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Future Design of Cyberspace Law

"Laws are Sand" (Mark Twain, The Gorky Incident)

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Abstract

The rapidly changing technologies and the evanishing sovereignty concept make it necessary to turn to (soft) informal law which can develop in many different forms. An evolutionary approach should mainly encompass procedural models being better suited to comply with an uncertain future and allowing a reconciliation of conflicting interests. Key elements in this concept are governance, organization, and dispute settlement. Thereby, civil society must be adequately positioned through a multi-stakeholder approach to determine what social impacts should be caused by law.

Keywords: dispute resolution, governance, informal law-making, normativity, organization, soft law, technology-dependency

1. Introduction

(i) At the time of its infancy, the cyberspace was described by John Perry Barlow in his well-known manifesto "Declaration of the Independence" with the following emphatic pronouncements (Barlow, 1996):

"I declare the global social space we are building to be naturally independent of the tyrannies you [the governments] seek to impose on us. You have no moral right to rule us nor do you possess any methods of enforcement we have true reason to fear.

Governments derive their just powers from the consent of the governed. You have neither solicited nor received ours. We did not invite you. You do not know us, nor do you know our world. Cyberspace does not lie within your borders …"

The cited manifesto was considered of being the key cyber-libertarian thesis. A few months later, Johnson & Post (1997) published the famous article on "Law and Borders – The Rise of Law in Cyberspace", arguing in a cyber-libertarian contention that regulation founded on traditional state sovereignty, that is based on physical borders, does not function effectively in cyberspace. This approach has culminated in the assumption that the participants in cyberspace would create a "net nation", being different from the "real" world since most implemented laws were conceived in and for a world of atoms rather than bits (Weber, 2002).

In the meantime, netizens and scholars are less euphoric about the independence of (and particularly the lack of a legal environment in) cyberspace. On the one hand, legal theorists point to the close relations between technical codes and social/legal "norms"; on the other hand, the hectic legislative activity all over the "real" world has shown that governments are indeed concerned about the "legalization" of cyberspace.

(ii) The shortly discussed emphatic pronouncement shows the difficulty to forecast the future. Definitive statements are always risky in times of uncertainty; the mentioned example illuminates that the future legal environment in cyberspace can hardly be prognosticated. This assessment does not mean that developments in natural sciences are not open to anticipations as the following examples illustrate: The famous novelist Jules Verne undertook an ambitious project in 1863, namely writing a prophetic novel, called "Paris in the Twentieth Century" (Verne, 1863). The manuscript was lost for almost 130 years and got only published in 1994. At its re-discovery, the public was astonished how Verne could predict that Paris in 1960 would have glass skyscrapers, air conditioning, TV, elevators, etc. In 1865, Verne wrote the novel "From the Earth to the Moon" (Verne, 1865; Verne, 1870) outlining numerous details of the mission of the US astronauts to the moon more than hundred years

later in 1969. The novel predicted the size of the space capsule, the length of the time of the voyage and the weightlessness of the astronauts (Kaku, 2011). Notwithstanding the fact that Verne was not a scientist, he amassed a vast archive encompassing the great scientific discoveries of his time. Similarly, George Orwell has given an accurate forecast in 1949 about the expectable technological environment in 1984 (Orwell, 1949).

Already in the 15th century Leonardo da Vinci who has not only been a famous painter and thinker, but also a visionary, was sketching parachutes, helicopters, hang gliders, and even airplanes (Capra, 2007). When engineers some twenty to thirty years ago started to build the respective machines based on Leonardo's sketches it became apparent that in fact the constructed machines did function as expected.

(iii) These introductory observations give a contradictory picture: On the one hand, the impression is prevailing that at least a few very talented people were obviously able to forecast the future, even if this is not generally the case since for example the reruns of the old 1960s TV series Star Trek show that much of the twenty-third century technology is presently realized (mobile phones, portable computers, etc.). On the other hand, legal scholars seem to have more difficulties to foresee the developments in the legal framework. Perhaps the easiest answer comes from William Gibson who coined the (now in everybody's mouth familiar) term "cyberspace" (Gibson, 1984) in his novel "Neuromancer" and said that the future is already here, just unevenly distributed.

This article attempts to address the problems occurring in case of application of the traditional legal instruments of the "real" world to the ongoing challenges of the fast developing information technologies. National laws and existing multilateral treaties are not any longer suitable to offer appropriate "clothes" for legal relations in cyberspace. A major problem for overcoming the present tensions in "using" prevailing legal norms in cyberspace consists in the fact that even new theoretical approaches do not sufficiently try to have them embedded into the international legal system. Therefore, the article discusses various normative alternatives to the previously discussed legal concepts and pleads for a more informal approach of law-making. In this context, the main elements playing a role in future cyberspace law-making are designed and assessed, namely governance, organization, and dispute settlement.

