

## The Ubiquity of Law in Cyberspace Introduction to the Topic of the 4th Edition of the International Conference *Legal Perspectives on the Internet*

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**Abstract:** Desirable or not, rules of law are necessary. Despite the sustained efforts of self-regulation or of codes as law in cyberspace, these rules, whatever they are, are invariably breached and those whose rights have been disregarded or violated are seeking for solutions. In interpreting the existing ones and in the attempt of adapting and adjusting them to the new reality or in creating new provisions, legal experts need to enter into a collaborative and constructive alliance with IT professionals as to cope with the current challenges.

**Keywords:** cyberspace; law; code as law; *lex informatica*.

The Internet is changing everything: the way we live, think, learn, write, fight, do business, think of ourselves<sup>2</sup>.

Four years ago, at the first edition of the conference, I had been talking about the omnipresence of the Internet in a vast array of legal domains, or generally speaking, in our legal lives. Now, I am turning to the opposite, the omnipresence of law in Cyberspace.

What do I mean by *Cyberspace* and what do I mean by *Law*?

*Cyber* comes from the Greek word κυβερνάω (kyvernáo), which means govern, rule and applies to leadership. The word *Cyberspace* was first used in 1982 in a short science fiction story written by William Gibson<sup>3</sup>. *Cyberspace* now refers to anything associated with the Internet<sup>4</sup>.

What do I mean by *Law*? I envisage the broad meaning of law, encompassing hard law<sup>5</sup>, soft law<sup>6</sup> and *Lex Informatica* or the *Code as Law*. I

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<sup>2</sup> J. Grimmelmann, *Internet Law: Cases & Problems*, Ninth Edition, Semaphore Press, 2019, p. 10.

<sup>3</sup> W. Gibson, *Burning Chrome*, [Online] at [https://en.wikipedia.org/wiki/Burning\\_Chrome](https://en.wikipedia.org/wiki/Burning_Chrome), visited 28.09.2020

<sup>4</sup> The Cambridge Dictionary define *Cyberspace* as “the internet considered as an imaginary area without limits where you can meet people and discover information about any subject”, [Online] at <https://dictionary.cambridge.org/dictionary/english/cyberspace>, visited 20.09.2020.

<sup>5</sup> Hard law refers to actual binding legal instruments at national, regional or international level.

stated in the title of this presentation that law is ubiquitous in Cyberspace. Is that true?

It may seem counter-intuitive, as Cyberspace is or at least pretended to be independent, and by saying that I am referring to the Declaration of Independence of Cyberspace dated back in 1996<sup>7</sup>. John Perry Barlow said in his famous message to the governments of the world: “*You are not welcome among us. You have no sovereignty where we gather. You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear. Cyberspace does not lie within your borders.*”.

After this declaration of independence, which I admit, made me feel that I am a part of something big and important, a variety of theories on Internet regulation were formulated. The nineties were prolific years in terms of legal literature on Internet regulation. To name just a few:

– Starting, naturally, from John Perry Barlow’s theory, who predicted that the Internet cannot be regulated, that any attempt to regulate the Internet would fail, and that governments have no right to regulate the ‘new home of Mind’<sup>8</sup>;

– David Johnson and David Post in the same year (1996)<sup>9</sup> argued for self-regulation which, they said, should have been left to work;

– I. Trotter Hardy<sup>10</sup> pled for a decentralised approach of Internet regulation, considered to be the ‘proper regime’;

– Joel R. Reidenberg supported the idea of *lex informatica*<sup>11</sup>; in 1998, he considered that technology provides effective tools for regulation and that governments should use its infrastructure to regulate. He pointed out that in the age of technology, users face instabilities and uncertainties caused by the multitude of potentially applicable national rules in the virtual space and that

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<sup>6</sup> For a comprehensive explanation of soft law, see, A. di Robilant, *Genealogies of Soft Law*, in *Scandinavian Studies In Law*, pp. 217-268, [Online] at <https://pdfs.semanticscholar.org/7474/7ec5a4397a9862247b8a63a0d562b2e87a9c.pdf> visited 25.09.2020.

<sup>7</sup> J.P. Barlow, *A Declaration of the Independence of Cyberspace*, [Online] at <https://www.eff.org/cyberspace-independence>, reprinted in *Duke Law & Technology Review*, vol. 18, no.1/2019, pp.5-7, [Online] at <https://scholarship.law.duke.edu/dltr/vol18/iss1/2/>, visited 20.09.2020.

