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ARTICLE

Convergence Revisited

Toward a Modified Pattern of Communications Governance

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Abstract / This article revisits the nature and governance implications of the convergence phenomenon more than a decade after it gained major prominence in politics and research. It analyses the reforms undertaken in reaction to convergence, outlines their common features, and argues that a worldwide trend towards a modified common governance pattern for convergent communications markets is emerging. The major constituent components include integrated strategies, control structures and legal frameworks for the convergent communications sector; a technology-neutral functional taxonomy; a subdivision into transmission and content regulation; and a growing reliance on alternative modes of regulation such as self- and co-regulation.

Key Words / communications research / convergence / governance / media policy / regulation / telecommunications policy

Introduction and Content

By the end of the 20th century, a core piece of the regulatory regime for the communications sector as it had been taught and practised for several decades – the technology-oriented subdivision into media and telecommunications, into mass communication and individual communication – was crumbling. Developments driven by mobile communications, the internet and digital television challenged the traditional categorizations, analytical frameworks, separate regulatory bodies and regulatory models for telecommunications and the mass media. The technology-oriented criteria used to categorize services as broadcasting/mass media or telecommunications were defined according to a reality that suddenly no longer existed. The internet is the prime example and a symbol of the disruption in both policy and analysis that was caused by convergence. At the same time it is only the tip of the iceberg on which the unwieldy regulatory system has become stranded. Since then, however, a lot of work has been put into damage limitation and redefining the course of communications policy. The general problem was that the industry proceeded quickly into the convergence era while policy makers and researchers remained largely stranded in the traditional separation between telecommunications and

the media. Policy reforms have been proposed and carried out in an effort to overcome this problem.

This article argues that, after a period of unrest caused by convergence, a new dominant design of governance for convergent communications markets is becoming apparent. It deduces several developmental lines of this emerging pattern from a review of theoretical and empirical literature, plausibility considerations and empirical evidence of policy reforms in various industrialized countries. It states that these are the guiding principles for regulatory reforms and will constitute the major building blocks of world-wide reforms. The major purpose of this article is to provide an overview of the upcoming governance pattern and to put together the main pieces expected to constitute future communications governance. The large number of issues involved does not permit in-depth discussions of individual issues. Hence, in several cases only references to relevant detailed discussions can be provided.

The article starts with a review of the beginnings and essential features of the separate media and telecommunications policy regimes. Subsequently, it outlines the disorder and challenges produced by convergence in policy making. The analysis of reform proposals and reform steps in reaction to the convergence trend yields the essential features of the new governance regime. This new model is achieved, among other things, through an integrated communications policy (mediamatics policy) that will no longer define the sector vertically by subdividing it according to technological criteria or industrial affiliation. The conclusions also point to a possible rise in significance of communications research for an integrated mediamatics policy.

Order by Demarcation: Telecommunications Policy and Media Policy

The nationally organized communication sectors of the 20th century were essentially characterized by more or less uniform governance models[1] that fundamentally distinguished between media policy and telecommunications policy.[2]

Telegraphy and telephony, whose commercial deployment started in the second half of the 19th century, were categorized as the telecommunications sector. The press and the broadcasting sector, which established itself commercially a few decades later, were classed under the media sector. The telecommunications and media sub-sectors used differing technologies and separate networks. Different enterprises were involved, the political competences were separate, separate regulatory agencies and legal foundations were created and the underlying *regulatory models* also differed from one another (see Latzer, 1997: 49 ff.).

Characterized by individual communication, in the telecommunication sector the *common-carrier model* established itself, with the focus on the obligation to supply in the public interest.[3] In the media sector there was a *broadcasting model* (public trustee model) and a more market-oriented *print media model*. Cable TV, which subsequently pressed forward with the convergence of the fields, assumed a special position as a mixed model of broadcasting and common-carrier regulation. Depending on the communications networks used, the allocation of communications services to the prevailing governance models was *technology-specific/industry-specific*. The essential difference between the models lay in the regulation of content and market access (see

Windahl and McQuail, 1993: 211). This is explained in part by differing regulatory objectives. However, in some instances different means were used to pursue the same objectives, such as diversity: in the formerly monopolistic broadcasting sector this was achieved through internal diversity and in the print sector through external diversity achieved by competition. These differences can be explained by another interpretation of divergent regulatory approaches, which focuses on value conflicts. Vick (2006: 58 ff.) argues that the divergence is the result of a 'historical accident', because the choice of regulatory models depends on the school of political thought (market liberalism or social liberalism) prevailing at the time when the medium established itself as an important force.[4]

The traditional broadcasting regulation was highly active with regard to spectrum scarcity and the social and cultural effects of the content conveyed, whereas in the telecommunications sector economic factors dominated as far as infrastructure supply and national security considerations were concerned. With the internationally promoted opening up of the telecommunication markets in the last third of the 20th century, the center of interest shifted to economic reasoning concerning the transition from monopoly to competition and the associated institutionalizing of independent national regulatory agencies – NRAs (see Héritier and Thatcher, 2002).

The uniqueness of communications policy, and at the same time the special complexity of the regulatory policy it follows, lies in the combination of economic and sociocultural objectives it is pursuing. The economic and social implications of regulatory decisions can overlap (see Napoli, 2001). This dual economic/social character is more prevalent in the media sector, yet it also definitely played a major role in the regulation of the telecommunication sector in the 20th century, as for example in the universal service obligations in telephony or in foreign-ownership restrictions regarding telecommunications companies for national security reasons.

Disorder through Convergence

As Van Cuilenburg and McQuail (2003: 197) point out, convergence gave birth to the idea of *communications policy* as it took shape in the late 20th century. Communications policy, understood as the sum of telecommunications and media policy, permits a better consideration of the convergence phenomenon (see Vowe, 2006).

In the social sciences, the concept of convergence is taken as the characterization of various phenomena.[5] In communications research, the concept of convergence is employed, on the one hand, for convergence between the programming of public and commercial broadcasters in dual-order models and, on the other hand, for the blurring of the traditional demarcation between telecommunications and the mass media, which is discussed as such in this article. It should, furthermore, be noted that in the telecommunications policy debate too, the integration of wired and wireless communications is also called convergence. There are also contradictory uses of the term telecommunications. If telecommunications is defined as communication by technological means of transmission (see Scherer, 1985), then telecommunications policy includes broadcasting policy. This conflicts with the definition used here of telecommunications and media policy as parts of communications policy, with the analysis concentrating on the regulatory policy.

Since the 1980s, convergence in the communications sector has been discussed as being unavoidable and desirable. This has taken place more intensively in telecommunications circles than in media circles, and predominantly in relation to the desired integrated broadband networks and services (see Garnham and Mulgan, 1991). Media representatives are more reticent in their interpretation of the convergence trend, equating it with deregulation and commercialization, and occasionally giving the impression that convergence exemplifies a hostile take-over by telecommunications. As long as three decades ago, the telecommunications industry was already investing high hopes in the ISDN broadband networks and fiber-optic technology – hopes which have still not been fulfilled. With telecommunications and broadcasting two different worlds collide, two corporate cultures meet. Correspondingly, the OECD (1992) raised the significant question of whether this really is convergence or rather a collision of telecommunications and broadcasting. In 1997, the European Union put the convergence issue on its official political agenda with the *Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors, and the Implications for Regulation (COM(97)623)* (COM, 1997). After having harmonized the liberalization of the national European telecommunications sectors within a decade, the EU then took on another explosive reform topic, which exceeds even the liberalization debate in its complexity. Communications research, too, has busied itself since the 1980s with the characteristics and possible consequences of the convergence trend (see de Sola Pool, 1983; OTA, 1990; Baldwin et al., 1996; Collins and Murroni, 1996; Latzer, 1997, 1998; McQuail and Siune, 1998; Latzer et al., 1999; Marsden and Verhulst, 1999; Mueller, 1999; Bohlin et al., 2000; Hoffmann-Riehm et al., 2000; Murdock, 2000; Iosifidis, 2002; Van Cuilenburg and McQuail, 2003; Storsul and Syvertsen, 2007).

From an analytical perspective, convergence is taking place at many levels, with reciprocities within it being of particular importance (see Latzer, 1997; Meier, 1999; Murdock, 2000). A leading role is being played by *technological* convergence. However, it is inappropriate and misleading to reduce convergence to this alone, as is often done, or above and beyond that to combine it with extremely naïve expectations of an all-embracing uniform medium. Technological convergence stands for a universal digital code, for common (IP) protocols, which are used for different technological (hybrid) platforms (fixed-wire and mobile communication, WLAN, broadcasting, WiMAX and so on). Convergence creates a 'digital modular construction system', which offers great flexibility for innovatively assembled services. This can lead to service-integrating devices, such as TV-capable mobile phones. Convergence also and especially leads to increased flexibility on the supply side, and so to increasing product variety as the previously rigid combination of technology and content (services) is dissolved. Technological convergence furthers *corporate* convergence too, that is, the same companies are now active in both sectors and in the third sector, the internet – keyword triple play – (see Bauer, 2005). Moreover, convergence enterprises of a new kind are emerging here, following core businesses such as search engines (e.g. Google) and electronic trading (e.g. eBay). As *social-functional* convergence, it is being realized that telecommunication is now also increasingly used in the private-entertainment sector and broadcasting is increasingly used for business communication (e.g. internal corporate business TV). At the same time, shifts, substitutions and combinations in the application of services are taking place. This is also called *receptive* convergence, since it is about the change in reception patterns, a

convergence of usage patterns (see Höflich, 1999; Hasebrink, 2003; Wagner et al., 2004). Finally, a *spatial* convergence can be identified – which includes the globalizing effect of ever-increasing cross-border services and uniform technology – as well as a *regulatory* convergence, affecting the coordination and integration of regulatory systems for media and telecommunications.

The result of the convergence of telecommunications and broadcasting is more than just the sum of its parts, as the hard-to-classify online-communication sector makes clear. The conceptual and terminological formulation of the convergence trend varies according to the research perspective. Thus the result of convergence is variously called *multimedia*, *TIME* (telecommunications, information technologies, media, entertainment), *cross-media* or *'Medienverbund'*, with the stress on its media-overlapping character. From a media structure perspective, convergence changes the techno-social, societal communication systems toward *mediamatics* (see Latzer, 1997). The computer sector serves as connector between the formerly separate sub-sectors of telecommunications and the mass media. Seen chronologically, convergence has taken place in two steps. Data communication and the digitalization of telephony, which marked the arrival of computer technology (inforMATICS) into TELEcommunications (= telematics[6]), has been followed since the end of the 20th century by convergence of the likewise digitalized mass MEDIA with teleMATICS (=mediamatics). The process was co-evolutionary, which means that its direction and speed was shaped by the reciprocal interplay of technological innovations, corporate strategies, political-legal reforms as well as changes of media reception patterns. The bursting of the internet bubble around the turn of the millennium slowed the process down in the short term but did not halt it. The empirical evidence for convergence in the 21st century is increasing at all levels, especially in relation to the further development of the internet (web 2.0), digital TV, wireless communication and next-generation networks.

Disorder in Communications Policy

Convergence is causally connected to globalization as well as to liberalization. Digitalization in general and the internet in particular are changing the cost structures in the communication sector, enabling and demanding new business models and thereby profoundly changing the competitive conditions in convergent mediamatics markets. Seen historically, the first convergence step in the direction of telematics (the digitalization of telephony) was connected to the liberalization of the telecommunications sector. The cross-border character of internet-based services has additionally accelerated globalization and the corresponding (multi-level) governance problems.

Since the end of the 20th century, communications policy and its scientific recording have been under increasing pressure to reform, with the central problem lying in the fact that the industry has already entered the mediamatics era while politics and scientific analysis are still operating in institutions and regulatory systems that are split between telecommunications and the mass media. The digital destabilization of the governance models originated in the extremely obsolete categories that were applied. For decades, these served as differentiating criteria between the mass media and telecommunications, and thereby also for assigning differing regulatory models: technologically oriented, vertical sector definitions, the differentiation into mass and individual communication,

into public and private communication and the strict separation of sender (supplier) and receiver (customer).

These are not simply academic problems of communications theory. They do indeed produce real economic and political effects. Legal insecurity increases, planning safety decreases and the investment risk rises. In sum, the development of the sector, which is considered to be central to the information society (key word Lisbon strategy of the EU), can be seriously hampered. The growing political arbitrariness in demarcating and categorizing new services only adds to the legal insecurity. Likewise, in order to evade regulatory conditions that might prevent their diffusion (universal service obligations, access fees, interconnection, content regulation, quota regulation and so on), internet telephony is not classified as telephony and internet TV is not classified as TV (see Dong, 2006). With broadband services, care is taken not to apply the common-carrier model with its corresponding regulatory conditions.[7] On the other hand, there is an ongoing discussion of whether, owing to their lack of regulation of broadband networks, common-carrier models are still adequate. As things stand, with triple-play suppliers the question arises of whether their relevant market is the broadband market. Legal insecurity also arises concerning questions of responsibility for content, whether internet service-providers are common carriers like telecommunications service providers, and so not responsible for content, compared to publishers of mass media, who are responsible. