The Matrix of Law:
From Paper, to Word Processing, to Wiki

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Fifteen years ago, François Ost proposed a conceptual framework, known as the "word processing" model, to analyse and understand the evolution of law-making since the advent of the Information Society. This paper presents and discusses the accuracy of this model in the current context. Sketching out *regulation* as the new underlying logic of postmodern societies' legal framework and networked law, the paper also draws attention to the phenomenon known as *regulatory marketing*. Arguing that law is now "in transit" and that the coherence of legal frameworks has been lost, the paper proposes to update François Ost's word processing model to that of the Wiki, a utopic new paradigm to understand and produce law in the 21st century society.

Il y a quinze ans, François Ost proposait le modèle du "traitement de texte" pour analyser et comprendre l'évolution de la production legislative depuis les débuts de la société de l'information. Cet article entend présenter et discuter la pertinence et l'actualité de ce modèle dans le context actuel. Mettant en lumière la *régulation* comme nouvelle logique de gouvernance dans les sociétés postmodernes au droit réseautique, cet article insiste sur le phénomène de *marketing législatif*. Confirmant que le droit est dorénavant en état de transit et que le cadre juridique a perdu sa cohérence, cet article propose d'aller plus loin que la pensée de François Ost avec le modèle du Wiki, une utopie envisagée comme nouveau paradigme pour comprendre et produire le droit de la société du XXIème siècle.

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> Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. […] You do not know our culture, our ethics, or the unwritten codes that already provide our society more order than could be obtained by any of your impositions. […] Your legal concepts of property, expression, identity, movement, and context do not apply to us. They are all based on matter, and there is no matter here.
>
> John Perry Barlow.[1]

INTRODUCTION

Fifteen years ago, legal theorist François Ost published "Le temps virtuel des lois postmodernes ou comment le droit se traite dans la société de l'information"[2] ("Virtual Time of Postmodern Laws, or How the Law is Processed in the Information Society.") He proposed a conceptual framework to analyse and understand the evolution of law-making in the then-recent years. It was an interesting idea, but largery ignored by civil law scholars,[3] and virtually unknown by common law scholars. This

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1. John Perry Barlow, "A Declaration of Independence of Cyberspace" (Davos, 8 February 1996), online: Barlow Home(stead)Page <http://homes.eff.org/~barlow/Declaration-Final.html>.

2. François Ost, "Le temps virtuel des lois postmodernes ou comment le droit se traite dans la société de l'information" in Jean Clam & Gilles Martin, eds, *Les transformations de la régulation juridique* (Paris: LGDJ, 1998) at 423.

3. We venture the guess that, in 1998, civil legal scholars were not yet ready to go beyond the Kelsenian paradigm and see Adolf Merkl's model of the "pyramid of laws" challenged by the "networked law" proposed by François Ost.

essay attemps to apply and discuss Ost' theory in the context of today's world, and to further refine his approach by proposing further developments to his framework. François Ost's original article will not be reproduced here, although it deserves careful reading (as do other writings by the author).[4] Rather, this paper will reproduce selected translated passages, as well as relevant arguments made by Ost.

1. Down the Rabit Hole: The Law in Transit

In spring 1989, the world was on the brink of a paradigm shift. In Eastern Europe, communism was about to lose its tremedous influence on populations that had been dreaming of Western liberties. The fall of the Berlin Wall on November 9, 1989, would usher in a brand-new era: one where the world would become globalized, starting with its economy, then its culture, and finally (and reluctantly) its laws. At the same time, still in Europe, in the basement of CERN, Tim Berners-Lee was presenting the *World Wide Web*.[5] This new interface for the Internet network would lead to the advent of new spaces of freedoms, first for academics and culture,[6] and rapidly for businesses.

The emergence of information technologies and the globalization of commerce transformed societies worldwide, from economy to culture and law. The Information Society was born. States did their best to resist the globalization of law, but in the end, law might emerge as the most affected of all social institutions. Some would say that law today has been radically transformed, from their drafting to their implementation and even their legitimation. As pointed out by Ethan Katsh,[7] after a first shift following the introduction of printing by Gutenberg, legal paradigm has been further transformed by the use of electronic media in lieu of paper. By "legal paradigm", we refer not only to the content of law – though this has also evolved, but also to the ways of thinking and conceptualizing legal frameworks which are prior to the crafting of substantive law. That is to say

> the goals, doctrines, and institutions of law have ancient and modern forms, whose differences can be traced at least in part to changes that have occurred in the movement, storage, and processing of information. As print is replaced by the electronic media, these visible facets of law are likely to exhibit new characteristics.[8]

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4. Consider: François Ost & Michel van de Kerchove, *De la pyramide au réseau ? Pour une théorie dialectique du droit* (Bruxelles: Facultés Universitaires Saint-Louis, 2002).

5. CERN, "The Birth of the Web" (10 June 2013), online: *CERN.ch* <http://home.web.cern.ch/about/birth-web>.

6. Lawrence Lessig, *Code*, Version 2.0 (New York: Basic Books, 2006) at 2.

7. M Ethan Katsh, *The Electronic Media and the Transformation of Law* (New York: Oxford University Press, 1989) at 15.

8. *Ibid* at 229. Consider also: M Ethan Katsh, *Law in a Digital World* (New York: Oxford University

1.1. The Word Processing Model

François Ost proposed[9] an analysis tool to track the evolution of legal frameworks at the beginning of the global and digital age. Questionning the changes brought to law-marking processes and legal systems in postmodern societies, he asserted that the law was now *in transit*:

> Yesterday the transitional meant the finely-tuned regulation that managed the in-between of two long periods of normative stability. […] The transitional was in fact the hinge aimed at articuling two historical sequences characterized by a significative duration. But today everything happens as if things were reversed: time has faded, making unnecessary the subtle managements of transitional law: it is the law as a whole that is set in motion – the transitional is now its normal state. Our law is 'in transit'.[10]

The entering of law into such a state of instability can be traced back to the transformation of our world into the Information Society, with the advent of computers and the Internet.