<sup>8</sup> J.P. Barlow, *op. cit.*, p. 5.

<sup>9</sup> D.R. Johnson, D.G. Post, *Law and Borders - the Rise of Law in Cyberspace*, in *Stanford Law Review*, vol. 48, no. 5/1996, pp. 1367-1402.

<sup>10</sup> I. Trotter Hardy, *The Proper Legal Regime for „Cyberspace”*, in *University of Pittsburgh Law Review*, vol. 55/1994, pp. 993-1055, [Online] at <https://scholarship.law.wm.edu/facpubs/656/>, visited 20.10.2020.

<sup>11</sup> J.R. Reidenberg, *Lex Informatica: The Formulation of Information Policy Rules through Technology*, *Texas Law Review*, vol. 76, no.3/1998, pp. 553-593, [Online] at [http://ir.lawnet.fordham.edu/faculty\\_scholarship/42](http://ir.lawnet.fordham.edu/faculty_scholarship/42), visited 20.10.2020.

the information infrastructure contains essential rules for users, in the same way that *lex mercatoria* guided traders in the Middle Ages. The principles governing digital information must provide stability and predictability so that participants have sufficient confidence for their communities to thrive, just as *lex mercatoria* has given confidence and vitality to communities of traders.

– Lawrence Lessig coined the theory of “Code is Law”. He said in 2000<sup>12</sup> that the law of the Internet is the code, meaning the software and the hardware that make cyberspace work. This code, or as he called it, *architecture*, establishes the conditions of use for cyberspace: it determines the confidentiality or censorship, anonymity or possibility of identifying users, it determines whether anyone can access information or whether access is allowed depending on certain areas, who can use the cyberspace and who is monitored, if there is freedom of speech and so on. This code is written by people. Who are these people and according to what criteria do they write the code? Proclaiming the independence of cyberspace from states / governments does not mean that a vacuum remains in its place. It does not mean that those who write code have no interests or that when the interests of the state are no longer at stake, other interests do not take their place.

In my opinion, Lessig’s theory is more actual than ever.

State regulations are subject to control through a mechanism that has proved its functionality. Is the code written for cyberspace subject to any control? What kind of control would this be, if any?

According to what Montesquieu said in “De l’esprit des lois” (1748), “Pour qu’on ne puisse abuser du pouvoir, il faut que par la disposition des choses, *le pouvoir arrête le pouvoir*”<sup>13</sup>. So who could control the power of the code? It seems that only the state has the necessary leverage to do so.

More recently, along the same reasoning as Lessig’s, other authors<sup>14</sup> have argued that cyberspace is governed by software and algorithms that regulate our online actions through rules embedded in code, developed by several private actors. Unlike traditional legal rules, which stipulate only what

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<sup>12</sup> L. Lessig, *Code Is Law. On Liberty in Cyberspace*, 2000, [Online] at <https://harvardmagazine.com/2000/01/code-is-law-html>, visited 20.10.2020.

<sup>13</sup> Livre XI -*Des lois qui forment la liberté politique, dans son rapport avec la constitution*, Chapitre IV, [Online] at [http://fr.wikisource.org/wiki/De\\_l%27esprit\\_des\\_lois\\_\(%C3%A9d.\\_Nourse\)/Livre\\_11#CHAPITRE\\_IV.\\_Continuation\\_du\\_m.C3.AAme\\_sujet](http://fr.wikisource.org/wiki/De_l%27esprit_des_lois_(%C3%A9d._Nourse)/Livre_11#CHAPITRE_IV._Continuation_du_m.C3.AAme_sujet), visited 10.09.2020.

<sup>14</sup> S. Hassan, P. De Filippi, *The Expansion of Algorithmic Governance: From Code is Law to Law is Code*, Artificial Intelligence and Robotics in the City, Field Actions Science Reports [Online], Special Issue 17 /2017, p. 89, [Online] at <http://journals.openedition.org/factsreports/4518>, visited 11.09.2020; C.T. Marsden, *Transnational Internet Law*, Chapter in P. Zumbansen (ed.), *Oxford Handbook of Transnational Law*, Oxford University Press, 2020.

people *should or should not do*, the code *determines* what people *can or cannot do*. This means that if there is no possibility to act, the code cannot be violated. The advantage of this form of code regulation is that instead of relying on the enforcement of *ex-post* legal rules by third parties (e.g. by state courts or arbitral tribunals), the rules are implemented *ex-ante*, making it almost impossible to breach them.

