# Ethics and Learning
## *From State Regulation towards Reflexive Self-Regulation of the Information Society*

© Tom Dedeurwaerdere (UCL-FNRS)

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*Centre for Philosophy of Law (Université Catholique de Louvain)*
*National Foundation for Scientific Research, Belgium*
*dedeurwaerdere@cpdr.ucl.ac.be*

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**Abstract**

*In this presentation we consider an original institutional solution proposed by E. Brousseau, for a hierarchical framing of the self-regulation of the Internet, which tries to encounter the incompleteness of solely technical means of self-regulation (standardisation or juridical self-rule) as well as the inefficiency of co-regulation in a classical sense. We evaluate this type of solution, form the point of view of it's contribution to a process of ethical learning, taking into account the contextual conditions of access to a more reflexive self-regulation of the Internet. In order to do so, we show that it is necessary to modify the procedural approach of reflexivity in the actual attempts to regulate the Internet, through constructing more adequately the conditions of capacitation of the cooperative moment through an incentive politics of inferential nature.*

**Keywords** : self-regulation, co-regulation, procedural ethics, incentive politics

# 1. INTRODUCTION

The object of this presentation is an interrogation on the possible contribution of ethical reflection to an amelioration of the regulatory structures of the Internet. The starting point of our reflection is a diagnosis of the insufficiency of formal deontological ethical models in actual discussions of the problem of regulation. These models remain on an abstract level and do not integrate their possible contribution into a better construction of the social efficiency of the reflective judgements on actual regulation means (Kling [26] ; Berleur [6]). In order to go beyond this insufficiency, we must take into account the recent developments within contemporary ethics – whether it be procedural (Sunstein [52] ; Habermas [20] ; Berleur and Poullet [8]) or pragmatist ethics (Rorty [49]) – which emphasize the importance of contextual conditions of elaboration of norms in public space, in order to translate concretely the evolution towards a universal moral viewpoint. From this point of view, what is important in the practical acceptance of a principle of action, is not so much it's semantic justification but it's submission to conditions of equity of viewpoints and roles in a practical discussion[1].

However, rather than to consider a direct translation of ethical competences mobilised by procedural or pragmatist ethics, within the different places where a reflection on the evolution of the regulatory means of the Internet is taking place, we will argue for the necessity of broadening the ethical models and of evaluating their contribution to a process of ethical learning in these concrete situations of regulation. In this sense, the issue of regulation of the Internet should be broadened as well for the purpose of taking into account discussions on the mode of organization of the information society, in it's relation to the transformation of different life forms involved in it's self-regulation. These include discussions about intellectual property rights, about the question of material infrastructure of the net or the discussion on how to organize public policies. Through this broadening we do not aim to chose for a technocratic solution to the regulatory problems of the Internet. Our hypothesis is that this broadening rather allows us to formulate the question of reflexive learning within the evolution of the regulatory systems themselves and to point to the double insufficiency which characterises the use of reflexivity within the actual attempts of regulation of the Internet.

Indeed, as we will see, the approaches of regulation in terms of "self-regulation" (Ogus [43] ; Poullet [46]) as well as the approaches in terms of the so called "co-regulation" (Grabosky and Braithwaite [17] ; Ogus [43]) mobilise a certain form of reflexivity in order to reform the conventional structures of "command and control" governance of the welfare state[2]. The defenders of "self-regulation", tend to privilege a reflexivity of automatic adjustment through mechanisms of recurrence within subsystems. Defenders of "co-regulation", point to the necessity of procedures of "adaptive learning", in order to determine the interests of the different parties concerned and to allow the emergence of the largest possible user community gifted with the reflexive capacity to cooperate in the administration

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[1] Through this general background of our research, we share the methodology used in *Ethics and Governance of the Internet* of the Special Interest Group on Ethics of the IFIP (Berleur, Duqenoy and Whitehouse [6] ; Berleur [6], p. 14) ; cf. also the remarks of J. Berleur on this methodology : "Finally, it is rather evident that self-regulation, in the sense in which we have used it, will not be very efficient if it is not supported by the will of an ethical behaviour of the users. It is not sufficient, however, to simply rely on their goodwill or their own convictions. The diversity of ethical norms, within the cultural horizon of the Internet, demands that procedures are put in place, so that through "discussion" some principles accepted by all can emerge" (Berleur [6], p. 20, our translation).

