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The Future of Law – “Serial Law”?

Karl-Heinz Ladeur

European University Institute
Department of Law

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cadmus.eui.eu

Author contact details

Karl-Heinz Ladeur

Professor emeritus

University of Hamburg

Karl-Heinz.Ladeur@uni-hamburg.de

Abstract

The legal system undergoes again a deep process of transformation that may be attributed to the emergence of the “society of networks”. The earlier transformations that took place in the “society of organisations” were centred around the organisation as a kind of “big individual” that was and still is able to aggregate and manage long chains of actions as opposed to the individual subject whose action was rule oriented and followed established patterns of experience. The “society of organisations” was characterised by the rise of all kinds of social norms (standards), organised generation of knowledge, and practices of “balancing” that the multiplication of long chains of action have made necessary. The “society of networks” leads to more complex processes of knowledge generation and tends to create new “quasi-subjects” that follow mobile project-like patterns of cooperation. They are focused on “high knowledge” that is involved in permanent processes of self-transformation. The emergence of “data driven technologies” that do not follow stable trajectories is paradigmatic. It is a challenge for the legal system if what the new loosely aggregated quasi-subjects of the “society of networks” do is “*surfing fluid reality*” (Bahrami/Evans). This evolution finds its repercussion in new challenges for the regulatory state and also for contracting practices in private law. “Serial law” might be a new paradigm of law that “reads” processes of change in real time and experiments with forms of coordination that refer to learning processes.

Keywords

society of networks, serial law, big data, regulation, high technology

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Preliminary remarks: From the rule of law to “serial law”?

The hierarchical, top-down perspective on law is still the dominant one (primarily in continental legal systems – given that there are some peculiarities in Anglo-American law): This principle finds its repercussion in public law in the doctrine of the “delegation” of rule-making power by parliament to administrative agencies or the assumption that the law is “applied” to cases, but that cases do not make law. Because this doctrine is untenable in practice the principle is mitigated by the acknowledgment of “judge-made law” or the recognition of “broad” parliamentary delegations or “quasi”-legal rules (administrative norms that are treated *as* legal norms to a certain extent). At the same time there is a plethora of legal delegations that seem to fulfil the requirements of the delegation doctrine (at least in the formal sense) without really allowing for the formation of rational expectations of citizens or firms. One should go one step further and give up the delegation doctrine for the practice of decision-making in conditions of complexity, *i. e.* control *ex ante* should be superseded by a new control project, to wit, control *ex post*. One could openly accept the law-making power of administration or of private organisations *i. e.* “serial law”, which is generated from a “series” of experimental search processes in conditions of uncertainty. One could, perhaps, transcend the limits of systems theory, which still presupposes the stable functions of societal systems of communication, *i. e.* for the legal system: the counterfactual stabilisation of (behavioural) expectations (Luhmann 1993). One could hope for further inspiration from a “media theory” of law (Vesting 2011-2015 – English translation to appear).

Scott Lash (1999: 265) takes the view that the media, the culture of the media, bring to the fore late-modern forms of a rupture with representation, the clear distinction of rule and exception, norm and facticity, the universal and the particular, inside and outside (e.g. of organisations and markets). The media (scripture, book, films, television, press, computer networks) increasingly structure the heterarchical processes of self-organisation of the law and thereby undermine clear conceptual distinctions. The “media” in this sense are not primarily characterised by “the physicality of a specific medium”, the book (Vesting 2013), the computer network (Hansen 2004: 23; Vesting 2015; Krauss 2008: 7, 35), but by the modes of (*re-*)configurations of communications that are “mediated” by the media in the technical sense, *e.g.* for computer networks the extreme “plasticity” of the figures and forms of digitisation, “the processural realization of information in time... as a traditional image ... only for contingent reasons” (Hansen 2004: 9) – the digital structure allows for the permanent transformation on the basis of an infinite combinatorics of fragments – it needs a learning “algorithmic” order that can use the possibility in order to search for the potential stabilization of patterns, of productive “nodes” of interrelationships within informational processes in real time and can test their practical viability. This finds its repercussion in the legal system for example in the emergence of “contextual” contracting, which does no longer presuppose the stability of expectations *ex ante* because this would undermine the functionality of law in conditions of high complexity (Sabel & Zeitlin 2004; Sabel & Simon 2012; Jennejohn 2008; 2010).