2. Challenges of Information Technologies

2.1 Trend to Human Control and Utility Character

The famous Swiss writer Max Frisch once said that technology would be the knack of so arranging the world that we do not have to experience it. Obviously, some laws of the nature do exist, such as (i) the force of gravity (as shown by Isaac Newton in his study "Principia", 1686), even if this force must now be seen through Albert Einstein's theory of general relativity, as well as (ii) the electromagnetic force and (iii) the nuclear force, both governed by the quantum theory and its uncertainty principle which assesses that it is impossible to know for certain the location of any atom.

Obviously, technologies are quickly changing the environment, thereby confronting mankind with partly unexpected challenges. Nevertheless, looking from a general perspective, human beings can now be considered to be in a transition phase from being passive observers of the laws of nature to becoming the choreographers of nature and finally conservators of nature. Consequently, humans will have to be able to control objects of the environment and the technical equipment would need to have the ability to decipher a person's wishes in order to carry them out (Kaku, 2011).

In addition, more and more information technologies will become utilities (as mass technologies), including new technological developments such as cloud computing. Utilities are used in case of need; in principle, users do not care about the provider. Nevertheless, technological equipments, in particular robots, will not be able to perform certain human activities, namely pattern recognition and exercise of common sense (Note 1). These human abilities enable creating multiple models that approximate future events.

2.2 Political and Social Impacts of Technologies

A further major question related to information technologies' developments concerns the viability of Moore's law saying that the number of components in integrated circuits doubles every year (later corrected to two years). Based on Moore's law some futurists (Ray Kurzweil, Bruce Sterling, Vernor Vinge) believe that this law will ultimately lead to a technological singularity, i.e. a period where progress in technology occurs almost instantly (Kurzweil, 2005). Gordon Moore himself, when asked about a possible collapse of the celebrated law named after him expressed the opinion (prediction) in 2005 that it would end in ten to twenty years (Dubash, 2005).

The technological developments do have important political and social consequences:

- Science and new technology if developed in a future-oriented way can question political structures and powers by causing an unsettling effect: A good historical example is the controversy between Galileo Galilei presenting the idea of a round world (thereby questioning religious assumptions) and the Catholic Church represented by the pope (Note 2). Recently, many observers have expressed the opinion that the "Arab spring revolutions" could not have happened without the available information technologies' instruments such as mobile phones and social networks (Note 3).
- Technologies need to comply with at least three social expectations (Susskind, 1996): (i) Applications must be available from a technical point of view; (ii) applications and projects leading to them have to be socially and commercially acceptable; (iii) the implementation and usage of the systems need to be achievable from a cultural perspective. Similarly, the legal framework must be manageable, available, realistic, workable, and interwoven easily with all aspects of social life (Susskind, 1996).

Without a need to further evidence the importance of technologies in daily (physical and virtual) life it must also be acknowledged that technology is a social endeavor; Internet technologies in particular (as well as law) are to be understood through the lens of social interpretation since they have an identifiable socio-legal effect beyond their direct contribution to the fabric of society (Murray, 2007). Consequently, the article will exploit regulatory settlements that design the environment.

3. Traditional Hard Law as Expression of Social Control

Traditionally, the term "law" has been as related to norms stated by a legislator and being enforceable by public authorities. Since a few decades, scholars have looked closer into the notion of "soft law" having gained different shapes and expressions. Now, however, this distinction is questioned and in fact the statement is made that the hard law/soft law dichotomy should be overcome (Weber, 2012). Hereinafter, the discussion is shortly summarized, to be followed by a description of new law-making approaches.

Law has traditionally been considered to be a means of social control; in this concept, its provisions must be effective. On the necessarily international level of cyberspace, the main legal instruments are multilateral treaties which, however, are of different legal quality (Weber, 2002). The most important elements of such regulations are the (unanimous) consensus building and the dispute settlement schemes. Insofar, hard law is helping to establish a robust legal framework being based on a regulatory system (Gadbaw, 2010).

In case of hard law the legal system is rule-oriented focusing at the importance of predictability and stability of the provisions for all participants in the concerned social arrangement (Weber, 2012). A multilateral treaty usually encompasses a quite comprehensive coverage leading to a minimum harmonization level. Furthermore, transparency is a prerequisite for good governance (historically seen as a constitutional instrument for empowering the people as opposed to have a person with absolute sovereignty).

This traditional hard law regime, however, does not comply with the uncertainties of technological developments. In particular, the multilateral treaty negotiation process is slow and the existence of many national regulators leads to a fragmentation of rules which make the cross-border communications and business activities more demanding and the supervision of compliance with the rules more difficult (Weber, 2010a), notwithstanding the fact that modern socio-legal theory has tried to develop models which ideally should overcome legal instability (Amstutz, 2011; Trachtmann, 2010).

A further problem with international hard law consists in a certain lack of sufficiently involved international organizations. Cyberspace is not regulated and supervised by any of the existing bodies; only narrowly limited aspects such as spectrum allocation or trade in digital services are dealt with in the international context (ITU and WTO, respectively).