[2] A model of governance which returns when enforcement of a certain public control is needed after a deregulation phase in a sector (Mueller [40] ; Lemley [29]).

of their common resources[3]. On both sides, one can observe a recourse to reflexive capacities, either of adjustment or of learning, which are likely to ameliorate the structures of regulation.

However, this use of reflexivity differs considerably from one case to another. In the first case, one only looks for a functional adjustment of the actors taking part in the game, while in the second case, the organisational context itself is mobilised directly in order to favour a learning process oriented towards the emergence of norms of reciprocity in behaviour, relying on existing resources of reciprocity in a retrospective manner. However, one still has to know how to evaluate the choice for either functional reflexivity or retrospective reflexivity and, ultimately, one has to know if this alternative exhausts all the existing resources for a recourse to reflexivity in the field of governance. Our thesis is that this type of analysis enables us firstly, to point to a double deficiency of the mechanisms of regulation selected and secondly, to propose an orientation based on a different use of reflexivity on the level of the incentive mechanisms which are mobilised by the models of regulation.

## 2. PROCEDURAL ETHICS AND REFLEXIVITY OF THE SOCIO-TECHNICAL SYSTEMS

First of all, we want to situate the debate on the self-regulation of the information society within the larger context of theories on means to regulate the evolution of socio-technical systems. Thus we want to take into account recent evolutions within procedural ethics (Maesschalck [37]), which consider the formal equity of viewpoints and roles in terms of the asymmetry of their embedding in particular contexts (Maesschalck [36] ; Dedeurwaerdere [13]). Such a conception of proceduralism necessarily leads to integrate within the debate on the self-regulation the evolution of theories of social regulation with regard to the representations they mobilize of the context of application of norms. As shown by J. Lenoble and M. Maesschalck (Lenoble et Maesschalck [30]), J. Habermas also took into account the consequences of this correlation in his later work, by trying to determine the conditions appropriate to the elaboration of principles in a regime of weak legitimacy (Habermas [21], p. 122) – that is in practical situations which are deprived of the confidence acquired through reciprocal recognition. It are such situations of weak legitimation which characterize the field of global governance of the Internet, where a relationship of confidence has to be created between different interest groups from radically different cultural horizons. In order to find an agreement on common principles with an "other" from whom I cannot recognize *a priori* the intentions and the preferences, from whom the values are strange to me, as well as the types of aspiration to the good life (*Ibid.*, p. 119), in order to find an agreement in such circumstances one has to renounce the practical confirmation of the common choices based on their comparison to known situations and the moral types which are affected to them. The only feasible way which remains then is to try and rely on procedural agreements

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[3] Cf. Paul [45], p. 75 : "A permanent exchange is realised between the actors of the Internet and the authorities of public regulation. (…) A cooperation between the instances of public regulation (…). It is this exchange and this cooperation we designate by the term co-regulation. (…) Co-regulation is in the first place a method. (…) Co-regulation can also be stimulated through the creation of an organism in charge of giving a dynamical and permanent character to the exchange". Less ambitious, the Australian approach of "co-regulation" applied to the sector of the broadcasting seems more directly compatible with the regulatory function of the state : "it was the clear intent of the Australian government that several levels of regulatory control would apply to the whole spectrum of broadcasting services in accordance with the level of influence the services could exercise (…). The Australian government had certain precise results on the level of public interest in mind (…) that it wanted to attain in the domain of broadcasting (…) : i.e. facilitating the emergence of new services, and also a greater number of services, guaranteeing a larger access of the public to the process of regulation (…)" (Grainger [18], p. 35). Cf. for a more general approach Leib [28].

to which one can recourse in order to realize forms of "non substantial confirmation". These include clearly visible guarantees on the will to pursue the research for new agreements, to enlarge the local dynamics of regulation, or to multiply the experimentations, in short the indication, trough the regulatory rules, of a *gain in reflexivity* (Maesschalck [36], pp. 283-285) concerning what is at stake in the procedural dynamics, that is the capacity for self-regulation, or in other words the capacity to create the rules of a common life-world (Habermas [21], p. 66) which includes this self-adjustment.

Currently, there are two basic currents, within theories about the regulation of the evolution of contemporary technology, which try to translate this condition of *increasing reflexivity* into the discussion procedures on common norms. The first consists of favouring the multiplication of different forms of reflexivity of the actors, in relation to the production of non intended side-effects of technological modernization (Beck [1])[4]. Thus one aims to ameliorate the chances of success of actors who chose a cooperative strategy in response to the social effects and risks of the technological system, through a joint action on strategies of enrolling in the new actor networks and on it's mode of organisation (Latour [27], pp. 250-251). In the domain of the Internet, the actors of technical standardisation are involved in such a joint action, combining a purely technical intervention with strategies of social integration of the technical means proposed, through their influence on the issue privacy protection, on the regulation of the content on the Internet or on intellectual property rights (Reidenberg [47], p. 554). As an example, we can cite the discussions concerning the IPIC norm (Platform for Internet Content Selection) for the selection of contents on the Internet (Berleur et Poullet [8], p. 3) or the controversy about the new Internet transmission protocol Ipv6, which requires a numerical identifier for each individual user (Reidenberg [46], p. 3). These examples cannot be reduced to purely technical discussions. They have to be situated in the larger context of a collective evolution towards a new phase of rationalisation of social relations, which combine technical knowledge and reflexivity on strategies of social embedding of technology. A similar evolution can be observed on the level of economic self-regulation, trough the development of multiple local experimentations which try to integrate the reflexivity of the users. In a similar manner to the evolution of rules for technical standardisation, the development of tools of economic self-regulation – such as the introduction of labels for websites (Poullet [46], p. 75), the classification of computer games for young users (Reidenberg [47], p. 581) or the contractualisation of the relations between Internet users and providers containing a respect of an ethical code (Poullet [46], p. 59) – are not inspired by commercial interests alone, but have to be situated within the context of an evolution towards a more reflexive construction of the information society (Benkler [2], p. 562).

The second way to translate the condition of increasing reflexivity consists of acting on the institutional structures which accompany the new actors, thereby orientating them towards generalising their interests to the largest possible community. This second form of gain in reflexivity looks at a mechanism of second order, which acts on the institutional framing of the actors in order to incite processes of organisational learning. This mechanism should allow us to order concrete communities in function of a common good, through the

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[4] As indicated by U. Beck, a non-reflexive development of technical knowledge can only result in a collective irresponsibility, where the different isolated actors refer to one another when it comes to looking for the one responsible for an accident or an insufficiency of the system (Beck [1]). To illustrate this, one can think of certain well studied examples of accidents or failures of evaluation, such as the accidents with radiotherapy using the Therac-25, due to a non detected failure in the software program (Jacky [23]), the mistakes made by the first microprocessor Pentium of Intel, also, or the risky start-up and the final withdrawal of the nuclear accelerator Superfénix in France (Dubreuil [14], pp. 24-36). In all these examples, it is clear that reasons linked to the social dimension and the modes of organisation of research played an important role, in addition to purely technical reasons.

development of incentive or prospective institutional solutions. Thus, on the level of scientific regulation, prospective evaluation methods have been developed since the seventies in order to meet the deadlocks of an evaluation of technologies based on an expert calculus of probabilities of risks or of indicators of social, cultural and environmental impact. According to E. Wenk, one of the founding fathers of *technology assessment* in the United States, the aim of those methods is to develop a truly prospective knowledge, which permits on the one hand to exercise our responsibility in anticipation of long term effects of technologies (cf. Wenk [56], p. 939) and to integrate, on the other hand, the dimension of uncertainty into the decision (cf. Wenk [56], p. 940). What is at stake in these institutional propositions is the necessity to give incentives in the direction of a learning process on the level of the dispositions specifically adapted to scientific and political actors in order to make them pursue, also in the future, a development of technologies which integrates the points of view of those excluded from the information society or of those subject to the risks of technological systems. In the more specific domain of the Internet, this anticipative reflexivity of the institutional development of the sciences has given rise to the development of a more systematic knowledge of the social embedding of information technologies, as is the case in "social informatics" (Kling [24]). It has also stimulated the development of particular epistemic communities, linked to professional organisations as the IFIP (Berleur, Duquenoy and Whitehouse [7]) or an international organisation as the UNESCO (Unesco [51]). The development of such knowledge communities should allow to institute forms of co-regulation between institutional incentive structures and different self-regulated sectors of activity (Reidenberg [48], p. 10)[5].

