract, a part of a contract, or the clauses relating to the execution of the contract. The *smart contract* that is a mere automatic execution of a contract is - obviously - less problematic than the consumer. However, a different conclusion would be reached if it were to constitute a real contract. In this case, the consumer would certainly lose the last glimmer of freedom in understanding the contractual terms and in expressing consent. This would be one of the most extreme forms of standardisation of the contractual agreement. In the words of an author which seem particularly compelling: "(…) consumers will lose their right to meaningfully participate in the formation and incorporation of meaningful provisions in consumer contracts. Over time, commercial institutions will gain complete control over this, and will, by implication, invert the value of contract over goods and services".[31]

In principle, this solution seems somewhat disconcerting due to its ability to deprive consumer relations of humanity. In other words, it is legitimate to ask whether this "extreme" standardisation is a development to be viewed favourably or, rather, with concern. In any case, this brief reconstruction of the standardisation processes of GTCs seems to contrast with the argument according to which technological evolution (e.g. *blockchain*, *smart contract* and *big data*) should lead us towards a "granular" right, that is, capable of being "customised" based on the situations and recipients.[32]

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things, a whole series of models and explanatory documents of these models for operators in the sector which can be consulted at *https://www.isda.org/2019/10/16/isda-smart-contracts*, 14.05.2022.

[30] An example is that of the model indicated as "ERC 20" is a technical standard used for *smart contracts* on the *Ethereum blockchain*. The community of programmers who are active on *the Ethereum blockchain* has developed this *smart contract*, which has some characteristics, through a collaborative process that is made possible by technology. Therefore, this *smart contract model* is the result of a community effort and is also constantly evolving; Khalid Husain Ansari, Umesh Kulkarni, "Implementation of Ethereum Request for Comment (ERC20) Token", *Proceedings of the 3rd International Conference on Advances in Science & Technology*, 2020, 1-6, *https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3561395,* 08.05.2022.

[31] The quote is from Ronald C. Griffin, "Standard Form Contracts", *North Carolina Central Law Journal*, No. 2, Vol. 9, 1978, 158-177, *http://commons.law.famu.edu/faculty-research/25*, 04.06.2022.

[32] Christoph Busch, Alberto De Franceschi, "Granular Legal Norms: Big Data and the Personalization of Private Law", *Research Handbook on Data Science and Law* (eds. Vanessa Mak, Eric Tjong Tjin Tai, Anna Berlee), Cheltenham, 2018, 408-428.

In consumer law of the future, therefore, there will probably be an oscillation between two opposites: on the one hand, the extreme standardisation of GTCs and, on the other, the maximum customisation of the rules.

Moreover, it is unlikely to be compatible with the current EU regulatory framework on consumer contracts mentioned briefly in the introduction, as well as with national laws on the matter (consider, for example, the application of Art. 1341 of the Italian Civil Code). However, it must also be recognised that the requirement of consumer consent in mass bargaining, often through GTCs, has long been a legal fiction, particularly with respect to the digital environment (i.e. e-commerce, platforms).

Therefore, the element of the *smart contract* merely represents the last step in a process whereby freedom and consent have been sacrificed in the name of mass consumption, constituting its extreme manifestation - and exaltation. The question then becomes: how much do we need to retain this fiction in law? The point is that doctrine has seriously criticised the validity of consumer consent in GTCs without, however, offering different and alternative solutions to the current model. It goes without saying that the EU regulatory framework is based on the doctrine of pre-contractual information obligations which must be fulfilled by the company towards the consumer and on the idea that, once informed, the consumer will be capable (an illusion) of expressing valid consent in mass bargaining. American doctrine, which has criticised the European propensity for excessively regulating consumer relations, has not, however, been able to develop original and convincing approaches.[33] In essence, the absence of a regulatory model has hindered the evolution of doctrine on GTCs since the 2000s.[34] However, as doctrine continues to gropes in the dark, technology continues to evolve and we are just beginning to understand the effects of automation on consumer relations (and beyond)[35] with the aim of identifying

[33] Oren Bar-Gill, Omri Ben-Shahar, "Regulatory Techniques in Consumer Protection: A Critique of European Consumer Contract Law", *Common Market Law Review*, 2013, 109 ff.

[34] The most persuasive critical studies are due to American scholars, such as: Omri Ben-Shahar, Carl E. Schneider, "The Failure of Mandated Disclosure", *University of Chicago Law & Economics, Olin Working Paper No. 516; University of Michigan Law & Econonomics, Empirical Legal Studies Center Paper,* No. 10-008, *https://ssrn.com/abstract=1567284* or *http://dx.doi.org/10.2139/ssrn.1567284*, 06.05.2022. We believe, then, to indicate two books that, despite the diversity of approaches and methodologies, seem to be particularly interesting, namely: Margaret Jane Radin, *Boilerplate: The Fine Print, Vanishing Rights and the Rule of Law*, Princeton, 2012; Oren Bar-Gill, *Seduction by Contract, Law, Economics, and Psychology in Consumer Markets*, Oxford, 2012.