Still, reality proves something else. People use the Internet, and the virtual world can be as harmful as the real world, can create conflicts and misunderstandings, which eventually have to be solved. Whether judges, lawyers, prosecutors know how to do this or not, it is for them to decide. Each judge or authority called upon to decide will apply norms/rules or, if there are not any, general principles. They cannot deny justice based on the lack of regulation.

What rules would they apply? First, maybe we should consider as a solution the assumption that the best way to learn the law applicable to specialized endeavours is to study general rules<sup>15</sup>. Therefore, already existing national and international regulations could be adapted and applied. Apart from these, in terms of hard law, currently, there is a joint effort at the state, regional and international level to regulate various issues / challenges that the Internet poses in the field of law. It is worth mentioning:

– The United Nations’ Convention on the Use of Electronic Communications in International Contracts (New York, 2005)<sup>16</sup>, in force from 2013, which aims at facilitating the use of electronic communications in international trade by ensuring that contracts concluded and other communications exchanged electronically are as valid and enforceable as their traditional paper-based equivalents.

– The International Convention on Cybercrime (Budapest, 2001), in force from 2004, which deals with crimes committed via the Internet and other computer networks (infringements of copyright, computer-related fraud, child pornography and violations of network security)<sup>17</sup>.

– At the regional level, the European Union is a reliable source of regulation related to Internet issues, such as: Directive (EU) 2019/770 of 20 May 2019 on certain aspects concerning contracts for the supply of digital content and digital services<sup>18</sup>, Regulation (EU) 2019/1150 of 20 June 2019 on promoting

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<sup>15</sup> J. Grimmelmann, *op. cit.*, p. 9.

<sup>16</sup> In force in 14 states, [Online] at [https://uncitral.un.org/en/texts/ecommerce/conventions/electronic\\_communications/status](https://uncitral.un.org/en/texts/ecommerce/conventions/electronic_communications/status), visited 10.10.2020.

<sup>17</sup> Convention on Cybercrime, Council of Europe, Budapest, 2001, in force from 2004. with 65 member states at 30.09.2020, [Online] at [https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/185/signatures?p\\_auth=uUuzDFcX](https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/185/signatures?p_auth=uUuzDFcX), visited 2.10.2020.

<sup>18</sup> Official Journal of the European Union, L136, 22.5.2019.

fairness and transparency for business users of online intermediation services<sup>19</sup> or the brand new Regulation (EU) 2020/1503 on European Crowdfunding Service Providers for Business<sup>20</sup>, to name just a few.

– As for soft law rules, UNCITRAL model law on electronic commerce (1996)<sup>21</sup>, UNCITRAL Model Law on Electronic Transferable Records (2017)<sup>22</sup>, UNCITRAL Model Law on Electronic Signatures (2001)<sup>23</sup>.

We could mention, as well, the UNIDROIT project on Artificial Intelligence, Smart Contracts and DLT (Distributed Ledger Technology)<sup>24</sup> as work in progress.

The European Union's digital future has at its core artificial intelligence issues<sup>25</sup>. The High-Level Expert Group on Artificial Intelligence (AI HLEG), an independent expert group set up by the European Commission in June 2018, released *The Ethics Guidelines for Trustworthy Artificial Intelligence (AI)*<sup>26</sup>.

What about *lex informatica* or code as law?

This special form of code regulation is used for a variety of online situations, which appears to be much more appropriate than traditional law enforcement mechanisms. The progressive implementation of blockchain<sup>27</sup>

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<sup>19</sup> Regulation (EU) 2019/1150 of the European Parliament and of the Council of 20 June 2019 on promoting fairness and transparency for business users of online intermediation services, Official Journal of the European Union, L 186/57, 11.7.2019.

<sup>20</sup> Regulation (EU) 2020/1503 of the European Parliament and of the Council of 7 October 2020 on European crowdfunding service providers for business, and amending Regulation (EU) 2017/1129 and Directive (EU) 2019/1937, Official Journal of the European Union, L 347, 20.10.2020.

<sup>21</sup> Legislation based on or influenced by the Model Law has been adopted in 74 States and a total of 153 jurisdictions, [Online] at [https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic\\_commerce](https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_commerce)

<sup>22</sup> [https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic\\_transferable\\_records](https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_transferable_records), visited 2.10.2020.