However, as one can also notice in other important domains of evolution of our governance structures (Maesschalck [33] et [35] ; Lenoble et Maesschalck [30]), these two principal forms of gains in reflexivity remain insufficient. First of all, the increase in reflexivity of technical and economical actors often has a local character (Reidenberg [47], p. 583) and does not look for other means of institutionalisation than those including formal guarantees of transparency and flexibility of the self-regulated networks in order to achieve the possibility of new experimentations (Vivant [55] ; Sabel [51], p. 75 ; Verbiest and Wéry [54], p. 523). As such this first way does not develop any reflexivity on the sustainable integration of those experiments into visible engagements towards the future, giving concrete guarantees of a multiplication of spaces of reversible interaction between economical and technical subsystems on the one hand and social subsystems on the other. In this manner, the reversibility of those systems is posited without any reflexivity. Secondly, the incentive and prospective reflexivity of co-regulation takes into account a process of learning, aiming at a sustainable engagement towards the generalisation of interests to the largest possible community. However, it is also relying on already existing cooperative resources on the level of the life-world of the actors (J. Habermas [21] ; cf. also Maesschalck [34]) or on the level of cultural determinations of the potential community which define the selection criteria of the means to be allocated in the concrete realization of the engagement agreed upon[6] (Rorty [50] ;

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[5] In order to see the transversal character of these propositions on the increase of reflexivity of governance structures, it is interesting to compare them to similar ones in the field of environmental regulation (cf. P. Haas and E. Haas [9] ; O. Goddard [16]).

[6] Which can give rise, as we can see in the analysis of Rorty, to the recourse to a form of economic selection of potential recipients of those universalistic policies. Indeed, if there are no *a priori* guarantees on the level of the means mobilised by real communities in their cooperative policies that aim at enlarging of the "moral we", those policies will be combined with individual decisions for each case, and will control the scarcity of the material resources by a selection of the beneficiaries supposed to be able to make the best use of these resources (Rorty [49] ; Maesschalck [34]). One can also reconsider in this context the remarks of R. Kling on the necessity of taking into account the financial cost of introducing computers into schools in order to sustain pedagogical

Lévy [32], cf. also Maesschalck [34]). In this case, it is the asymmetry of cooperative dynamics in the organisational development which is posited without any reflexivity, which leads to the re-evaluation of the cooperative orientations in function of the already acquired attitudes or cultural codes at work (Lenoble & Maesschalck [30]).

Thus the dominant translations of increase in reflexivity within the procedures of discussion remain incomplete. On the one hand, i.e. in the first form, the reversibility of subsystems of the actors is posited without any reflexivity while, on the other hand, i.e. in the second form, the asymmetry of the organisational framework of institutions is posited without reflexivity. This incompleteness is due to the absence of regulatory mechanisms designed to encounter the condition of a joint increase in reflexivity of both actors and institutions. Precisely as a reply to this double deficiency, more specifically within the context of the actual forms of self-regulation of the Internet, we will develop our own working hypothesis on regulatory mechanisms designed to combine both the reversibility of self-regulated subsystems and the asymmetry of organisational learning frameworks.

## 3. APPLICATION OF THE REFLEXIVE APPROACH TO THE SELF-REGULATION OF THE INTERNET

From our point of view, the ethical evaluation of a procedural perspective on self-regulation must thus take into account the demand for a joint increase in reflexivity within the deliberation on normative principles. This can be brought about by a common action on the actors and the institutions. Such a model of complete reflexivity makes an application of the demand for reflexivity to the reversibility (forms of coordination, self-restraint) and to the asymmetry (forms of cooperation, communitarian limitation) requested by self-regulation (Maesschalck [36], pp. 162-163). Within the present context, the question concerns more precisely how the different solutions to the self-regulation of the Internet can encounter their own conditions of increase in reflexivity. These conditions have to be met if one wants to mobilise effectively the new reflexive resources which are needed to face unprecedented ethical situations.