This needs a broader comment. One might start from a perspective on J. L. Nancy’s (1996) theoretical reflections on the “singular” (“singulier”) that or who can no longer be subsumed as the “particular” (which is already characterised by universality or a general “trait”, as an “example) under the general/universal. This finds its political repercussion in the fact that the representative institutions (parliament, political parties, trade unions etc.) are increasingly facing the resistance of the particular, which escapes from the generalisation of interests, of political strategies, of legal standardisation. Whether this leads into a self-destructive aporia or just aesthetic resistance of versions of protest without political demands addressed to institutions is not clear (Ladeur 2015: 97). This can be left open, however, these are phenomena of a crisis, which implies that the “singular” cannot just be the starting point for generalisation, for the formulation of stable universal norms.

According to Scott Lash (1999: 267) the combination between “singulars” is exactly what the media are up to. E. Domenach (2006: 90) takes a similar view when she ventures the assumption (following St.

Cavell) that the media (literature, films) remind us that we have to look at specific “singular” works in order to discover and experiment with new possibilities, which we would not see if we were already involved in the search for understanding the universal. What is at stake are the “poietic possibilities”, the never ending “flow of analogies” (D. Hofstadter/E. Sander 2013) that still need stop rules if we do not want to risk complete chaos. Otherwise there could not be any “order from chaos” (cf. Atlan 1979). St. Cavell (1989: 77) has aptly formulated what the new challenge (after the end of the universality and generality of order) is; it is the paradox of “finding *as* founding” (no emphasis in the original). A foundation is found, not founded! This means that there is an entanglement of hierarchies, of the general and the singular, of persons and things, that allows only for the experimentation with forms and patterns that have no preliminary stability. In a legal perspective this would mean that we have to reckon with new *quasi*-subjects, nodes within networks of relationships, which introduce new aggregation of action potential which go beyond the organisation (and the individual subject). This is why one may talk about a “society of networks” Of course, what I have in mind is not Nancy’s reference to the “singular” (“*singulier*”), which in my view, remains enclosed in an aesthetic paradox, although it might be regarded as an intellectual “instigation” to make use of the heterarchy of interrelationships between things, persons, possibilities, below the level of stable concepts in order to grasp the “unrest” that comes to the fore in the legal system and which cannot be tackled either upon the basis of a classical normativity of *rules* (and discursive rationality of argumentation) or as a systems theoretical approach to the law as a system of communication whose touch upon the facticity “outside” is always filtered by a predetermined *eigenrationality* (Luhmann 1993) – that determines both what it “sees” and how it “sees”: programmes (norms) may change, but the law’s function itself remains the same. This is dubious because the *facticity* itself has become so disruptive that the dependence of the law on facts and social conventions, the observation of the clusters and patterns within the facts is transformed. N. Luhmann (1971) has anticipated the possibility that a “cognitive rationality” might replace the rationality of the law. This is perhaps a one-sided look at an alternative to the presupposition of a stable function of the law. The law’s function itself may undergo a process of transformation in conditions of rapid changes in the knowledge basis of society. Such a dependence of the law on the stability of facts can go unnoticed for a long time, if the facticity itself changes only slowly and continuously.¹

I will try to demonstrate the idea of a transformation of the legal system, of normativity, focusing on four domains which are under the pressure of the highly dynamic and disruptive development of technologies and knowledge: The emergence of global administrative law (“from above”) and the challenge of “high technology” for administrative law (“from above”). The development of communication structures on the Internet that undermine the hitherto established social norms on communication, and finally the evolution of new forms for the management of private contracts in the domain of “high knowledge” that reacts to the phenomena of extreme complexity in technology.

The future forms of co-ordination between global and domestic administrative law

A reflection on the future of domestic and global administrative law (Stewart 2006: 695, 705) may be helpful here: in both fields, a new generative dynamic momentum comes to the fore, which is due to the rise of networks emerging beyond both classical liberal administrative law (“the society of individuals”) and its focus on the abstract person. This evolution demonstrates that administrative law can no longer be constructed with reference to classical patterns and their stabilisation by statute law. Meaning is no longer deposited in slowly evolving rules of experience nor in the legal text. It pre-supposes a dynamic modelling of a distributed domain of options and relations thereby invoking a multiplicity of perspectives in “real time” in an open context. Co-operation will not only occur in public-private networks alone, but also in “inter-public” joint ventures that mobilise expertise beyond the limits of

¹ M. de Certeau (1990: 218) has taken the view that the „normative *discourse*“ only ,works’ (,marche’), if it has been preceded by a historical „story“ (,récit“), a text that „has articulated with something real and speaks in its name“ (,articulé sur du réel et parlant en son nom“).