Summarizing the hard law approach it must be acknowledged that the traditional rules do not comply with the requirements of an appropriate cyberspace framework. The success of an appropriate future cyberspace legal framework depends on the ability of the policymakers to embrace new approaches using different tools from the still-dominant and traditional model of command-and-control regulation (Weiser, 2009). Other forms than the overcome law-making regime must gain importance. This assessment seems to be now quite widely shared and manifold theoretical approaches looking at informal law-making are available.

4. New Approaches of Informal Law-making

In the meantime, it is uncontested that normativity does exist beyond states. As a consequence, contrary to hard law, "soft law" as all-embracing term, having been coined as a term some 35 years ago (Note 4), consists of rules issued by public or private bodies that do not comply with procedural formalities necessary to give the rules a specific legal status (Guzman & Meyer, 2010). In view of the complex operations of international relations and the

ongoing transformation of law-making processes it seems to be implied that the evolution of new forms of legal regimes becomes more important (Weber, 2012). This over the last few decades developed "new" notion of law, commonly called soft law, describes something between traditionally introduced hard law by a legislator and no law (Weber, 2002).

4.1 Law-making through Formalized Standards and Networks

In principle, the often expressed assumption that hard law is qualitatively better than soft law does not anymore hold in today's environment, even less so in the future; the notion that legalization entails a specific form of discourse, requiring justification and persuasion in terms of applicable rules and pertinent facts is not only an element of hard law, but also of soft law (Abbott & Snidal, 2000). In other words, the rule-makers are becoming exchangeable.

This appreciation is not a completely surprising result, but corresponds to manifold ideas developed in legal philosophy which are to be shortly mentioned. During the last twenty years several legal and philosophical scholars looked at the rule-making processes and came to the conclusison that the quality of soft law can even reach a higher level of "compliance" than the traditional "legalistic" law-making (Weber, 2010a, with further details): (i) Herbert L. A. Hart has described the process of formalization and institutionalization or qualification of general standards as secondary norms; civil society actors can monitor the rules of formalization by applying different instruments depending on their grade of specification (Hart, 1997). Therefore, secondary norms in form of widely accepted standards in cyberspace are apt to play a major role for the legal framework. (ii) Linked to the increasing influence of civil society, Michel Foucault calls for an "art of government" in order to mirror the epistemic networks and autonomous self-regulation against the public interest (Foucault, 2004). This approach lays the foundation for the widely discussed multi-stakeholder concept of Internet governance. (iii) Gunther Teubner expresses the idea that the unity of regulatory regimes is significant for the perception of phenomena at the supra-, infra-, and trans-state levels, forecasting a new evolution restage in which law will become a system for the coordination of actions within and between semi-autonomous and societal sub-systems (Teubner, 1989). Consequently, the legal framework is to be based on networks established by the concerned communities and linked together through interconnection mechanisms.

A more recent approach is based on principles for government networks, being set out as relatively loose, co-operative arrangements across borders between and among like agencies that seek to respond to global issues and managing to close gaps through co-ordination. Thereby, a new sort of power, authority and legitimacy could be created (Slaughter, 2004); Anne-Marie Slaughter proposes the establishment of such government networks since they permit the realization of co-ordination on a global level and create a new authority responsible and accountable for the development of rules (Slaughter, 2004; Slaughter & Zaring, 2006). The trans-governmental co-operation could also improve the achievement of solutions through informal information exchanges (Raustiala, 2002). This concept lays the ground for new non-governmental activities as exercised for example by the Internet Governance Forum (IGF), established in 2005 by the World Summit on the Information Society under the auspices of the United Nations; in the meantime the IGF has become the most prominent forum for the exchange of ideas and policy proposals in the Internet world even if the IGF can not, but influence other bodies through moral persuasion.

Andrew Murray (2007) even developed a three-dimensional regulatory matrix which leads to the situation that at each point of the matrix a regulatory intervention may be made, but the complexity of the matrix means that it is impossible to predict the response of any other point in the matrix. By accepting that the regulatory matrix is a dynamic structure, regulators are offered the opportunity to produce effective complementary norms. To effectively map the effect of their intervention within the regulatory matrix, policy-makers must take a further step, namely to measure the probable (or actual) of their intervention through the application of systems dynamics which include a feedback process.

4.2 Code-based Law-making

A second group of theories is less based on network structures but more on the technological code-based system of virtual communications. In the light of the fact that cyberspace law needs to be looked at from a fresh perspective and can also not be marginalized by reference to the "law of the horse" (Note 5) (Easterbrook, 1996; Lessig, 1999), Lawrence Lessig developed the approach of code-based regulation more than ten years ago (Lessig, 1999a). According to Lessig, human behavior is regulated by a complex interrelation between four forces, namely law, markets, social norms and architecture (Lessig, 1999a). Thereby, code solutions, similar to legal rules, principally reflect information that allocates and enforces entitlements. Apart from the well-known terms law, markets and social norms, the architecture being based on codes as design of hardware and software elements determines what

place of cyberspace will be in the life of individuals (Lessig, 1999a). In cyberspace, code can do much of the work that the law used to do, even far more effectively than the law did which leads to the consequence that code can and will displace law (Lessig, 1999).

Lessig's code-based regulation approach relates to the control paradigm occurring as a result of independent decision-making by private or quasi-private entities. Such kind of control has not remained uncontested since the allocation of the decision-making power to private actors has a political impact (see Weber, 2002). This fact makes it imperative that courts impose checks on the powers of private regulators where the respective norm-setting threatens important collective values. If such public interest control is not effectuated, cyberspace risks to be privatized totally, probably to the benefit of the biggest participants in the online world. At the same token, the power element shows that the below discussed dispute settlement mechanisms are an imperative part of a future cyberspace legal framework.

Furthermore, Lessig's linear and directional relationship between technology and society has been discredited by much of the research in science and technology studies (see Mayer-Schönberger, 2008) not at least due to the fact that Lessig failed to demonstrate why cyberlaw should not be seen as "multidisciplinary dilettantism" (Murray, 2007).

4.3 "Informal" International and "Internet-ional" Law-making

Since a few decades, legal doctrine is looking at possibilities and at the concretization of different forms of "informal" law-making. Soft law is often used as overarching term; however, other terminologies are also available. Often, the term "self-regulation" as already known from the law-making in the physical world is used. Self-regulation plays an important role in many segments of the society, amongst others (close to Internet communications) in the media markets. The strengths and weaknesses of self-regulation have been established by a large number of scholars (see Weber, 2002, with further details): The private law-making is usually flexible and apt to be adapted to new (technological) needs, mostly quite cost-efficient and based on the motivation of the concerned persons/entities to improve the regulatory environment. However, problems can not be overlooked: Self-regulation does not only cause a free rider issue but does also not necessarily comply with democratic requirements of participation; furthermore, a major drawback of self-regulation must be seen in the fact that enforcement mechanisms as well as sanctions are usually not available (Weber, 2012).

For these reasons, modern theories further develop the notion of self-regulation which makes sense in the cyberspace context. "Informal" law-making in particular means that rules are elaborated and implemented by bodies not having sovereign power in the traditional sense (Thürer, 2009; Brummer, 2012a). Examples can be found in many areas, particularly in fields coined by fast technological developments such as the international finance and the Internet law (Note 6). An important aspect of this movement is the trend to increased cooperation trying to achieve a multilevel consistency (Breining-Kaufmann, 2005).

(a) In fact, "informal" law-making is on the rise domestically and internationally, thereby challenging traditional mechanisms of democratic accountability. The "informal" international law-making can be seen as encompassing three main features, namely according to Joost Pauwelyn (2011): (i) Process-informality leading to norms developed not in treaty-based forms, but in networks, fora or G-groups often without international legal personality. (ii) Actor-informality encompassing private actors, industry associations, civil society and other organizations or networks. (iii) output-informality leading to norms that are not formal hard law sources, but standards, non-binding guidelines or indicators most of which are outside of the remit of the traditional legal order.

The challenge of "informal" international law-making consists in maintaining the law's neutrality and protective force and in balancing informality which may be needed to enable effective cooperation or to avoid traditional strictures. Such an approach will require a shift in international law from being a value-free instrument enabling state-to-state cooperation to a genuine regulatory order as well as a process balancing effectiveness with democratic accountability (Pauwelyn, 2011). The advantage of this approach can be seen in the fact that it reduces formal requirements and increases dynamic adaptation potential. Furthermore, "informal" law-making can be controlled by law (by any legislative regime) in order to make it more accountable which is a centerpiece of any stable order (see also Wouters & Ramopoulos, 2012).

(b) Similarly, Warren Chik analyzed the disjuncture between the law and practices in cyberspace caused by the information technologies' developments including the socio-economic problems and proposed the framework of "Internet-ional" legal principles based on the history of customs as a source of law (Chik, 2010). This approach underlines the suitability of customary international rules as a template for formulating Internet law-making rules by adapting customary rules to develop a set of determinants for Internet law (Chik, 2010). Indeed, customary international rules gain importance in various fields of law, including constitutional law (Fielder, 2012). The

model of having customary international rules as foundation of new cyberlaw also meets the requirement of reaching online and offline equivalence in order to avoid any disruptions based on the technical infrastructure; as Chris Reed convincingly pointed out (Reed, 2010), complex barriers derived from the different technologies are to be overcome, but generally accepted customs can help to build bridges.

(c) Most recently, Joanna Kulesza has shown the development from international governance to "International Internet Law" being a customary legal framework based on international cooperation of all stakeholders and the incorporation of the idea of "civic virtue" (Kulesza, 2012). This foundation could reflect the decentralized, diverse and complex nature of the Internet, as it mirrors the principles common to all cyber-communities (Kulesza, 2012). Consequently, cyberlaw can be seen as the legal, customary regulation of cyber-communities, based on solid, recognized and enforceable ethical rules (Kulesza, 2012).

(d) Assessing the described theories of informal law-making it can not be overlooked that often the link to the international legal setting is missing. This evaluation is particularly true for the code-based law-making, however, partly also for the law-making through formalized standards and networks. Even if cyberspace is considered to be a new world, manifold linkages to the (further) existing physical world exist. It is also not imaginable that a completely new system (such as a code-based concept or a network structure) can be implemented as of 1 January 20XX.

Moreover, the design discussion should more intensively look into the relations between (theoretical) regulatory concepts and the possibility how to have them embedded into the ongoing (and further developed) international law structure. Promising approaches insofar are the inclusion of customary law into the discussion and in particular Kulesza's common principles of the different cyber-communities.

5. Lessons from Informal Law-making: Normativity without Legal Order and Yet Unidentified Legal Objects

As mentioned earlier, during the last few years scholars increasingly recognized that normativity can develop even without legal order. The most prominent approach is the informal law-making model. This approach, however, must be embedded into the international legal framework and be part of global governance considerations. The reference point might be the principles (or common core) of international cyberlaw principles (see Kulesza, 2012 and Uerpmann-Wittzack, 2010).

5.1 Normative Expectations in Cyberspace

Contemporary legal theory is replacing the understanding of law as command by an understanding which allocates to the law the incentive of inducing people to execute certain actions in the sense that people think about what to choose and what to do (Raz, 1994; Reed, 2012). For Niklas Luhmann, the specific function performed by law is the stabilization of normative expectations (Luhmann, 2004), which law translates from other social systems and reflects in a coding of its own (Thompson, 2011; Raz, 1994). As far as cyberspace regulation with its polycentric character is concerned, human conduct should be subjected to the governance of external controls whether state or non-state, intended or un-intended (Murray, 2007).

Partly based on the philosopher Joseph Raz, the well-known U.S. scholar Yochai Benkler has sketched a theory of social production in the information environment, which appears to be marked by collaborative forms of development being common-based (relying on a common goal of informational resources) or peer-produced (based on decentralized creative inputs) (Benkler, 2006). Thereby, Benkler intends to take care of the effects that "law can have through the way it structures the relationships among people with regard to the information environment they occupy" (Benkler, 2006). Insofar, structural foundations are laid down in his approach optimistically designed as arising organically (Note 7). Benkler also states that the "structure of our information environment is constitutive of our autonomy, not only functionally significant to it" (Benkler, 2006), leading to the assumption of trust in the empowerment of the individuals, rather than in the political system giving the structural contours of the environment (Thompson, 2011).

Normative expectations can mainly be based on generally recognized substantive principles since they have two different core functions (Uerpmann-Wittzack, 2010): On the one hand, legal principles help systemizing and, by that, explaining a set of legal rules, thereby being apt to overcome the risk of an incoherent mass of normative rules. On the other, principles can be considered as elements of legal reasoning since they elucidate object and purpose of legal rules and influence the evolution of international customary law. Furthermore, the two functions facilitate the building of bridges between different actors in cyberspace with the objective to establish interrelationships based on trust and confidence.

5.2 Global Governance

Obviously, all approaches are to be embedded into the global governance debate which can not be exposed in the context of this article since it encompasses the herein discussed topics by far (see Winchester, 2009). Nevertheless as a general statement the widely accepted assessment might be made that "there is no such thing as" a sole global governance. Moreover, global governance has to be looked at from a multi-layered structure (see Weber, 2012c, with further details). Depending on the topics at stake, the actors involved and the problems to be solved, different layers must be taken into account.

Since regulatory regimes evolve in view of the societal and political context, private autonomous regimes are part of the multi-layer governance if developed with the objective to increase the institutionalization, based on broad initiation and wide building support (Bernstein/Cashore, 2007). Other elements are the significance of institutional environments, the dynamics of relationships, and how non-sovereign bodies respond to multiple legitimacy claims in complex and dynamic regulatory situations (Black, 2008). In relation to non-state or private networks and organizations, the governance emphasis should not be put on normative validity; moreover, the trend towards efficiency and public value maximization should be supported (Senn, 2011).

In this context, the new dimensions of global administrative law merit further attention since this discipline looks at institutional differentiation and elaborated procedural techniques (Kingsbury & Casini, 2009). Both elements will be discussed as major design aspects of a future cyberspace legal framework hereinafter. Hand in hand with this development the regulatory system has increasingly accepted the importance of public notice and consent procedures (Barr & Miller, 2006). The fructification of these ideas has recently mainly been done in connection with the execution of functions by the G-20 in respect of financial regulation (Wouters & Ramopoulos, 2012), but lessons from the respective experiences can also be drawn for other segments of the society.