However, literature on the subject of self-regulation of the Internet already attempts to go beyond the insufficiencies of actual solutions ; hereby holding that self-regulated networks can go beyond individual market behaviour by developing a certain level of collective constraint which is different from the one emanating directly from the government (Black [9]). One can think of forms of self-regulation by delegation as in the case of the privatisation of the root by the creation of the ICANN (Internet Corporation for Assigned Names and Numbers) (Ogus [43], p. 596 ; Mueller [39], pp. 518-519) or of forms of spontaneous emergence of voluntary constraints within user communities (Poullet [46] ; Ogus [43]). Nevertheless, these solutions are most of the time limited to proposing a purely formal reflexivity of ethical codification or juridical self-rule. To take into account the reflexivity of the actors and the institutional frameworks in addition to the formal rules, two types of solutions are proposed in literature on the subject. The first solution, which can be described as 'decentralized regulation' (Lemley [29]) or 'multi-regulation' (Vivant [55])[7], tries to take

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innovation (Kling [25], p. 116) or on the question of the real beneficiaries of the increase in productivity in organisations through computerisation (Kling [25], p. 123).

[7] These are the terms used in the field of Internet governance. One could prefer the term of "polycentric" governance, used in the field of community management of common goods studies, which has the advantage of showing that decentralisation does not imply the absence of any coherence between the subsystems. The use of this term, introduced by V. Ostrom, Ch. Thibout and R. Warren, connotes a coherent manner of functioning of the system as a whole through "various contractual and cooperative undertakings" between the independent

into account the reflexivity of the new actors emerging in the field of the Internet. This solution focuses on the increase in reflexivity of the emerging actors through the recurrent interaction between subsystems of normativity, such as the interaction one can observe within the Internet Society between the Internet Societal Task Force (ISTF) on the one hand and the Internet Architecture Board (IAB) and the Internet Engineering Taks Force (IETF) on the other[8]. The second solution, which we describe as 'co-regulation' in the strong sense[9], focuses on an institutional framing facilitating the responsibility of the actors in favour of the research of common solutions, such as in the proposition of the French and Australian coregulatory agencies.

The demand for an increase in reflexivity of self-regulation of the Internet gives thus rise to an action on the two levels of reflexivity already pointed to in the field of socio-technical systems and which one could call an actantial and an institutional level. The presupposition of such an evolution towards a more reflexive system of self-regulation lays in the mobilisation of contextual resources wich we can see already at work in the research on means of regulation. These are on the actantial level, the user culture which manifests itself through the proliferation of aggregative experiences and on the institutional level, the political culture of public authorities which manifests itself through the ordering in function of a common good. However, mobilising these two forms of cooperation in the perspective of an increase in reflexivity of self-regulation necessitates a mobilisation of the reflexive power of these two resources. That is why it is necessary to find the adequate manner to elaborate reflexive self-regulatory structures while taking into account the conditions of capacitation of these resources. This is what proposes E. Brousseau with his hypothesis of a *hierarchical framing* of multiregulation, based on considerations inspired by neo-institutionalism in economics (Brousseau [10], p. 20 ; Levy and Spiller [31] ; Menard and Shirley [38]). This hypothesis shows that the approach of neo-institutionalism within economics is one of the most advanced contemporary attempts to establish a joint action on the reflexivity of actors and institutions. This is why we will try and apply our "reflexive criticism" to this proposition.

### 3.1. The capacitation of the reflexive resources : hierarchical framing of self-regulation

In his article on the self-regulation of the Internet, Eric Brousseau [10] proposes an original institutional solution, which meets both the incompleteness of solely technical means of self-regulation (standardisation or juridical self-rule) (pp. 364-365 ; 368-369) and the inefficiency of co-regulation in a classical sense (pp. 370). Relying on the analysis of North [42], he introduces a principle of hierarchy within the conception of an institutional framework. Instead of a "common intervention based on the equity of the State, private corporations and interest groups in the procedures of regulation" (Brousseau [10], p. 370) – as is the case in co-regulation in the classical sense – he proposes to consider a hierarchy between on the one hand, different private and specific institutional frameworks, which can elaborate "collective solutions of coordination", "adequate to a family of more specific cases" (*Ibid.*), and, on the other hand, a final instance of regulation which has to solve conflicts between the regulatory rules and the private norms.

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"centres of decision making" or even the recourse to "central mechanisms to resolve conflicts" (E. Ostrom [43], p. 35).