stable territorial competencies (Zaring 2005 for transnational cooperation of agencies). The transnational dimension of administrative law is nothing but an expansion of the multi-layered spatial relationships that emerge at domestic level. The discretion of administrative decision-makers which finds its legitimation in the increasing importance of specialised knowledge that has to be generated within complex procedures and demands the use of adequate methods of control could be opened for the co-ordination of heterogeneous and polycentric knowledge bases of different countries and societies², in the sense that, in transnational procedures, the aggregation and integration of global social norms and knowledge might be regarded as a new meta-rule also for the judicial control of administrative discretion. Considering the dynamic nature of the administration both in, and of networks, more evaluation (Stichweh 2004: 147, 155) *ex post* and more indirect rule-making will be necessary: “steering” administrative practice *ex ante* by statutes or by the “application” of informal rules of experience will not be sufficient. The new knowledge base of the “society of networks” will allow for more self-organised rules and patterns, while, at the same time, the decreasing relevance of stable norms in both senses should lead to a focus on procedural norms which are designed with regard to the generation of new knowledge that will be useful for the evaluation *ex post*.

We are still in the process of experimentation, which will generate new forms of action, new procedures, new types of co-ordination between public and private actors. It may well be the case that the role of the judiciary in this new evolutionary process will be negligible, not to mention codification by the legislator. What should be conceivable is a new type of co-operation between domestic agencies and the legislator, with the prospect of coupling transnational procedures of decision-making and domestic legitimation and accountability of decision-makers (cf. generally Dyzenhaus 2008). New elements of an intertwining of domestic and transnational law might be developing.

Data driven technologies and the model of “evolutive networks”

The regulation of data-driven technologies can itself only follow a model of “evolutive networks” (M. Amstutz), *i. e.* under the transformed conditions of uncertainty stable goals for the regulatory process can only be formulated to a limited extent. Such a strategy is useful only insofar as certain risks can be analysed and described beforehand – and these are the risks of the past. This is why first of all the internal risk management of firms should be strengthened (Reiling 2016).

During the last financial crisis the internal institutions of the risk management of banks has been weakened by a “philosophy” that has favoured the “makers” at the expense of the staff that were responsible for the risk management. The latter have been devaluated as the “worriers” as opposed to the “warriors” who run the risk and meet the challenge of the markets. This has also led to a spread of salaries in favour of the former and to the detriment of risk managers. In the regulation of financial markets it would be crucial to focus more on avoiding a clustering of the risks that might accumulate in a way that would block the potential of self-organisation of the market. However, concrete patterns of such a regulatory policy cannot be designed in advance but only in real time by way of continuous observation of markets and a conception of an “evolutive regulation” upon the basis of a basic *ex ante* regulation that is focused on the access to the knowledge needed for such a mobile strategy whereas the core element of regulation should consist in the observation of risk indicators *ex post*. This could be the new heuristic for an appropriate regulatory strategy.

Clustering would then be regarded as a kind of “network failure” that should be an important frame of reference for risk regulation in the “society of networks”: the network collapses and is no longer able to mobilise and make use of its potential for self-organisation and flexible self-transformation in order to meet the challenge of crises. The same could be assumed for the new technologies that can be called “data driven”, as well, *i. e.* technologies in whose development no linear trajectory can be identified.

² For the re-emergence of the methodological problems of a distinction between „law and non-law“ cf. Zumbansen (2012).

It will be important to regard the volatility of the process that is to be regulated not only as a problem but also as a potential for a flexible smart regulation: regulation *ex ante* can easily fail under conditions of complexity, although it is not only the regulation of financial markets but also that of complex technologies such as nanotechnology or genetic engineering generate an abundance of data that could also be read by a public regulatory strategy.³ For example, nanotechnology allows for the use of micro particles that can be combined to other nanosubstances or genetically-modified organisms as “biomarkers” that allow for the observation of the risks of clustering. This means that computerisation of technological design could also be used for a strategy of flexible regulation that is based upon evolutionary learning algorithms. The recent transformation of genetic engineering (CRISPR) towards a new informational paradigm demonstrates the new challenge of emerging technologies that are mainly “data driven”: genetic engineering has developed a technique of “reprogramming” plants (“genome editing”), a kind of computerisation, that cannot be treated as traditional genetic engineering (Camacho *et al.* 2014; Grossarth FAZ 2006, Nr. 83, 21). Whether it may be subsumed under the regulatory regime for genetic engineering is dubious. The problem has been exacerbated by a position recently taken by the European Commission (16/April/2016) not to regard this new technology as “genetic engineering” in the former sense but to opt for a new intense regulation of the risks of the new technology.⁴ This will present a huge problem because of the extreme flexibility of the new technology that can no longer be clearly distinguished from methods of traditional plant breeding.