Thereupon, Ost proposed the computer-based allegory of *word processing* as an analysis model. The computer-based model supposes a circular, reversible and firmly unstable temporality.[11] As part of his reasoning, Français Ost referred to the cyber model of the control thermostat developed by Jacques Chevalier.[12] The latter is particularly useful for describing the adaptive, recursive check-and-balance mecanisms through which our legal systems seek to retain something akin to equilibrium, in an ever-changing and uncertain environment.[13] However, Chevalier's model appears better suited at describing the quest for balance in substantive law, rather than the processes pertaining to the production and conceptualization of law prior to. In that regard, Ost's model is a far better fit. Not only did the word processing model appear accurate and relevant in 1998, but it is as appropriate now as it has ever been. As demonstrated below, the word processing model still holds significant relevance for our current way of law-making, fifteen years later.

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Press, 1995) at 8.

9. Ost, *supra* note 2.

10. *Ibid* at 424 (our translation). Original quote: "Hier encore le transitoire s'entendait comme la régulation fine qu'il convenait de ménager entre deux longues plages de droit fixe, entre deux vastes périodes de stabilité normative. [...] Le transitoire n'était en somme que la charnière appelée à articuler deux séquences historiques caractérisées par une durée signifiante. Or tout se passe aujourd'hui comme si les choses étaient inversées : la durée s'est évanouie, rendant inutiles les subtils ménagements du droit transitoires : c'est le droit tout entier qui s'est mis en mouvement – le transitoire est désormais son état normal. Notre droit est 'en transit'."

11. *Ibid* at 425.

12. The model is presented by Ost: *Ibid* at 426.

13. *Ibid*.

According to François Ost,[14] laws are in a state of constant rewriting and therefore make for unstable materials. Indeed, laws are rewritten again, and again, and again. Notwithstanding historical writing standards, every version is circulated and enacted. The rhythm of enactment and repealment of legal texts has dramatically increased. It now happens at an ever-faster rate; consequently, legal texts' "lifetime" is increasingly short. In some areas such as tax law, regulations are amended and even repealed before coming into force. The model of word processing takes on its full meaning within such a context. Thanks to information technology, the legislator can easily play with regulations, rapidly retouching or rewriting them. François Ost argued that

> the legislator includes or recycles all or parts of others provisions in laws that it enacts. This time, the operation evokes the 'copy-paste' method of computer writing. It involves frequently more reassembling used pieces than introducing truly new parts. Hence the impression of a stack of overcrowded rules, solutions, institutions and procedures that jumps out at the observer of a branch of law who bothers to take a step back to measure, from a little distance, the general appearance of the construction.[15]

As Shirley Turkle[16] has pointed out, the reason has to be found in computer writing and editing. They are the facilitators of the copy-paste phenomenon. Before the computer era, on stone, on paper or even on a typewriter, one had to compose one's thoughts and carefully choose one's words prior to laying any writing down. Any errors meant having to start again. Texts, including laws, have to be carefully thought-through and discussed before they were drafted. The process was longer and laws were stabler and, perhaps, more coherent. Computers have changed everything. As Turkle noted, "[w]ord processing has its own complex psychology."[17] Nowadays, we can compose texts straightaway, and often in several parts, before merging them, rearranging words and ideas, without the need to ever start again by rewriting the entire text each time. The idea of thinking ahead, in Turkle's words, has become "exotic".[18]

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14. *Ibid* at 427.

15. *Ibid* at 428 (our translation). Original quote: "le législateur intègre ou recycle tout ou partie d'autres dispositions dans les lois qu'il adopte. L'opération évoque cette fois le procédé du "copier-coller" de l'écriture informatique. Il y va souvent plus du réassemblage de pièces usagées que d'introduction de dispositifs vraiment nouveaux. D'où cette impression d'entassement et d'empilage de règles, de solutions, d'institutions et de procédures qui frappe l'observateur d'une branche du droit qui se donne la peine de prendre un peu de recul pour mesurer, d'un peu plus loin, l'allure générale de la construction."

16. Sherry Turkle, "How Computers Change the Way We Think" (2004) 50:21 Chronicle of Higher Education B26.

17. *Ibid*, para 22.

18. *Ibid*, para 23.

1.2. The Phenomenon of Regulatory Marketing

Law-making has not been spared by the above-described pattern. Whenever a bill is circulated or passed, it is always a work in process, a project. If any problem arises, the bill can *simply* be amended or even repealed, for a word or a comma. It will happen, sooner or later. François Ost argued that legal documents are always in an unfinished state, as any *working paper*. Such experimental and provisional rules are also excuses for approximations and shortcuts.[19] Doing so certainly allows for greater flexibility in the legislative process. Nonetheless, we believe that, in the meantime, the law has lost its coherence. More importantly, the result is an exponential increase in the amount of regulations. With a proliferation of rules and the multiplication of derogatory provisions, the law today is a barely comprehensible nebula, even for the most advised lawyers.

The pursuit of such growth, for the sake of ease alone and not for any thought-out reasons, undermines a key principle governing the rule of law in democratic societies. It jeopardizes the well-known adage "ignorance of the law is no excuse." A body of law changing every second, so poorly and inconsistently written, clearly raises the issue of citizens' access to law. It also raises issues regarding legal certainty. Alarmingly, in *The Morality of Law*, Lon Fuller wrote that if such path is followed by the legislator, it "does not simply result in bad system of law; it results in something that is not properly called a legal system at all."[20] Without going that far, we highlight the risks of a legislator that produces regulations as an end in itself. Moreover, it confirms the importance of the Free Access to Law Movement[21] which aims to provide, free of charge, public legal documentation.

Legal uncertainty has its origins in the role assigned to law in the 20th century, notably with the emergence of the welfare state. As such, the law was no longer a general framework for society, but a policy tool. François Ost noted that the idea then was to adopt a program of actions, defined by general political objectives and within a dynamic environment: legislation was to be programmatic.[22] The evolution of the legislative process has since gone even further. Under the welfare state, law was used as a means to an end. In today's society, in order to satisfy popular mediatic and electoralist demands, law is being produced without any particular or relevant purpose. In our current society of information and personal branding, the law follows the logic of media, public image and urgency.[23] We have abandoned the great ambitions of the welfare state doctrine. Decision-makers, nowadays men and

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19. Ost, *supra* note 2 at 428–429.

20. Lon L Fuller, *The Morality of Law* (New Haven: Yale University Press, 1964) at 39.

21. See: Free Access to Law Movement, "Declaration of Montreal on Free Access to Law" (2002), online: FATML <http://www.fatlm.org/declaration/declaration_en.shtml>.

22. Ost, *supra* note 2 at 33.

23. *Ibid* at 447.

women of media, are looking to the next profitable publicity stunt. The law is just one way of achieving such notoriety, among others.[24]

As characterized by Jacques Commaille, the law-making process is now akin to marketing.[25] Just as law has become a marketing tool, the polician himself is now a marketing product. This is now a "full-time" profession. The politician seeks to remain a "fresh product" that meets the needs of his constituents; his voters, not the citizens nor the society. He must show he *is* a decision-maker, a man or woman of action, and that he was not elected to be a figurehead. Henceforth, at the slightest problem or provocation, the polician will propose a new bill. Most of the time, the latter will only be a repetition of pre-existing provisions, occasionally drafted using slightly different terms; or it will provide for the addition of specific provisions in order to answer an issue that the previous law has addressed, often with a similar solution. Often, the new bill will also be too general in wording, too vague to be implemented in actuality, or with non-legal terms and concepts, leading to preposterous interpretations. Such is the first reason for the increase, in quantity and in uncertainty, of the law.

Some will argue that voters are the ones demanding such actions, and that politicians their mere representatives. But as stated by Lawrence Lessig, the "marketing politicians" are more representing themselves and their funders, than their constituents. [26] No funding means no candidacy, no mandate, and no reelection. There lies another reason for hyper-regulation. The price of political funding is the proliferation of hyper-specific rules. With regards to a project aimed at simplifying and deregulating the telecommunication sector, Lawrence Lessig reported a Congressman's answer as: "Hell no! […] If we deregulate these guys, how are we going to raise money from them?"[27] There is nothing to add.

2. Through the Looking Glass: The Network Paradigm

Not everything is as wrong as it seems, however, as there is another side to this tarnished coin, perhaps an even greater one. The global and digital society challenges the established principles of hierarchy. Enabled by the ever-changing technological framework, the past decades have witnessed the emergence of the networked world[28]. As expressed by Yoachi Benkler, changes "brought about by the networked

24. *Ibid* at 448.

25. *Ibid* (as summarized by Ost).

26. Lawrence Lessig, "We the People, and the Republic we must reclaim" (3 April 2013), online: *TED Conference 2013* <http://youtu.be/mw2z9lV3W1g>.

27. *Ibid* at 8:20.

28. Consider generally: Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven: Yale University Press, 2006).

information environment is deep. It is structural."[29] Accordingly, "series of changes in the technologies, economic organization, and social practices of production in this environment has created new opportunities for how we make and exchange information, knowledge, and culture."[30]

This is especially true of legal systems. Following the advent of the information society, the philosophy of law-making has changed. The law-making process aims at taking into account people subject to the rule. Before his well-known book co-authored with Michel van de Kerchove,[31] François Ost had already has developed the concept of *networked law* in the paper on which this essay is based. Just as it has changed society and culture,[32] the network approach has transformed law: what was once a state-driven, unilateral, authoritarian and centralized power has given way to a more decentralized, flexible and adaptive regulatory framework.[33] Classical distinctions are being seriously challenged, as much as the classical legal framework. Yesterday's competing powers are now collaborating. The global intertwining of economies has led to legal harmonization, at least on a regional scale. The dichotomy between public and private has the tendency to vanish. Legal and socio-economic normativity interpenetrate. As well, courts have rediscovered a regulatory role, especially in *civil law* jurisdictions as regards the interpretation of rules and standards.

2.1. The Rule of Regulation

The fact that there was non-stop changes in society, technology and the economy encourages legislators to delegate some regulatory power to others, such as public authorities or professional bodies. This is now quite common in technical fields, where the legislator defines guidelines and the delegated bodies enact technical rules. The act of delegation allows a regulatory framework to be more adaptive to economic and technological realities, especially in highly dynamic settings. Often, the delegated bodies also have redress processes and the power to impose sanctions and specific rules. As summarized by François Ost, for a long time,

> the legislator chosed to ignore, in a large part, the state of affairs of the common world which he was regulating, as to the preferences (including normative) of citizens and organizations subject to its rules. The generality and stability of legislative solutions were largely the result of this drastic selection of factors taken into account. [… T]earing the veil covering his eyes, the legislator now intends to inquire into the state of affairs prevailing

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29. *Ibid* at 1.

30. *Ibid* at 2.