In addition, the term of "yet unidentified legal objects" has been coined in the context of the attempt to develop a "global" law, encompassing the objects which do have a "doubtful" or "controversial" legal character (Frydman, 2012). Such objects require the acceptance of a certain degree of normativity since they are implemented pragmatically in practice (Duss, 2012). Departing from the well-known distinction between "objective law" and "subjective rights" the approach differentiates between the macrolegal and the microlegal level; thereby, the model provides for the possibility to assume a microlegal concept of normativity without a macrolegal framework (Frydman, 2012). This approach can be made fruitful in connection with the implementation of appropriate organizational rules as described hereinafter.

In a nutshell, summarizing the discussed law-originating developments, the following assessment can be made: If a regulatory need is recognized in cyberspace, the concerned members of civil society and business might not be satisfied with national legal provisions and might not wait for multilateral treaties. Moreover, an adequate legal framework is only realizable if the foundation is done on an informal law-making basis which can be embedded into the international legal framework. Nevertheless, it remains to be analyzed which structural elements should assume the key functions in the future design of cyberspace law.

6. Structural Elements for a Future Law of Cyberspace

The description of the different scenarios which can lead to a new legal order has shown that fresh approaches are needed for an appropriate future legal framework. Looking at the prevailing circumstances the forecast can be easily given that soft law and informal law, respectively, will play a more important role, but such kind of statement does not suffice to build a new legal framework. Therefore, light must be shed on possible structural elements for a future law of cyberspace.

6.1 Starting Point: Which Elements Are Reliable?

Any legal order has social impacts. Therefore, the setting of a framework for future (cyber-) law should be based on assumed premises of a perfect society. Almost five hundred years ago, in 1516, Sir Thomas Morus has written the novel "Utopia", envisioning a paradise on a fictional island in the Atlantic Ocean (Morus, 2002). Again in the nineteenth century, many social movements in Europe searched for various forms of utopia (Wells, 1905). Some forty years ago, autonomous cultural arrangements have been seen as "framework of utopia" (Nozick, 1974); a good decade later, the structure of the international legal reasoning was assessed through the lenses "From Apology to Utopia" (Koskenniemi, 2009). However, the problem with the term "utopia" consists in the fact that clear contours can hardly be identified and structural elements possibly designing future developments are not to be drawn from this concept. Therefore, "utopia" is not in a position to design the cyberlaw framework.

Nearly half a century ago, Louis Henkin phrased the often cited sentence that "almost all nations observe almost all principles of international law and almost all of their obligations almost all of the time" (Henkin, 1979). This

assertion seems hardly be convincing anymore. Moreover, the increasingly dense framework of rules with different legal qualities rather leads to uncertainties in respect of the compliance with rules by States. At best (and convincingly) it can be said that international law provides instruments for reconciling conflicting interests and settling disputes (Kaufmann, 2011; Howse & Teitel, 2010). In addition, narrrowly oriented rules are not apt to comply with the challenges of rapidly changing technologies; consequently, a polycentric approach must be chosen (Senn, 2011).

Other models are based on specific compliance aspects: For example, Abram Chayes/Antonia Handler Chayes (Chayes & Handler Chayes, 1995) express the opinion that States obey international rules not because they are threatened, but because they are persuaded by the dynamic created by the treaty regimes to which they belong. Thomas M. Franck relies less on managerial processes than on the fairness of international rules themselves (Franck, 1995). Both approaches, however, underestimate procedural elements, i.e. the complex processes of institutional interactions in a transnational legal setting as well as the processes of internalization of global norms (Koh, 1997; Shaffer, 2010) (Note 8). Furthermore, it cannot be overlooked that the concept of Thomas Hobbes, outlined in his famous Leviathan (Hobbes, 1651), that law is to be defined in political terms, which means in terms of power, does not anymore fit the structures of the cyberworld since the regulatory environment is linked to multi-stakeholder participation (Frydman, 2004).

Rules are usually not "invented" by coincidence. Moreover, a process-oriented approach developing mechanisms of evolution for a law of the future makes sense (Amstutz, 2011b). An evolutionary approach can encompass substantive and procedural elements; in light of the rapidly changing technologies, any approach relying on substantive elements risks to loose material grounds within short time intervals. Therefore, procedural elements seem to be better suited to comply with the "needs" of an uncertain future. Processes are indeed more likely adaptable to changing requirements of the society.

Process in the mentioned sense is not limited to formal aspects; moreover, substantive elements in the conceptualization of structures and relations should not be underestimated. Based on the discussed foundation of informal law-making and the critical anlysis of previous political-legal theories, the article comes to the assessment that three main aspects designing a possible future (cyber-)law framework are to be analyzed, namely (1) the governance aspects, (2) the organizational aspects and (3) the dispute settlement aspects. The choice of the three pillars does not mean that further elements should not be evaluated; the assessment only is a consequence of the concentration on the key topics.