The monitoring of rapidly changing environments and the distribution of potentially hazardous substances in the environment may also be too complex for humans to design. A new strategy that would observe the changing landscape both of research and of technology could observe a close relationship between such an innovative strategy and the coming paradigm of the “Internet of things”: on the one hand, a “web of sensors” could communicate data that are collected from nature, on the other, the “web of nature” is modelled upon the basis of a new conception of information technology conception, and both “communicate” without a human interface.

Clearly, this does not mean that “older” regulatory models should be abolished altogether. There should be a combination of elements of all three paradigms: in as far as experience continues to be available, the traditional model should not be given up, the prospect of organisational generation of knowledge should be taken into consideration as well, and we still need a new approach for the emerging data driven technologies that can no longer be regulated according to the traditional paradigms – and this means *before* they are used in practice.

As far as technology is concerned we will face a new challenge once nanotechnology will play a more important role, which is only a question of time: this new technology - if one may still speak of *one* technology at all – will make the relationship between science and technology even more complex: nanotechnology will not just provoke a new process of reframing the relationship between science and technology, it will reverse the hitherto established hierarchy between both: technology no longer makes “use” of science – on the contrary, it is rather technology that changes nature and creates new versions of “objectivity” (Daston & Galiston 2010). This new disruptive transformation will no longer allow for *ex ante* evaluations of risks and of risk management. Risk assessment technologies will, on the one hand, have to be integrated into the new technological trajectories and follow their evolution. On the other hand, the rise of “smart systems” can be used for the generation of a huge amount of risk information by the systematic observation of technological “applications”. This new turn will demonstrate once more the importance of information technology and its ubiquitous presence in systems that generate artificial knowledge.

³ The limits of the traditional regulation of technology, i. e. to presuppose a linear development of a technology that follows a certain „trajectory“ is demonstrated by the recent evolution of genetic engineering that has considerably changed and can no longer be referred to a stable „description“.

⁴ http://www.theecologist.org/News/news_round_up/2987595/new_gmos_are_not_gm_eu_folds_under_us_pressure.html

The governance of the Internet

The missing social norms and how to generate them

Another variant can be seen in the discussions about the limits of Internet communications. The web communities on the Internet tend to regard every legal barrier to Internet communications as an unacceptable interference in the fundamental rights of the individual. This, too, is a manifestation of the deterioration of a balance of legally protected interests moving to create “groupings” of interests (W. Benjamin). Against this background, which can only be summarily illustrated here, the development of Internet connections, from the perspective of both social theory and the law, must be seen as a challenge, as it rips right through the differentiated construction of both the public sphere and that of privacy, as well as of each one’s relationship with the other. Compared to this, the forms of communication typical to the new media, such as blogs or social media posts, acquire a hybrid character.⁵ In this context, this means that the factual, social and legal conditions of the differentiation of the relationship between the private and the public spheres are convulsed (Ladeur & Gostomzyk 2011: 710). In particular, individuals can communicate with large numbers of unknown participants electronically or, more precisely, non-orally and this derails the rules that govern the borderline between private and public issues. Electronic communications about “private” issues take place in what is in any case a potentially public manner, so that the participants in the communications no longer address one another privately and individually, but frequently also quite unintentionally can reach a large number of people, without the person generating the message always being able to control this, as was hitherto the case with the mass-media. It might even be said that mass-media forms can be reproduced within hybrid Internet communications (by professional bloggers), but there are also the ambiguous figures of communicating individuals who themselves suddenly become semi-media when they set out to achieve mass dissemination of their communications and surprisingly actually succeed in doing so.

In the past, the oral nature of communications used to set factual limits to the dissemination of the private individual’s messages, while the public media’s right to express themselves was limited by the law. On the other hand, examples can be used to show that 90-95 per cent of information that is of general interest at local level is produced by the traditional media, while the new media just compile it new ways and distribute it. That is why issues that are much more specialised are now reproduced. This leads to the bundling function of the classical media focused on the state and on the civic public realm losing out in significance (FCC 2011: 124). A report from the United States’ FCC calls this development “the great unbundling” (127). The professionalisation of reporting standards and the concomitant centralisation of knowledge rules also benefited the legal protection of third parties and enabled criteria to be developed for processing knowledge or maintaining or limiting non-knowledge or silence.