31. Ost & van de Kerchove, *supra* note 4.

32. Benkler, *supra* note 28 at 62 & 284–285.

33. Ost, *supra* note 2 at 433.

in the social system and its constituting differentiated subsystem, since it now also listens to preferences and pretensions of its recipients,given them more and more often a voice.[34]

Regulation is the new underlying logic of legal frameworks in postmodern societies. Regulation is a flexible and adaptive way to frame social and economic activities. Certainly, as pointed out by François Ost, there are two sides to the medal. At first sight, it attests of an effort towards rationalisation. Actors, the subject of rules and regulations, needed to regain control of their regulatory oversight. Politicians, overwhelmed by the complexity of economic and technical realities, prefer to leave details of regulation to specialized entities. Certainly, the state would no longer be the exclusive source of law. François Ost argued that this symbolic loss is regained in managerial efficiency.[35] However, on the other hand, it raises the question of *true* authorship of the law. This kind of law is almost without author, without a central controller. It may be exposed and vulnerable to the mercy of special interests.[36]

The increasing decentralization of regulatory sources can also cause community-centered attitudes. The trend towards decentralization or self-regulation can also pose risks of creating a state within the State. There is also a risk of returning to Europe's Old Regime guilds, repealed at a time People imposed the State and the Nation as the origin of almost everything and, above all, of law. However, it is naive to believe that law enacted by states could not be the expression of special interests. Religious, political, economic and professional groups have always sought to have a voice, to influence the state powers and the content of law. The rise of special interest groups in modern parliaments is only their contemporary equivalent. If not discussed in delegated entities, law is discussed in parliamentary assemblies;[37] and politicians could be the puppets of interests groups, including those funding their campaigns as pointed out earlier. If their presence has long been known, not all parliaments have implemented processes to ensure transparency in their lobbying.

Certainly, networked law may pose risks; but the role of law has changed. François Ost effectively argued this new, decentralized method of law-making is more effect-

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34. *Ibid* at 430–431 (our translation). Original quote: "le législateur choisissait d'ignorer, en grande partie, l'état de choses du monde concret sur lequel il opérait, ainsi que les préférences (y compris normatives) des particuliers et des institutions qu'il visait. La généralité et la stabilité des solutions législatives résultaient en grande partie de cette sélection drastique des éléments pris en compte. [… D]échirant le voile qui lui masquait les yeux, le législateur entend désormais s'informer de l'état des choses qui règne dans le système social et les sous-systèmes différenciés qui le constituent, dès lors aussi qu'il prête désormais l'oreille aux préférences et prétentions de ses destinataires, qu'il leur donne même de plus en plus souvent directement la parole […]."

35. *Ibid* at 435.

36. *Ibid* at 435, 447.

37. Or, at least, it should be. Nevertheless, from time to time, lobby groups exert such pressure on governements that bills are passed on a fast-track. This exceptional procedure has become increasingly common over the last years, especially in technical fields such as the Internet.

ive and efficient.[38] In an ever-changing world where technical, social and eonomic realities are hard to grasp by politicians, the legislator uses a "trial-and-errors" process.[39] Jacques Chevalier's cybernetic model of the control thermostat becomes quite relevant to understanding this situation. There is a proliferation of trial statutes to try to adapt the law to new realities. But as noted earlier, this proliferation is such that the entire body of laws look as if it was a trial version. As an illustration of François Ost's word processing model, the easy by which the trial-and-error process is achieved is through computerization.

Objectives of this new regulatory approach are, in our view, commendable. The goal is to rationalize the law, to adapt it to new realities by addressing such realities and take a closer look to them and their actors. This is a long-term process and, as such, is a journey far from being over. That the law provides a long-term framework is an ideal; but various considerations lead to myopic short-term thinking. Meanwhile, law losts its rationality. We argue this loss is not due to the concept of networked law, which we welcome, but to the media-centered urgency. The *word processing* model which allows for the network to exist also makes it easy to update, amend and repeal its laws. The legislator has fallen into the trap of this easy, double-edged word and, somewhere in the process, the law has lost. François Ost argued that

> the postmodern law has actually lost control of its rhythms and control of its time. In this case, the rhetoric of the project hardly hides the short-termism; temporality, presented as scheduled, most often goes back to improvisation; cyber procedures for self-adjustment would not be anything other than ad hoc reactions to unforeseen developments.[40]

Society experienced a paradigm shift at a speed never seen before. Today, things are slowly down; the digital age may be in its infancy, but it is known to be the one in which the next few generations will live.

2.2. The Journey of the Lost Laws

Scholars such as François Ost and Ethan Katsh have explained, in the 1990s, this paradigm shift. By then, computers were becoming a staple in offices and were slowly but surely setting up in homes. The Internet was no longer the exclusive preserve of scientists and academics, but it was still only the beginning of a new phenomenon

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38. Ost, *supra* note 2 at 447.

39. *Ibid* at 437.

40. *Ibid* at 445 (our translation). Original quote: "[i]l se pourrait en effet que le droit postmoderne ait en réalité perdu la maîtrise de ses rythmes et le contrôle de son temps. Dans ce cas, la rhétorique du projet cacherait mal le simple pilotage à vue ; la temporalité, présentée comme programmée, se ramènerait le plus souvent à l'improvisation ; les procédures cybernétiques d'auto-ajustement ne seraient pas autre chose que des réactions *ad hoc à* des évolutions imprévues."

which we now know as the digital society. As already emphasized, comments and questions raised by these authors are highly relevant today. Within the Information Society, law has begun a new journey and, in the words of François Ost, is in transit.[41] Law has changed and become more open, both in substance and in its production process. But, as the journey cannot be an end in itself, a question remains: To what destination should the law go, and where are we on the path of tommorow's regulation? Ethan Katsh has already raised the issue years ago: "And where is the law going?" His answer was expressive:

> To a place where information is increasingly on screen instead of on paper. To a place where there are new opportunities for interacting with the law and where there are also significant challenges to the legal profession and to traditional legal practices and concepts. To an unfamiliar and rapidly changing information environment, an environment where the value of information increases more when it moves than when it is put away for safekeeping and is guarded. To a world of flexible spaces, of new relationships, and of greater possibilities for individual and group communication. To a place where law faces new meanings and new expectations.[42]

The law is going to a place where it will face new meaning and new expectations. The global economy and the Internet, not familiar with the concept of state borders,[43] have misused state-produced law. These two new realities are illustrations of the networked world and law. Legal frameworks are thus in competition. States were already competing against each others, in the legal field and otherwise.[44] But alongside classical players, new players have emerged. First, we had "global corporations,"[45] some of which are now more powerful than many states, imposing their business, customs, tax and social policies. Then came the birth of digital legal orders. Communities were created on the Internet and their members produced their own bodies of law.[46] Some of them even rejected the legitimacy of state-produced

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41. *Ibid* at 424. (See *supra* note 10).

42. Katsh, *supra* note 8 at 4.

43. Pierre Trudel et al, *Droit du cyberespace* (Montréal: Éditions Thémis / CRDP, 1997) at 8:1–8:3.

44. Consider the World Bank's *Doing Business* reports; as for the last published: World Bank & International Finance Corporation, *Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises*, Doing Business Reports (Washington, DC: World Bank, 2013).

45. As defined by Theodore Levitt in "The Globalization of Markets" (*Havard Business Review*, May/June 1983, 92-102). "Levitt made a stark distinction between weak *multinational* corporations, which change depending on which country they are operating in, and swaggering *global* corporations, which are, by their very definition, always the same, wherever they roam." (Naomi Klein, *No Logo. No Space, No Choice, No Jobs*, 10th anniversary ed (London, UK: Fourth Estate, 2010) at 116).

46. Consider: James Grimmelmann, "Virtual World Law" in S Gregory Boyd & Brian Green, eds, *Business and Legal Primer for Game Development* (Hingham, Mass: Charles River Media, 2006) 311 at 312–314.

law to govern this new digital medium.[47] The construction of digital identities within digital worlds owned by private corporations have raised some issues. Social networks have produced their own bodies of law, with redress and sanction schemes – effectively their own legal order.[48] In case of abuse (both in the way the rules are set and their content,) users will join together and organize themselves to challenge the amendments and attempt to influence the company operating the service[49]; as did, and still do, citizens with regards to state-produced laws.

It it clear that the Internet is not a no-man's land, without rules, rights or obligations. Quite the contrary, the digital world is a zone of lawfulness where state law is in competition with the networks's own rules. Information technology brings about its own philosophy. Far from the known and accepted principles of the "material world," this is not understood or/and ignored by states wishing to shape the digital world according to their own laws, and territorialize the Internet. It should be noted that states are quite able to recognize, under their national laws, these new legal orders without the need for any legislative change; the answer is to be found in contract law, and sometimes tort. States already are,[50] as the digital world is supported by the material one and states are they only ones with enforceable and binding decisions.[51] Whatever they do recognize it, states are no longer the only "fountain of law"; if they ever were.[52] The digital society came with its own rules and philosophy; technology overriding will.[53] These changes brought out by the digital and global world also call for an update of state-produced law. As Ethan Katsh pointed out

> [l]aw is also, however, partly a set of attitudes and perceptions and a reflection of the culture of which it is a part. Modern law is different from law in other historical periods because modern culture is different from ancient culture and the attitudes and perspectives of inhabitants of modern society are different from those of ancient citizens. In some important ways, law in modern times is the result of the modern mind, of

47. See: Barlow, *supra* note 1.

48. James Grimmelmann, "Anarchy, Status Updates, and Utopia," Pace Law Review (forthcoming) at 5–8 (of the draft available at SSRN), online: SSRN <http://ssrn.com/abstract=2358627>.

49. *Ibid* at 11–12. Grimmelman argues their is some limits to such users' power, and that the *rule of software* is not quite the *rule of law*. In the same vein, we argue this is more the *rule of corporations* than the *rule of law* or the *rule of software*.

50. See generally: James Grimmelmann, "Virtual Borders: the Interdependence of Real and Virtual Worlds" (2006) 11:2 Fist Monday, online: *Fist Monday* <http://firstmonday.org/ojs/index.php/fm/article/view/1312/1232>. See also: Grimmelmann, *supra* note 46 at 314–318.

51. We should however note that States can be in "competition" with criminal organizations. Also, on the Internet, if States have ways of actions, *hackers* communities – as *Anonymous* – have demonstrate their power.

52. Must be remembered that, for centuries, religions have been important social regulators.

53. As Lawrence Lessig wrote: « Code is Law » (See: Lessig, *supra* note 6; Consider also: Grimmelmann, *supra* note 48).

orientations, values, and concepts that have become dominant only in the past few centuries.[54]

Law is expected to evolve with society. To paraphrase to a technological analogy, law is the social *daemon* running the society's *operating system*. Whenever the *operating system* changes, the *deamons* have to be updated. It certainly does not require a complete rebuilding from scratch, or the creation of new branches of law. There is certainly no need for a "Law of the Horse,"[55] as we can and should use existing law and legal frameworks. As for horses, we were still in the material world; but cyberspace is difference. We believe that Judge Easterbrook was wrong. The pre-Information Society laws were not able to understand new digital realities. There is a whole range of digital issues than can be resolved by classical bodies of laws. But there is also a wide range of new questions that cannot be solved, as they are unknown to the material world. These last ones call for new and tailored regulations. Most of the time, it is because existing law is technology-oriented, not *technology neutral*, namely enacted for paper media, and so for the material world.[56] The law has to become technology neutral;[57] rules should not be enacted according to a specific support but be able to embrace every existing and future technologies.