[8] Cfr. the article "Regulating the Internet, the Consensus Machine", in *The Economist* (June, 2000).

[9] Within the French context, this term intitially only had a descriptive function designating the necessity for a new means of regulation by gathering different state and non-state actors, as has been reminded by Isabelle Falque Pierotin on the seminar of the *Cellule Interfacultaire de* Technology Assessment (CITA) of the *Facultés Universitaires Notre-Dame de la Paix* les 15 et 16 juin 2001 à Namur : "Gouvernance de la Société de l'Information : Ethique – Déontologie – Autoréglementation – Loi et role de l'Etat".

Even though a purely juridical interpretation of this proposition is possible (i.e. the introduction of a collective norm with an enforcement mechanism), the formulation of E. Brousseau clearly puts the emphasis on the importance of mechanisms which capacitate the reflexive resources. Indeed, as writes Brousseau, the mechanism of conflict resolution of the final instance attempts to "take into account the interests of the largest possible community" (p. 370).

More precisely, this mechanism aims at maintaining the open character of the network, in order to avoid the misappropriation of self-regulation by particular interest groups. What is at stake in hierarchisation, is not so much the possibility to sanction, which would turn it into a sort of supra-national state, but rather the incentive relationship it establishes between co-regulation and multi-regulation. In fact, as Brousseau remarks, the multiple "virtual" communities already manifest a principle of openness in their mode of functioning. The user culture of those communities produces positive externalities which have implications beyond the interests of a particular community, such as allowing the diffusion of information of public interest or facilitating the possibility of citizens to develop certain services, etc. (p. 355)[10].

However, this mechanism of openness can become inefficient when confronted with certain unprecedented ethical situations (e.g. how to forbid access to racist websites) or to certain monopolistic tendencies inherent to the management of the only scarcely available addresses and of the available transport capacity. That is why a final mechanism of conflict resolution is necessary in order to enforce and maintain the principle of openness within the network, which manifests itself already on the level of the multiregulation of different user communities.

## 3.2. Beyond the mechanism of enforcement, towards mechanisms of inference

The proposition of E. Brousseau can thus be summarized as a proposition of action on a double level: on the one hand, the favorisation of the proliferation of cooperative mechanisms based on the aggregative competences the actors (the so called 'user culture') in order to complete contractual agreements ; on the other hand, the construction, also in a cooperative manner (of the type of alternative mechanisms of conflict resolution), of an authority of regulation of the common good. The reflexive nature of the formula appears on the level of constraints it implies in order to 'capacitate' this type of cooperative mechanisms. It has indeed to mobilize specific competences of the actors and to transform the mode of intervention of the institutional means of coordination.

However, if one wants to apply those reflexive conditions to the hierarchical model of Brousseau, one realizes how much it is still limited by it's insufficient understanding of reflexivity. The cooperative orientations do not rely on a deliberate reconstruction of the reflexive moment, so that the capacitation of the cooperative resources follows a retrospective scheme based on the given resources of the user culture of the actors of information society and the political culture of the public authorities of regulation.

In practise, this way of handling the problem causes a double deficiency : firstly on the level of the formation of the "collective competences" (Brousseau and Rallet [11]) which are supposed to enforce the user culture of the actors through the exchange processes favoured by the networks and secondly on the level of the empirical evaluation of the efficiency of a public policy which aims to enforce the organisational learning of the conditions which allow to "take into account the interests of the largest possible community". The functional

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[10] Cfr. also, for an analysis of the specific positive externalities to public network goods, the research of A. Héritier (cf. for example Héritier [22]) and the Max Planck project on network goods, directed by Adrienne Héritier and Christoph Engel (cf. the presentation on the site http://www.mpp-rpg.mpg.de/netgood.html).

conception of exchangeability of competences in a user culture, as well as the retrospective conception, in a political culture, of the limitations imposed by the consideration of general interest, leads to incentive mechanisms without true inferential power. Their aim is to enforce presumed capacities, not to infer them. We think, on the contrary, that if one has to act on the reflexive resources of the application contexts of regulatory policies, the first aim should be to infer reflexivity through appropriate incentive mechanisms.