The transformation of Internet communication

The Internet is changing the procedural rules of knowledge and non-knowledge fundamentally: communications now only appear to be disseminated horizontally, with no beginning and no end, to be brought into being without any standards that could be used for evaluating the proficiency of the knowledge that they contain for the future (Herrenschmidt 2007). This also makes any legal control and monitoring of such standards more difficult – and not only factually. The most important battle fought by the American Civil Liberties Union (ACLU) against the chilling effects of juridification is

⁵ About the “superficiality” of blog communications, see A. Sullivan (2009: 103).

symptomatic of the absence of any concept of a “control project” for the Internet or of any overarching perspective.⁶

Knowledge is still connected to a distributed heterarchical network that does not appear to leave any space for stable rules of attribution, separation or responsibility to develop and be centralised. The attention paid to knowledge is generated virally or by being infected by matrices, for which there are no prior regularities and which allow no rules to develop to govern the social reflection of the limits of knowledge and non-knowledge (secrecy). This is logical, to the extent that, as B. Groys puts it, in many of the new forms of communication on the Internet (in this case referring to Google), “man no longer speaks in the traditional sense”. He becomes a “user” who “applies the various different linguistic contexts, *topoi* or terrains or makes new ones” (Groys 2012: 27). He lets “words appear or disappear in different contexts – in a completely silent and purely operative extra- or metalinguistic form of practice” (Groys 2012: 27). The flow of the process itself becomes the framework of reference of the “synaptic self” or of the “neuronal personality” (LeDoux 2003; Malabou 2004; 2005), which is disturbed by “censorship”, *i.e.* the external interruption of the process of relating. It might be thought that the fact that Germany’s “Pirate Party” has no political platform, together with, in particular the rising interest in “direct” democracy, is a manifestation of the viral character of the Internet itself and thus of the heterarchical “society of networks”. This corresponds to the emergence of a fleeting, oscillating subjectivity that is inherent to the immediate experience of fluctuating attention and refutes all forms of mediatisation, institutionalisation and representation of the aggregation of generalisable interests.

New institutions for the “society of networks”

The development of the Internet marks a break with the rules and the regularities that changes social communications that find themselves on the borderline between the private and the public spheres. This also preferably calls for (complementary) new institutions of (alternative) conflict resolution that are attuned more to change and less to conservation (Ladeur & Gostomzyk 2011), so as to allow for “learning by monitoring” (Jennejohn 2010). A practice of this kind can be observed in the “relational (incomplete) contracts” of hi-tech companies (Sabel & Zeitlin 2004: 388), in which conflicts are no longer soluble by external judges, but are more likely to be found in and submitted to modular procedural methods designed to enable the problem to be described and overcome in the context of a flow that goes beyond the traditional concepts of borderlines (Jennejohn 2010). This does not rule out the possibility of an external support, also from the state’s courts. But their role changes in the dynamic context of the Internet, with its focus on self-adjustment, in the sense of the primary task of underpinning the ability of Internet communications to organise themselves. The problem of the law in the Internet in general and the protection of personality rights in particular has its basis in the fact that the web has undermined the weight of social norms that have structured communication in a most differentiated and subtle way.

The problems of data protection in the Internet are so manifold that not all can be raised in the context of this article. This is also the reason why they cannot be tackled by clear-cut rules to be imposed on the net in advance, from outside. The steering of data-communication is impossible. This complexity can, however, be tackled by a version of proceduralisation of the legal order of the self-organisation process which the Internet undergoes as the “network of networks”. The internal differentiation of the legal structure of the Internet may allow for the generation of new knowledge and its processing via specific institutions of the Internet.

A net-specific *problématique* of the implementation of legal controls consists in the discrepancy between the attention which the distinct item of data of the individual meets on the one hand, and the values of the processing and relationing of data through data mining, the construction of personality profiles (Turow & Tsui 2008), the observation of broad data- flows, and the operation of linking data

⁶ Even humiliating comments posted in the social media are defended against „chilling effects“ attributed to sanctions; cf. for example District Court, Central District of California v. 16.11.2009 – CV 08-03824 SVW (CWx)

by firms and by the state for reasons of security. The interest in the closure and disclosure of information are both legitimate.

The necessity to observe the collective effects of the processing of data flows

It would be much more helpful to change the paradigm of the conception of data protection 2.0 to a focus on networks, *i.e.* to have a closer look at the opportunities and risks of data processing in networks and to adapt its legal structure which is still characterised by its origin in the offline world to the conditions of the media world (Grimmelmann 2009). The rapid proliferation and continuous linking of information in networks can no longer be adequately mirrored in the individual right to decide on the separate domains of action that are attributed to persons. This construction can no longer do justice to the hybridisation of legal constellations. For example: a firm can possibly generate a high information value by data-mining, which does not correspond to the construction of an accumulation of infringement of individual rights to decide on the use of the data which are of no particular interest to the user himself or herself. A hybrid construction which is more adapted to the collective transsubjective component of the data in a network can bring a more flexible and adequate solution to this dilemma (see below).