Of course, society also evolves and will need rules consonant with the social exceptions of the moment. One example is the notion of "privacy", which makes daily headlines these days. There was a time when the conception of "privacy", as we know it now, did not even exist and was even frowned upon.[58] Paradoxically, while communications have improved dramatically, the concept of privacy has emerged to become one of the biggest stumbling blocks of our societies. Everyone wants his or her privacy to be protected; exceptions vary according to whether individual leads a very public or private life, and mostly due to generational differences. Today, we have three opposed generations – the *digital natives*, borned in the digital era, the *digital settlers*, thought not native they learned and are quite used to technologies, but still rely on traditional medium, and the *digital immigrants*, who learned late in

54. Katsh, *supra* note 7 at 229.

55. For the debate on the « Law of the Horse », see: Frank H Easterbrook, "Cyberspace and the Law of the Horse" (1996) University of Chicago Law Forum 207; *versus* Lawrence Lessig, "The Law of the Horse: What Cyberlaw Might Teach (Commentary)" (1999) 113 Harvard Law Review 501.

56. Vincent Gautrais, *Neutralité technologique. Rédaction et interprétation des lois face aux changements technologiques* (Montréal: Éditions Thémis, 2012) at 135.

57. We will develop on the concept of *technological neutrality* of law in Part III-B. For a summary see: Chris Reed, "Taking Sides on Technology Neutrality" (2007) 4:3 SCRIPTed 263, online: *SCRIPTed* <http://www2.law.ed.ac.uk/ahrc/script-ed/vol4-3/reed.pdf>. With regards to the different meanings of this concept, we will refer to the US Government's definition as reported by Reed at 263: "rules should be technology neutral (i.e., the rules should neither require nor assume a particular technology) and forward looking (i.e., the rules should not hinder the use of the development of technologies in the future)." On the other meanings of the concept, see Gautrais, *supra* note 56 at 32–35.

58. See: Katsh, *supra* note 7 at 190.

life and share fears about the Internet[59]. The last are the ones in control of society and law. The digital natives, and most of the digital settlers who shaped the digital world, want to have a voice.

3. The Wiki Paradigm

In summary, our argument thus far has been that law is in transit, but that this transititionl journey is neither the destination nor a dead-end. We are on the road of the path to tomorrow's legal framework. At the beginning of the 21st century, the transition was between the material and digital worlds; or more exactly, towards the interpenetration of both worlds and the fading of their boundaries. The journey must have a destination in order to stabilize law and to avoid lawlessness. The next step, the next societal shift, might be the disappearance of states as we know them today and the merger into regional jurisdictions, or even the ermergence of the State of the Earth as in some science-fiction novels. *Who knows?* In the meantime, the normative approach should be stabilized in the territorial and social schemes that are known today. For this purpose, the word processing model of law has been of great interest. Indeed, we have argued that this model explains the legal transforma-tions of the last decade.[60] However, we now propose to go even further. In our view, the future of society and law lies in the *wiki* model; that is to say, a construction arrived at through a collaborative path, within a networked and distributed society.

3.1. The Wiki Model

A *wiki* is a web service "which allows people to add, modify, or delete content in collaboration with others."[61] The technology is best known to power *Wikipedia*, the infamous collaborative online encyclopedia. With such technology, all sectors of so-ciety are encouraged to contribute their knowledge to the community and build the encyclopedia. The philosophy behind *Wikipedia*, and the wiki technology, is quite disruptive for hierarchic societies, including that of the academic field. A wiki-cre-ated content has no defined author, and consequently no owners. Contributing guidelines are produced the same way, following discussions within the commun-ity.[62] Also, at the center of the technology, the hypertext helps to build networked and contextualized information, as illustrated by *Wikipedia*. Even though the phe-nomenon may seem recent, it can in fact be traced back to the origins of the World

59. See: John G Palfrey and Urs Gasser, *Born Digital: Understanding the First Generation of Digital Natives* (New York: Basic Books, 2008) at 2-5.

60. See also: Katsh, *supra* note 8 at 239–240.

61. Wikipedia, "Wiki" (8 December 2013), online: *Wikipedia* <http://en.wikipedia.org/wiki/Wiki>.

62. See: Yochai Benkler, "Practical Anarchism: Peer Mutualism, Market Power, and the Fallible State" (2013) 41:2 Politics & Society 213 at 227–230.

Wide Web. Indeed, the first browser was also an editor, and Ward Cunningham released *WikiWikiWeb*, the first wiki software, in 1995. The term "wiki" was coined using the Hawaiian word for "quick", as *WikiWikiWeb* was presented as a software to quickly build websites.[63]

We propose the Wiki as the relevant model for exploring and conceptualizing the law in the global and digital era. Doing so requires going beyong the primary meaning of "wiki" and embracing the *wiki*'s philosophy: the open and collaborative pattern. As already explained, there is no need, and no more room, for *quick* undiscussed law. However, the philosophy of collaboration underlying the Wiki might be the key to rebuilding law-making processes. The hypertext also has a major role to play. *Wikipedia* has shown that hypertextualisation helps to contextualize and understand complex issues within a broader landscape. The Legal Information Institutes and Free Access to Law Movement have also shown this with regards to legal provisions within broader legal frameworks. In this regard, we believe hypertext, within a wiki model of law, to be helpful in understanding and spreading the rule of law: indeed, the linking is a way of promoting access to and knowledge of laws. The collaborative and networked content-generation within wikis illustrates the ideals of the networked law. It is thus our argument that the wiki could be the next legal model. We are not denying the relevance of state laws as they currently are, but certainly, the wiki model is the relevant framework for the analysis of law going forward, in a society reclaimed by its people.