6.2 Governance Aspects

New organizational structures also require new governance principles. As typical assays of a more global governance, the following aspects are to be addressed (Waters, 2009; Weber, 2010b):

- Governance should refer to a "order, characterized in part by porous borders and power sharing amongst states, non-state actors, and geographic and/or functional entities" (Winchester, 2009).
- Governance must encompass collective efforts enabling the concerned persons to identify, understand and address worldwide problems going beyond the capacity of individual states to solve (Weiss & Thakur, 2006).

Consequently, the future problems require by their nature a broader and more collective decision-making than in the past; the different interests and needs call for the establishment of multilevel mechanisms that ensure that the voices of all concerned participants are heard and appreciated (Weber, 2010a; Newell, 2008). In terms of the economic theory, contrary the States' law often using sticks, global governance prefers to use carrots (Frydman, 2004).

The absence of hierarchical structures and the fact that responses to new issues are complex should be acknowledged. Flat structures on different appropriate levels facilitate the decision-making by including the relevant persons and organizations at the actual point of their respective concern (Weber, 2010b). In the context of Internet governance, the Working Group on Internet Governance identified a number of roles and responsibilities of the various stakeholders (governments, commercial world, civil society, academic and technical community); thereby, the interests of the parties involved should not be defined by any specific group, but through (procedural) participatory mechanisms that reflect the views of the whole society (Note 9). The multistakeholderism approach calls for different forms of "Co-Governance" in a multilayer multiplayer mechanism of coordination and collaboration (Kleinwächter, 2011).

Based on such an understanding, future governance can be seen as a broad "array of changes in the distribution of authority, legitimacy, decision-making and participation by individuals and organizations in ordering human

society, in response to similarly broad changes to material, social, technological, and economic conditions" (Waters, 2009). Consequently, an increased interconnectedness and complexity of life must be taken into account, leading to the formation or legitimization of these aggregated networks of sub- or cross-state communities as rule-producing and rule-enforcing actors (Weber, 2010b) (Note 10).

6.3 Organizational Aspects

Whatever the quality of law will be in the future, organizational elements need to be addressed: A stable order will only be realizable if the degree of "organization" of the concerned persons is high since in such a situation the implementation (and enforcement) of harmonized standards is facilitated. As past experience has shown, the implementation of autonomous soft law and non-state standards based on the principle that they are considered by the concerned persons as benchmark for the behavior can lead to a gradual process of institutionalization (Weber, 2010a).

Therefore, representatives of States and international organizations have increasingly recognized that soft law released by private persons is usually modern and dynamic (Note 11); it also allows the implementation of adequate decision-making structures (Koskenniemi, 2007) (Note 12). Sufficient coverage with adequate reputational and retaliatory tools can generate a sufficient degree of compliance. Reputational constraints are usually derived from the fact that illegitimacy itself creates "costs", i.e. members in standard-setting bodies must keep reputational discipline by refraining from overtly biased or self-serving decision-making (Brummer, 2011).

Consequently, if reputation is seen as an important factor in social life, civil society will act according to (aligned) incentives with the public interest (Rehbinder, 2009); this is even more the case with market participants in business matters. In fact, neither regimes nor States have a fixed nature or self-evident objective (Guzman & Meyer, 2010). This means that the degree to which rules are binding should not be conflated with whether they imply a formal legislative obligation; insofar, hard law and soft law are not dichotomous or qualitatively different forms of regulatory control (Brummer, 2011). Lack in confidence in the organizational law and skepticism about the legal system is detrimental and cannot be helpful in relation to the institution that provides a framework with which the civil society and the commercial world should operate (Susskind, 1996).

The problem of soft law or "informational" law-making consists in the fact that such kind of law can hardly provide a protection against extraneous values (Weber, 2012). This issue concerns the relationship between the system's own design and the environment in which it operates (Amstutz, 2011). Looking at this problem, it seems to be unavoidable that new dimensions of global administrative law are to be explored, covering aspects of accountability, institutional differentiation and elaborated procedural techniques (Kingsbury & Casini, 2009). In fact, during the last few years the international regulatory system has undergone a significant evolution and accepted increasing prominence of public notice and consent procedures (Barr & Miller, 2006).

6.4 Dispute Settlement Aspects

The establishment of an effective dispute settlement mechanism with the objective to complement and "enforce" soft law or "informal" international/"Internet-ional" law-making is of major importance in order to attribute higher reputation to the respective new rules (Note 13). As many examples show, the possibility of invoking a dispute settlement mechanism tends to lead to better voluntary compliance with the rules (Weber, 2012) (Note 14). The term dispute settlement mechanism should be understood in a broad way, encompassing not only juridical "proceedings" in a traditional form (such as arbitration), but also all thinkable forms of mediation leading to a resolution of pending or threatened controversies. Disputes can even be avoided by early cooperation between the concerned persons/organizations/States (Uerpmann-Wittzack, 2010).