A case for a reconceptualisation of data protection is the de-anonymisation of IP-addresses by both private persons and the public security agencies. In this respect it should be taken into consideration that the Internet as the “network of networks” cannot be dissolved into a number of linear relationships of exchange between individuals - the precondition of the older regime of protection of privacy in telecommunications - but that the old telecommunication has been transformed into an online world with its own rationality of information processing and the generation of new information products which is based on the generation of collective and collateral effects between information. These transsubjective effects can no longer be attributed to individual “owners”. Examples of these new phenomena are *eBay* ratings⁷ and the ratings of professional achievements (teachers, professors, medical doctors *etc.*; cf. Verga 2007). The ubiquitous nature of the Internet and its new logic come to the fore when we take a look at the transformation of the relationship between different types of rights which have been developed and coordinated in the offline world and migrate into the Internet. It is inevitable that this entails a major effect of destabilisation that has to be compensated by a rebalancing.

The self-organisation of the “data-owners” vis-à-vis private actors following the example of “collecting societies” in the protection of intellectual property: a model for net friendly legal instruments

A new “control regime” (White 2008: 245) which is fine-tuned to the functioning of the Internet and the processing of data and patterns of combination could, for example, consist in the public and private funding of self-organised private institutions for the protection of data on the Internet following the model of collecting societies in intellectual property law and practice. Such a new type of association of users might act as an “information broker” in the sense of a representation of the hybrid public-private interests of the users that transcend their own limited privacy concerns and are focused on the transsubjective elements of data processing on the Internet. These associations could make contracts on the conditions of the use of data that are not of much concern for each individual. This approach could correspond to the new transborder effect, which is common for the Internet use of data inasmuch as it raises collective effects from mass transactions that hitherto did not have any relation except to a central agent (such as a broadcaster). This “information broker” might make contracts on payment for the use of Internet data or make contracts on the quality of the protection of privacy. This form might be a productive alternative to the bureaucratic form of data protection by the institution of a public officer for the protection of privacy (*Datenschutzbeauftragter*). This model could present the appropriate levels

⁷ In the US eBay offers an electronic mediation procedure via “Square Trade;“ <http://pages.ebay.com/services/buyandsell/disputeres.html>

of flexibility and hybridisation (balancing individual and collective interests) which are required by the logic of the Internet, whereas traditional legal instruments and procedure are more based upon the expectation of the stability of rights and public goods.

A new control regime has to adapt to the volatility and ubiquity of Internet communication by flexible self-organisation of legal positions that are involved in a procedural mode of permanent self-transformation. It has to react to the fact that even identities are no longer stable but are “sampled” and open to transformation. One can even go so far as to assume that networks themselves become *quasi*-subjects in their own right.

The “network contract” as a new paradigm of private law for the “social media”

First of all, it should be recognised that, besides other legal arguments for the liability of social-media providers, primarily the relationship between users and social media is a contractual one. In the American literature, this type of contract is regarded as an “*adhesion contract*”.⁸ In legal practice, this means that the contract has the legal value of a more or less one-sided submission to the contract because conditions are normally formulated by only one partner of the contract, *i.e.*, the “provider”. The construction of a contractual relationship seems to be adequate because one partner, the provider, offers the possibility of using the communication services, whereas the other, the user, gives his or her consent to the use of the data that he or she places on his or her account for advertising strategies. This mutual consent brings about a relationship of reciprocity: the user can expect the conditions of use not to be changed arbitrarily. The provider lays open the conditions of use and the commercial use of the data for advertising, in particular. An exclusion of any forms of advertising is not a choice which is open to the users. The specific contractual relationship that is brought about in this constellation is characterised by the fact that a high number of similar “exchange” contracts are concluded at the same time, and that conditions of use are formulated by the provider. However, at the same time, there is a second level of inter-relationships among the users themselves, which is not just a multiplication of a standardised version of a contract, although, in this case, the relationships between the participants including the user – user-relationships - form a “triangular” contract. The consent of the user to make use of the data for advertising only makes sense in the event that the other users allow for this use, too. This constellation might allude to the recent construction of “network contracts” (Teubner 2011) – with a principled construction of this new type of contract, although Stefan Grundmann (2007: 757) is more prudent in this regard. The sense of such a construction could consist in the consequence that the triangular nature of the contract does not remain at the factual level but can lead to ideas about a specific “hybrid” institutional component. The relationship is a “hybrid” one in as much as it can be located beyond the level of the bilateral exchange contract, but below the level of a “company” (or, even less so, a corporate association). One has to bear in mind that this is not a normal case of a pre-determined setting of “general terms and conditions” which supplement the consent of the partners on the reciprocal rights and obligations, but of a one-sided competency of the provider to define the main duties of the user and to change them whenever he or she deems it appropriate (Terenzi 2010). The differentiation of the informational scheme of *Facebook*’s sites mirrors, in a way, the “hybrid” character of the “regulatory” structure of the network: *Facebook* has, apart from the site on which the general terms and conditions are laid out,⁹ a separate site on “governance”,¹⁰ which contains rules of procedure on the change of rules,

⁸ Cf. the seminal article by F. Kessler, *Contracts of Adhesion – Some Thoughts about Freedom of Contract* (1943), Yale Faculty Scholarship Series Paper 2731, http://digitalcommons.law.yale.edu/fss_papers/2731.