Alongside the proliferation of regulatory sources, the legislator is no longer alone in its ability write the law. Of course, there are and have always been the courts, repealing, amending or interpreting legislative provisions. But in this day and age, citizens are asking for more transparency and dialogue within the law-making process. The computer philosophy becomes that of the Internet, a place for freedom, openness, sharing, discussion and collaboration. This web philosophy is pollinating the rest of the society.[64] Transparency reports and open data movement have given citizens a prominent place. Today, more than ever in our modern history, people want to be part of their governance – from law-making processes to public policy debates and the government at large. The people want to be empowered in the exercise of their political agency and ensure that they are effectively represented. They are clamouring for more efficient and transparent oversight and control mechanisms over their elected politicians. And they have organized themselves for this purpose, helped along by information technology. More and more, in several jurisdictions around the word, citizens can themselves propose legislations. We have argued the multiplications of actors may lead to a loss of rationality within the body

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63. Ward Cunningham, "What is a Wiki" (27 June 2002), online: *WikiWikiWeb* <http://www.wiki.org/wiki.cgi?WhatIsWiki>; Jonathan Zittrain, *The Future of the Internet: And How to Stop It* (New Haven, Conn.: Yale University Press, 2008) at 95.

64. Benkler, *supra* note 28 at 1.

of laws. But the process, in our previous argument, was not correctly framed, nor was it sufficiently prepared. In our earlier scenario, it was more a case of *competition* between legislative sources, which can be detrimental to the law-making process, and not so much the *collaboration* which is involved in the wiki model.

To come back to the technology analogy: the *deamon* code was amended bit by bit, without being built with the necessary flexible foundations to confront current changes. The prevalence of so much anarchic editing may result in the content losing its meaning. In such cases, in wiki-created documents, the editing process is temporary closed[65], in order to encourage calm and thorough reflections about its rewriting. The same thing shall apply to the wiki model of law, in order to rebuild a more open, flexible and adaptive legal framework– the framework for the global and digital society of the 21st century. This *deamon* source code is not proprietary but open source, a common of society.

Sometime more restrictive than state law, community-discussed regulations are nevertheless accepted by people "who often profess little respect for their own sovereigns' 'real' law, following it not out of civic agreement or pride but because of a cynical balance of the penalties for being caught against the benefits of breaking it."[66] Today, for most citizens, governments have lost their legitimacy and the law that they produce with them. Meanwhile, regulations set up by communities are accepted because they are the product of prior discussions, and therefore are seen as balanced and reflective of the members' true interests. Community members feel as if they have decided for themselves, and so are willing to comply with their own rules. Even where a member did not directly take part in the rule-making process, such member generally respects the legitimacy of a rule enacted by *the community,* by "We The Users."[67] This pattern of collaborative governance can trace its roots back to the Internet with the use of "RFCs", the *Requests for Comments*.[68]

The relevance of our legislative, politician-driven process is about to fade, not just in the cyberspace but in the material world as well. Where people want a voice, they will sooner or later find a way to assert themselves as part of the law-making process.

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65. For a comment on *Wikipedia* process, see: Zittrain, *supra* note 63 at 135–141.

66. *Ibid* at 144.

67. The expression is borrowed to James Grimmelman. See: Grimmelmann, *supra* note 48 at 1 (SSRN draft).

68. Zittrain, *supra* note 63 at 243.

3.2. The Wonderland

Yoachï Benkler argued *Wikipedia* is "the most complex and successful instance of sustained self-governance we have on the Net, and quite possibly anywhere"[69] and stands as

> the most extensive implementation of a fuzzy governance model that depends fundamentally on human interaction, discourse, and sociality; incorporates diverse pathways for action and decision; leaves tremendous room for individual autonomy and subgroup collaboration; and depends on diversity of constraints and affordances, technical and organizational, rather than on the emergence of a well-defined hierarchy, a form of institutionalized power, or a coherent authority structure.[70]

There is no room for naivety either.[71] State-based legal frameworks cannot be edited as any *Wikipedia* page. But, once again, our focus is on the philosophy behind the *wiki* and not so much the mechanics of creating a wiki *per se*. We should focus on *how* the world of *Wikipedia* is governed: a place where the ideas of collaboration and public concertation are commonplace.

As James Grimmelmann pointed out, digital self-regulations may have loop-holes.[72] It might become more the *rule of software* than the *rule of law*, and "[t]he *rule of law* will come to social software when *We the Users* insist on it."[73] As we have argued,[74] the major loophole is the fact that Internet, like many other things, is run by corporations.[75] We are under the *rule of corporations* more than the *rule of law*. As a matter of fact, the advent of the *Internet of Things* has led to the same issues. Although this may be true, it really depends on the social software and its initial design. Of course, digital democracies remain utopic,[76] but digital worlds are still young and users are slowly learning how to fight for digital liberties. In the mean-time, they also want to regain their voice. *We the Users* has resuscitated interest in *We the People*.

In the short-term, society will witness new changes and face new challenges. The global and digital world is at its beginning; the world as we know it as being trans-

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69. Benkler, *supra* note 62 at 227.

70. *Ibid* at 230.

71. See generally: Evgeny Morozov, *The Net Delusion. The Dark Side of Internet Freedom* (New York: PublicAffairs, 2011).

72. Grimmelmann, *supra* note 50 at 11–12.

73. Grimmelmann, *supra* note 48 at 13 (SSRN draft; emphasize added).

74. See *supra* note 49.

75. See also: Grimmelmann, *supra* note 48 at 3–4 (SSRN draft); Morozov, *supra* note 71 at xv–xvi, and chap 8.

76. At the same time, we could argue that, in the material world, democracy is still an ideal which we all seek.

formed, and the current generations are shaping its future. Still, nobody knows what the future will look like. The law, and also its production process, must be prepared to face such changes; it shall "adapt or die." We are on the edge of the next "revolution". *We The People* is clamouring to *reclaim* the law-making process. There might be riots and protests, whether in the digital world or not, across the world. The new paradigm for society calls for a new paradigm for law. Fast-track bill negociated in secrecy have lost their legitimacy. *We The People* are requesting transparency and accountability in legislative processes, including negotiations for international agreements. This is a classic request for democracy. Democracy is only possible where there is openness and transparency. Democracy is only possible when you give citizens a real voice.