### 3.3. Application of the reflexive approach to the propositions of Benkler and Mueller

In order to realize this, it is necessary, to conceive an incentive politics oriented towards the constitution of new life forms, both on the level of the actors, as on the level of the institutional means of coordination. What needs doing is not so much gathering in order to enforce (citizen conference type model), but rather deciding collectively in order to transform concretely the way in which user culture and political culture have to be articulated in the information society governance. One can only look for a "hierarchical framing of self-regulation" through a joint transformation of the forms of self-regulation produced by the user culture and the forms of institutional framing brought about by the political culture. This means a directedness towards the constitution of new cooperative life forms which articulate both registers of action. The incentive mechanisms should thus be orientated in the first place towards the articulation of both registers and not towards their separate developments.

One can further develop this proposition of an inferential mechanism linking the forms of cooperation favoured by the "hierarchical framing of self-regulation". This can be done by applying our reflexive approach to perspectives which aim to capacitate the reflexivity of the two levels of implication of the collective culture within the current self-regulatory regime, from the viewpoint of the reflexive potentialities contained in alternative emerging regimes of regulation, such as in the analyses of Yochai Benkler and Milton Mueller. The application of our inferential reflexive approach to their analyses, should allow to condition on the one hand the political efficiency of the current regime by it's capacity to cause an evolution of the emerging user culture, and, on the other hand, the efficiency of the means of self-regulation in the different user cultures by their capacity to cause an evolution of political culture.

The analysis of Benkler, firstly, shows that the reflexivity of the institutional framing of the information society should be linked to the reflexivity of the different user communities. For instance, as is clear from his analysis, a political choice on the level of the institutional framing of the information society (for example in the terms of a politics of intellectual property rights) has different normative implications for different actors (for example for the commercial media producers, on the one hand, and the members of the university community, on the other). In order to take into account this diversity of user communities and pathways, Benkler proposes to act on the conditions of transformation of the existing regulatory regime, through an action on the potentialities contained in an emerging regime of regulation, which defends free access to the resources of the network[11]. As is stated more precisely by Benkler, the aim of such a proposition is not "to argue for one or other choice of public policy, but to evaluate how the factor autonomy can be taken into account in the choice" (Benkler [4], p. 112), both on the level of controlling resources through the largest number, as on the level of the diversification of producers of information (*Ibid.*, p. 29 ; pp. 108-112). From thereon, Benkler considers a series of technical propositions which would allow to extend the free access to the resources of the network, and which can be realized through material (*Ibid.*, p. 62), logical (Benkler [2], pp. 570-572) or legal means (Benkler [3],

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[11] Illustrated for example by the success of free software for web servers (Appache) or for operating systems (Linux).

p. 89). However, by considering purely technical solutions for the capacitation of the user communities, Benkler does not address the problem of the specific enforcement of the reflexivity of these communities[12]. Indeed, according to Benkler, the reflexivity of the communities is an automatic result from the technical solutions. "People, writes Benkler, develop communitarian norms and systems of reciprocal confidence and control which rely on the media through which they communicate with one another" (Benkler [3], p. 90). It is finally this spontaneous emergence which explains, for Benkler, the self-organisation of the norms of the communities, such as the norms of the university communities or of communities of users of free software.

The reflexive transformation of the regulation regime of Internet pointed to by Benkler remains thus incomplete. He rightly combines a reflexivity on the mechanism of hierarchical framing of the Internet[13] and a capacitation of this reflexivity from the viewpoint of the potentialities contained in an emerging regime of self-regulation. However, this articulation remains incomplete as long as it does not allow to encounter the second demand we have argued for throughout this presentation, i.e. the necessity to condition political efficiency by the capacitation of the reflexivity of user communities. Form this point of view, it is necessary to consider an analysis such as the one proposed by Mueller, if one wants to complete the perspective developed by Benkler.

Indeed, the analysis of Mueller puts the emphasis on the reflexive capacitation of the communities in the potential transformation of the Internet regulation regime. Mueller shows that the development of collective competences of the actors depends also on discursive strategies and on the formation of coalitions, in order to institute a certain form of life into an obligatory passage point for normativity. Contrary to the analysis of Benkler, Mueller shows how there is no direct pathway between technical innovation and the construction of collective competences in the communities concerned by this technique. In particular, the emergence of a coalition of private actors around ICANN, as an obligatory organisational passage point in the debate around the attribution of domain names, has only be made possible trough the assignment of a political character to an initially purely technical problem of attributing domain names. As is shown by Mueller, one only starts to observe the formation of coalitions and the development of discursive strategies around domain name attribution (Mueller [41], p. 27, p. 29), from the moment that the competence of conflict resolution in matters relating to the property rights on the one hand and the technical competence in matters relating to the sharing of the resources of the network on the other, has been attributed to one and the same instance, through the creation of the ICANN.

The analysis of Mueller, although it allows to take into account the construction of new collective actor competences (evolution of user culture), remains nevertheless also incomplete. Indeed, following the same reflexive orientations as Benkler, Mueller aims to analyse the potentialities of transforming the dominant mode of of Internet regulation. However, contrary to Benkler, he does not attempt to combine the communitarian reflexivity he mobilises, with the capacitation of reflexivity on the choices of institutional framing of the regulation modes (evolution of the political culture). The communities' reflexivity on the insufficiencies of regulation modes concerning institutions as the NSI or the ICANN (Mueller [39], pp. 517-520 ; Leib [28], p. 7) remains *ad hoc* and does not result in ways of learning within this user culture, which would allow the emergence of new forms of life that could take into account the interests of the largest possible user community[14].

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[12] Which corresponds to the user culture in our analysis.

[13] Which corresponds, this time, to the political culture in our framework of analysis.

[14] So we do not agree with the proposition of Mueller to resolve the insufficiencies of these institutions through the establishment of a purely juridical regime of regulation (Mueller [39]).

One has to consider, the continuation and deepening of analyses of the type of Benkler and Mueller, in order to arrive at a more complete capacitation of an intermediate culture (meso-culture) of governance constituted through the joint transformation of user culture and political culture. In that way, rather than to replace one regime with another, whether it would be in terms of a combined regime or an entirely new one, we obtain a crossed regime of regulation taking into account a double movement of incentive reflexivity. The first continues the analysis of Benkler in the sense of a test on the institutional reflexivity in function of it's capacitation of user communities' reflexivity[15]. The second movement should continue the analysis of Mueller and test the reflexivity of communities in function of their capacitation of a political reflexivity which allows to extrapolate to the interests of the largest possible community[16].


## 4. CONCLUSION

The hypothesis of a hierarchical framing as formulated by E. Brousseau [10] seems to confirm the importance of the issue which is represented by the double reflexive insufficiency of self-regulation and the necessity to evolve towards more reflexive modes of governance within a context of weak legitimacy (Habermas [21]). Moreover, this proposition shows that the solutions to this issue depend on the construction of mechanisms able to establish a relation of incentive reflexivity between co-regulation and multiregulation. This hierarchisation essentially intends to act on a final mechanism of conflict resolution allowing to maintain the openness of local forms of self-regulation towards interests which go beyond particular communities and which manifest themselves through unprecedented ethical issues which are a concern for humanity as a whole (as racist sites).

However, the contribution of our reflexive criticism is to make clear that such a proposition supposes an inferential mechanism which makes possible the joint increases in reflexivity of the actors and the institutions, which would allow in turn:

- to condition the political efficiency of the hierarchical framing by an organisational learning of the user culture
- to condition the innovative capacities of the user networks by an evolution of the political culture taking into account the interest of the largest possible community

In order to realize this double condition, we have tried to show that it is necessary to modify the procedural approach of reflexivity in the forms of governance of socio-technical systems, by adopting a more adequate construction of the conditions of capacitation of the cooperative moment (Brousseau) through an incentive politics of inferential nature (Benkler – Mueller). In this respect the final goal of this modified procedural approach seems to be the elaboration, in a constructive manner, of a "meso-culture" of governance of the Internet.

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[15] In other words, using an expression of Benkler, this movement develops an institutional reflexivity which takes into account the reflexivity of actors. These are here considered not only as simple consumers but also as users (Benkler [2]) ; this, of course, as long as one does not defends the hypothesis, as it is the case in Benkler's analysis, of an automatic passage from the one to the other.

[16] We can paraphrase this movement by? speaking of the construction of a political culture of "citizens of the information society" which would have as it's horizon the emergence of a new type of civil society.

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