⁹ www.facebook.com/legal/terms.

¹⁰www.facebook.com/fbsitegovernance.

etc. This construction might look promising, although, as a consequence, only those members that click on this site¹¹ obtain the information on the procedures.

The trans-subjective (“hybrid”) component of the contract is to be seen in the fact that the purpose of the contract is not to be formulated clearly in advance. The relationships within the network are prone to continuous change, they evolve upon the basis of communication processes which, first of all, are freely formulated and are integrated into a vast open network of relationships that allow for a plethora of communicative options. It is only at a secondary step that the provider observes these inter-relationships and tries to design the possibility of “surfing” on this network with the modelling of a commercial type of interest.

Advertising in the “social media” does not follow the traditional patterns of addressing a mass public; instead, it is characterised by the observation and “appropriation” of specific communicative networks that are spontaneously generated by the users. These differentiated networks process personalised information on consumer interests that may be re-coded by advertising firms. This is also the reason why the consent of the users for the re-processing of personalised profiles cannot be determined in detail *ex ante*.

This new constellation might fit into the new framework of “networks of contract” which might help develop new rules for the management of a hybrid “network interest” (G. Teubner) between exchange and collective interests. This “network interest” is emergent and heterarchical; at the end of the day, it can only be adopted for purposes of advertising if this is consented to by the users. The provider cannot just follow his or her own interest, but also has to support the processing of the networks of communications between the users by shaping an adequate institutional framework (cf. Grimmelmann 2010: 795). The relevance of the network of the inter-relationships *between* the users and the openness of the experimental development of communicative patterns and, at the same time, the evolving possibilities of personalised advertising could be a sound basis for the re-formulation and concretisation of the pre-conditions of “informed consent” in a dynamic environment.

Civil Law and Contracting on High Technology Projects

The phenomenon of self-organisation of legal relationships can also be observed in civil law where increasingly components of a contextual law that develop in “real time” come to the fore (Sabel & Zeitlin 2004; Sabel & Simon 2012) in contractual practice. In the domain of contracting on projects of high technology, or rather “high knowledge”, the forms of bargaining and contracting become more and more fluid because the projects are so complex that it is difficult to figure out beforehand what is at stake: for example, in the process of developing an innovative software several people co-operate without determining *ex ante* whether they can or want to set up a company, an exchange contract (of what type?) or whether someone is just doing a favour for a friend.

The methods adopted by the law of the “society of networks” now being constituted are still in a state of flux. In my opinion, the new difficulties encountered when developing a constitution for the “society of networks” are related to the fact that the networks develop to a considerable extent beyond the mediation of the state’s legal system. One far from negligible effect of this is that the development of suitable institutions is also at least partly blocked. Networks can be characterised negatively first by the fact that they circumvent the classical distinctions between inside and outside, between market and organisation, and between public and private (Teubner 2011). In particular, the dynamic of disruptive technologies leads to the development of “epistemic communities”, where knowledge is generated and processed. It is accompanied by volatile institutions of self-organisation, because the state law is not

¹¹ A few years ago *Facebook* announced a change in the “terms of use” on the governance site and opened a voting procedure for the week of 1 June to 8 June 2012; however, only a tiny fraction of the users participated -far below the quota has participated; cf. “Die Mitbestimmung ist rein virtuell”, *Frankfurter Allgemeine Zeitung* of 6 June 2012.

well-tuned to observing and shaping networks. In this respect, Gunther Teubner's analysis (2012) of the "self-constitutionalisation" of inter-organisational co-operation *etc.*, is exemplary.

The unlimited way in which networks proceed corresponds to the rise of the concept of governance (Schuppert 2011), which indicates that the state and the law can rely less and less on "decisions" as means of binding and dealing with uncertainty. On the other hand, the institutionalisation of networks also calls for new forms of reconciliation with state law, whose relatively stable institutions need to be adapted to an experimental mode of observing development trajectories *ex post*, given that they are confused by the introduction of multiple possibilities (replacing guidance) and the increase of intransparency. However, only a few comments can be made about this here.