Based on the philosophy of *wiki*, the new law-making process would let the legislator receive contributions from every stakeholder. All points of view will then be taken into account, and the consensus will be reflected in the drafting. As anyone would be able to participate, anyone would also be able to review and evaluate proposed regulations. The use of information technology will allow this process to take place internationally (or in all of the concerned territories), in real time. Every citizen will be able to have a voice; not just lobbies with sufficient funding. These are the simple rules of collaborative production, but to be applied to the law-making process. If everyone can have a voice and be taken into account in the process, the result will be a consensus leading to more balanced, accurate and legitimate laws.

However, we make clear that we are not proposing a model of *peer* review. The law-making process may be decentralized, through a networked society. Regardless, we still may require a central repository, a central power to organize the production, enactment, implementation and redress processes. Again, the issue is transparency and openness. The negotiations for the WIPO's *Marrakesh Treaty to Facilitate Access to Published Works for Persons Who Are Bling* is a recent illustration. The negociation rounds were public, and stakeholders were invited to give their opinions on every draft and new proposals. This was a first. The result is that the new collaborative text is considered balanced by all parties,[77] which is also a first. We also refer to the European Commission's intiative with regards to the copyright reform. The EU co-legislator released a public consultation to receive every stakeholders' opinion on the future of copyright law for the European Union[78]. The process is not perfect, as some questions were oriented; nevertheless, the initiative was a step in the right direction. It must be emphasized as such a public consultation process is not common in intellectual property law; one simply has to think of the *Anti-Counterfeiting*

77. Catherine Saez, "Miracle in Marrakesh: 'Historic' Treaty for Visually Impaired Agreed" (2013), online: *Intellectual Property Watch* <http://www.ip-watch.org/2013/06/26/miracle-in-marrakesh-historic-treaty-for-visually-impaired-agreed/>.

78. European Commission, "Public Consultation on the review of the EU copyright rules" (2013), online: EC <http://ec.europa.eu/internal_market/consultations/2013/copyright-rules/index_en.htm>.

Trade Agreement, the *Comprehensive Economic and Trade Agreement* between the European Union and Canada, or the *Trans-Pacific Partnership*.

With such new processes, it will be time to rethink the law. Regulations should be coherent and simple, comprehensible by everyone. An adaptive framework should be based on legal principles and concepts capable of application in tomorrow's still-unknown society. Ancient law, drawing the outlines of a general legal framework, allowed some room for continuous judicial interpretation over the years. Being too specific, the modern law quickly becomes inadequate and obsolete. This is particularly a problem in *civil law*[79] jurisdictions. *Common law* is regularly praised for its flexibility,[80] but the developpement of statutory laws in the past decades has led to similar issues. Today, legal texts have a "lifetime" of only a few years, if not months. Modern society is not the only explanation for decreased legislative life-spans. Indeed, some rules drafted in broad, general terms dating from the 1800s are still accurate and in force today, because of their flexibility.[81] But being too specific, too closely related to current affairs, the law today is no longer able to take into account all the facts of a situation, all of the technological and societal changes; it must be updated.

The new and updated body of law shall set *technological neutrality* as a general principal.[82] Rules shall not be considered solely on the basis of the material world, or of a particular technology. The law shall design a purposive framework. This way, legal provisions will be able to anticipate and welcome the next technological avancements. The legislator can finally be at ease: there will always be issues to discuss, especially on social and economic matters. But politicians will have necessary time to calmly deal with these issues. Also, as no principle is immutable, general laws might need some amendements, but then, once again, the legislator will have the necessary time – to consider them, challenge propositions, and consult *We The People*.

CONCLUSION

A transparent, technology-neutral and predictable regulatory framework will support the *rule of law* in the Information Society. But this has to be achieved very carefully. We will still need filters and elected representatives. We are not arguing for an *open source* government with everyone in charge (meaning, at the same time,

79. Under "civil law", we refer to "written law" jurisdictions.

80. See *supra* note 44.

81. We may refer to *French Civil Code*, art. 1382 providing the general framework of *civil* legal liability. Setting a principle to be implement by courts, since 1804, art. 1382 has been able to understand changes in society or technology.

82. See *supra* note 57 for our terminological conception of technological neutrality.

that nobody is really in charge). This is the idea of a broaded, open process, involving consulting society and stakeholders. It will not put an end to lobbying and the power of money in influencing law. Also, we are not arguing that the Internet, and, generally, technologies, are the solution to every single problem of society – even though, when it comes to lobbying and advocacy, the Internet is a tool offering less fortunate groups new communication opportunities. We only argue that the philosophy behind the rationale of the Internet may help to return to the roots of democracy. Moreover, we argue in favour of shorter and more general pieces of legislations to ensure legal certainty and sustainability.

We believe that this is the future of law and law-making, one way or another. In actual fact, there is no need to implement a new legislative process to write *technology neutral* laws. Also, openness and transparency in law-making would not require major changes; they are more the result of political willingness. This might be a *utopia*, certainly; but so was democracy centuries ago. And like Alice, we learned to try to believe in as many as six impossible things before breakfast.[83]

83. Lewis Carroll, *Through the Looking-Glass, and What Alice Found There* (London, UK: MacMillan, 1872) at 100.

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