<sup>23</sup> Legislation based on or influenced by the Model Law has been adopted in 33 States, [Online] at [https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic\\_signatures](https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_signatures), visited 2.10.2020.

<sup>24</sup> [Online] at <https://www.unidroit.org/english/governments/councildocuments/2020session/cd-99-b/cd-99-b-04-rev-e.pdf>, visited 3.10.2020.

<sup>25</sup> [Online] at <https://ec.europa.eu/digital-single-market/en/artificial-intelligence>, visited 3.10.2020.

<sup>26</sup> The document was made public on 8 April 2019, [Online] at [file:///C:/Users/User/Downloads/AIHLEG\\_EthicsGuidelinesforTrustworthyAI-ENpdf.pdf](file:///C:/Users/User/Downloads/AIHLEG_EthicsGuidelinesforTrustworthyAI-ENpdf.pdf), visited 3.10.2020.

<sup>27</sup> Blockchain „is a form of record-keeping. It is a digital ledger distributed among nodes in a network, meaning that no one central authority controls the data.” (A.J. Sulkowski, *Blockchain, Business supply chains, Sustainability and Law: the future of Governance, legal framework and lawyers?*, Delaware Journal of Corporate Law, vol. 43/2019, p. 308, [Online] at <https://www.djcl.org/wp-content/uploads/2019/08/43.2.A3.pdf>, visited 2.10.2020.). Blockchain is like „a giant shared spreadsheet, in that

technology can lead to the evolution of *Lex Informatica* into *Lex Cryptographia*<sup>28</sup>, the latter being characterized by a set of rules implemented through smart contracts<sup>29</sup>.

Its advocates<sup>30</sup> consider that the main consequence of *Lex Cryptographia* would be the rapid expansion to what Lawrence Lessig called “architecture,” that is, to the use of code as law in a vast array of legal issues. Even the enforcement of traditional legislation, they argue, could migrate towards blockchain. Smart contracts could include human intervention to some extent, for instance, to determine whether certain contractual conditions were fulfilled or not. Those contractual conditions could be made dependent on the judgement of third parties, called “oracles”. These third parties could be the national courts or a group of independent arbitrators.

*To sum up*, in a perfect world, where everybody complies with the rules, no matter the category these rules belong to (national rules, international rules, self-regulation, *lex informatica* or *lex cryptographia*), there would be no need to even discuss them. However, despite the sustained efforts of self-regulation or of codes as law in cyberspace, these rules, whatever they are, are invariably breached and those whose rights have been disregarded or violated are seeking for solutions. Desirable or not, rules of law are necessary. In interpreting the existing ones and in the attempt of adapting and adjusting them to the new reality (sometimes, in the likes of a Procrustean bed) or in creating new provisions, legal experts cannot cope by themselves. An alliance between legal experts and IT professionals is mandatory when faced with current challenges.

As Robert F. Kennedy said back in 1964, “Great change PREDOMINATES the world, and unless we move with change, we will become its victims.”<sup>31</sup>.

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several people all see it, any of them could change it, and everyone can see both the past and current changes to it.” (M. Swan, *Blockchain: Blueprint for a new Economy*, 2015, apud. Adam J. Sulkowski, *op. cit.*, p. 308).

<sup>28</sup> A. Wright, P. De Filippi, *Decentralized Blockchain Technology and the Rise of Lex Cryptographia* (March 10, 2015). [Online] at SSRN: <https://ssrn.com/abstract=2580664> or <http://dx.doi.org/10.2139/ssrn.2580664>, pp. 48-50.

<sup>29</sup> „A smart contract is a sort of computer code which is operated by a computer and is self-executing and self-enforcing” (M. Durovic, A. Janssen, *The Formation of Blockchain-based Smart Contracts in the Light of Contract Law*, in *European Review of Private Law* 6/2019, p. 756.

<sup>30</sup> A. Wright, P. De Filippi, *op. cit.*, p. 50; see also, J. Bacon, J.D. Michels, C. Millard, J. Singh, , *Blockchain Demystified*, Queen Mary School of Law Legal Studies Research Paper No. 268/2017, [Online] at <https://ssrn.com/abstract=3091218> , visited 3.10.2020.

<sup>31</sup> R.F. Kennedy. As quoted by the New York Times, July 2, 1964 (The Quotable Lawyer §18.19, at 38 (1986)).