It could be said that not only is the law further fragmented by the constraint to adjust to new heterarchical networks, but that the function of law itself is also fragmented: the law becomes more markedly experimental in character as it makes individual partial functions available, which may structure private and private-public procedures of standardisation, for example, but may also come unstuck in the process. This applies in public international law, for example, to the development of emerging legal reforms beyond the boundaries of the state and this side of classical international law (responsibility to protect, global administrative law; cf. Brunnée & Toope 2000: 19; Ku 20012: 13), or to the preparation of the ability to develop contracts in complex operative networks without any clear purpose (Jennejohn 2010: 173).¹² This includes new forms of mediation and conflict resolution, which also lead to the development of new law. These forms combine when, for example, new networks of evaluation (such as *eBay*) have to be taken into consideration. Collective side-effects on the whole system cannot be neglected in judgments about the limits of the freedom of opinion of users. This calls for new forms of monitoring and evaluation that open the law up systematically to a learning process. As a result, facticity and normativity are blurred in a new way. Juridification is called into play explicitly as a way of regulating private and private-public networks. This happens, for example, if specialised lawyers who are acquainted with the complexity of computer networks are engaged more as specialists for the determination of what the reasonable interpretation of an opaque legal relationship might suggest. And more often than not such interpretations are accepted by the participants because they know that relational "net subjects" have to adopt a flexible strategy for the cooperation in conditions of uncertainty. Neither legal normative patterns of contractual coordination nor individual contracts can provide satisfactory a satisfactory legal framework for the coordination of unclear perspectives on a dynamic project. In the past, legal forms in the past have presupposed the possibility of formulating more or less stable patterns of expectations and a correspondence with patterned forms of legal coordination of such expectations. However, in conditions of uncertainty, this is no longer the case. There is until now no law that is made for "surfing fluid reality" (Bahrami/Evans 2011). In many cases this type of flexible law can only emerge in "real time" or even *ex post* – if, for example, *Microsoft* offers much money for the software that has been conceived by a group of loosely co-operating young people who did not think about such a prospect. One might call the patterns that emerge *ex post* from such a practice of co-operation "*serial law*", because of the preponderance of a "series" of practical "moves" in fluid reality.

It does not appear to make much sense to derive more extensive materials or formal demands of the law of networks from the principle of democracy if the state and administration are incapable of taking expertise into account. It would instead make more sense to integrate the demands on law-making formulated *ex ante* by mobilising the instrument of subsequent improvement, with whose assistance the suitability of decision-making procedures could be evaluated *ex post* (Ladeur 2012: 369).

¹² The law only becomes *ex post* when, for example, an unstructured hi-tech co-operation network (such as Silicon Valley) is "translated" into a legal form, after the network's product has suddenly achieved a high market value: this is when the need arises to clarify what kind of legal relationship has actually come into being. The availability of fictions makes the law thoroughly suitable for this purpose.

The Limits of the Establishment of Institutions

As the flipside of this change, the change in the individuality of the “society of networks” must also be taken into consideration from a legal perspective. How can a cognitive, epistemic link be maintained in a society whose institutions are so volatile and fragmented? This calls for a new collective model of “order far from equilibrium” (Prigogine & Stengers 1990; Nicolis & Prigogine 1987: 77; Atlan 1979) that is also compatible with the law. In my opinion, its shortcomings are reflected not only in the field of data protection and the Internet, but also in the conflict about religion in the public realm (of school) and generally in the rise of a “nomadically-inclined individualism”, which rejects the influence of communications via third parties as illegitimate “interference” and thus hinders every process of the construction of stable institutions that would correspond to the law of the past. This is also the reason why more and more *quasi*-judicial adjudication by courts of arbitration or arbiters replaces state-based court practice: there is no stability in a factual nor in a normative sense. Arbitration and its frame of reference have themselves to generate legal solutions upon the basis of specific experience or expertise and not from general norms or patterns of the practice. In this respect the emergence of a “web” of judgments that can give orientation to practitioners cannot easily be imagined. This extreme complexity of factual and normative issues casts some doubt on the idea of an international court for the decision on conflicts about the “application” of transnational treaties on investment protection: Such a court would not be really democratically legitimated because it would no longer have a clear institutional integration into a state or an international organisation. It would itself be rather free floating. The problems of the emerging network society lie much deeper. They call into question the whole logic of the state and stable legal patterns of coordination. The law of the network society has to cope with a much more fundamental transformation of the whole structure of law.

Inside these networks, it is possible to discern signs of the development of a new relational person, who takes part in a variety of networks, for example, on the Internet, relating together the interests of a variety of “societies of mind” (Marvin Minsky) with one another, corresponding to the “society of the mind” that the cognitive sciences have observed at work in the human brain.

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