During the last two decades, different forms of alternative dispute resolution (ADR) mechanisms have been developed; these models apply different forms of binding effects and range from negotiated solutions to clear recommendations and finally to enforceable judgments (Note 15). The suitability of the manifold approaches depends on the given circumstances. The most relevant mechanism in the Internet field is the Uniform Domain-Name Dispute- Resolution Policy (UDRP), established by ICANN under the auspices of the World Intellectual Property Organization (WIPO, domiciled in Geneva, Switzerland) in view of domain name disputes. WIPO has mandated several organizations to actually offer the respective dispute resolution services. Notwithstanding the fact that some criticism has been levied against the way how the procedures are partly conducted, mainly from a formal procedural angle (right to heard, consistency of reasoning of decisions etc.), it should not be underestimated that the UDRP has helped to come to efficient, speedy and costly results in the assessment of domain name disputes, thereby avoiding long reaching uncertainties and the involvement of unpredictable national courts.

So far, dispute settlement mechanisms are not widely available in other fields of the cyberspace legal framework. Improved efforts in implementing such kind of procedures, however, must be considered as worthwhile. Dispute settlement mechanisms can namely equally be necessary to clarify which legal obligations are eventually incomplete or inadequate; insofar, the dispute settlement is able to establish the predicate for, and limit the scope of, retaliation. The suitable forum for complaints in this context is not yet available; however, it would be worth to consider implementing new structures dealing with the settlement of disputes (Weber, 2012).

The availability of dispute settlement mechanisms also is a pre-condition for the introduction of (reputational or monetary) sanctions; examples could be the imposition of some sort of disciplinary and enforcement powers, attaching costs to the failure of complying with applicable rules. However, such a "sanctioning" is only possible if adequate mechanisms allow the business world and the civil society to get hold of the relevant information constituting the basis for getting redress (Weber, 2011).

7. Outlook

Legal scholars when designing the future cyberspace legal framework should consider the fact that building designers, i.e. architects, are the experts in sketching "constructions". The famous architect Louis H. Sullivan said more than hundred years ago: "It is the pervading law of all things organic, and inorganic, of all things physical and metaphysical, of all things human and all things superhuman, of all true manifestations of the head, of the heart, of the soul, that the life is recognizable in its expression, that form ever follows function. This is the law" (Sullivan, 1896).

Indeed, the mentioned architect uses twice the term "law" consisting in the key notion of making form dependent from function. Therefore, when designing future cyberlaw, legal scholars have to make up their minds as far as the function of law is concerned: The main question must be: What social impacts should be caused by law? The answer is to be founded on the expectations of civil society. These expectations change over time, but some elements remain unchanged, such as the legal certainty, stability and reliability. In times of fast developing information technologies civil society is able to better rely on these principles in an informal law-making context than in the traditional legal regime.

The living together in a more and more informal-lawmaking environment makes it necessary to implement governance elements which encompass collective efforts enabling a proper identification and understanding of worldwide problems needed for global solutions, to have organizational structures in place which allow wide-spread participation by way of a multi-stakeholder model and to establish a dispute settlement mechanism which strengthens the accountability of all involved members of States' powers, commercial businesses and civil society.

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Notes

Note 1. For further details see *Kaku, 2011*.

Note 2. In 1633 an inquisition ban on reprinting Galileo's work was released by the pope which was only lifted in 1718 (for further details see *Heilbron, 2005*).

Note 3. See the special issue of the International Journal of Communication, Vol. 5, 2011, 1435 et seq. with the title "The Arab Spring and the Role of ICTs".

Note 4. The term "soft law" was introduced by *Dupuy, 1977*. See now the broad study of *Brummer, 2012*.

Note 5. This term refers to controversy between Easterbrook and Lessig (1996 and 1999); for a newer analysis see Murray, 2007).

Note 6. See *Weber, 2010* for the parallels of the rulemaking approaches in the Internet and financial markets fields; to the financial markets in particular see *Senn, 2011*.

Note 7. See also the critical approach of *Thompson, 2011*.

Note 8. The critical remarks of *Howse & Teitel, 2010* to the compliance approach are based on structural, not procedural reasons.

Note 9. For further details see *Weber & Schneider, 2009*.

Note 10. To the constitutionalism discussion see *Cottier & Hertig, 2003*; *Peters, 2009*; *Petersmann, 2011*.

Note 11. This section follows *Weber , 2012*.

Note 12. See also *Senn, 2011* to the institutional transformation.

Note 13. See also *Thomson, 2011* correctly asking the question who would settle disputes arising out of substantive cultural matters of the information environment.

Note 14. To the importance of the WTO dispute resolution mechanism see *Howse & Teitel, 2010*.

Note 15. For an overview see the still basic contribution of *Edwards, 1985/86*.