[35] Christiana Markou, *Consumer Protection, Automated Shopping Platforms and EU Law*, London, 2019.

a regulatory model that can respond adequately, on the one hand, to ensuring people's freedoms are respected and, on the other, to the ideology of innovation.[36]

ENFORCEMENT OF SMART CONSUMER CONTRACTS

In relation to the second cited profile, it should be noted that the automation of consumer contracts (often: GTCs) or simply of the execution of this contract, in whole or in part, which takes place thanks to the *smart contract*, also presents opportunities that should be considered. In particular, as mentioned, the *smart contract* involves automatic execution on the *blockchain network*. This aspect makes it possible to obtain the execution of the commitments contractually assumed by the company at no cost to the consumer. For example, using the aforementioned program, consumers can obtain the settlement of an insurance claim quickly and automatically. Insured travellers who have suffered a cancellation or a delay of more than two hours could receive a refund directly to their bank account (without even requesting it) thanks to cross-referencing of the insurance policy data with the actual details of the flight departure and landing times.[37] It follows that the consumer would not be required to carry out any activity, or to incur any cost, in order to obtain the payout of the claim. In these terms, the *smart contract would make it* possible to eliminate or, at least, significantly reduce the costs of justice in consumer disputes which, as stated at the outset, pose an obstacle to the effectiveness of the rights guaranteed by European law to citizens. In other words, the transition from civil trial to automation could therefore radically change justice in consumer relations.[38]

It is also true that similar solutions, albeit future-oriented, are being studied by public authorities and private companies that seem inclined to rely on technology - precisely in a computer program - to promote consumer rights in mass bargaining.[39] In particular, the German government aims to favour the application of the *smart contract* in consumer contracts through the collection of experiences and the standardisation of contractual models based on the industrial and commercial sector. A recent working document from the German government

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[36] John Patrick Leary, "The Innovation Cult", *Jacobin Magazine, https://jacobinmag.com/2019/04/innovation-language-of-capitalism-ideology-disruption*, 04.05.2022.

[37] The case takes up the experience of *Fizzy,* an *Axa* group project aimed at managing insurance policies relating to air transport. However, the project site is no longer accessible at the date of publication of this paper and therefore it is not possible to indicate a reference to the reader.

[38] M. Fries, op. cit., 30.

[39] *Ibidem.*

examines the possible applications of this technology with particular attention to financial services, investment services, and public services aimed at German citizens.[40] It seems legitimate to ask whether companies will be willing to adopt this new customer relationship model which links the fate of the consumer contract to automation. In this case, they should equip themselves with programmers and/or programs in order to promote the application of a *smart contract model in contractual* relationships with their customers. Furthermore, leaving aside the initiatives of the industry pioneers, it is also logical to ask whether this model could be applied on the large-scale, as only in this case could we speak of a real change of perspective in the protection of consumer rights.

CONCLUSION

We will now conclude our short journey into the future of consumer law. It is difficult to say whether the *smart contract* will actually come to be applied in consumer contracts and, above all, to identify the risks and benefits of this innovation. We have attempted to highlight the risks associated with the automation of consumer contracts which, in this case, appears to be led towards its extreme side. At the same time, we have focused on the role that automation could play with respect to one of the most pressing and difficult problems of consumer law in European law (and more generally in all legal systems): the lack of effectiveness of rights. In most cases, this gap is due to the inertia of the consumer and the cost of justice with respect to disputes of modest economic value. Certainly, the advent of automation will force us to reflect on the consumer protection model that the EU has laboriously constructed to date: the principle of informed consent in the act of consumption can no longer be the cornerstone of the protection system in the age of automation which, moreover, does not even admit the possibility of consumer withdrawal. Therefore, the fiction of consumer consent will have to be drastically rethought. In fact, automation would lead to a new paradigm since the protection of consumer rights would be entrusted not only to a judge, or to a public authority of a national state, but also - and above all - to a machine that exists in a global and virtual world. Will technology bring happiness to the consumer?[41]

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[40] German Federal Government, "Blockchain Strategy of the Federal Government We Set Out the Course for the Token Economy", *https://www.bmwi.de/Redaktion/EN/Publikationen/Digitale-Welt/blockchain-strategy.pdf?__blob=publicationFile&v=3*, 04.05.2022. The working document was prepared by the Ministry of Finance in collaboration with the Ministry of Energy.

[41] The answer is in Emanuele Severino, *Il destino della tecnica,* Rizzoli, Milano, 2009, 8-9.

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PAMETNI UGOVORI: KRATKO PUTOVANJE U BUDUĆNOST POTROŠAČKIH UGOVORA

Rezime

Pametni ugovor je kompjuterski program koji omogućava automatizaciju procesa pregovaranja. Ova tema je u doktrini dobila na pažnji, delom zbog svog neobičnog naziva, a delom zbog činjenice da je njen koncept usko povezan sa aktuelnom idejom automatizacije prava. S tim u vezi, još uvek nije izvesno da li će u oblasti potrošačkih pregovora ova inovacija u potpunosti biti primenjena u narednih nekoliko godina. Otuda se isprva treba osvrnuti na evoluciju standardizacije potrošačkih ugovora u globalnoj i digitalnoj ekonomiji. Autor u radu postavlja hipotezu da pametni ugovori predstavljaju oblik „ekstremne standardizacije" potrošačkih ugovora, odnosno njihovog potpunog ili delimičnog izvršenja. Taj oblik je specifičan, ne samo jer je blisko povezan sa tehnološkim medijumom (tj. *Blockchain* tehnologijom), već zato što utiče i na digitalni i na stvarni svet. S druge strane, u radu se razmatra da li će proces automatizacije, u potpunosti realizovan pametnim ugovorima nakon pojave elektronske trgovine i digitalnih platformi, biti prilika za smanjenje troškova u potrošačkim sporovima, ili će naprotiv, predstavljati opasnost po slobode potrošača.

Ključne reči: pametni ugovori, pravo potrošača EU, kriptoekonomija, pametni potrošački ugovori, ostvarivanje prava potrošača

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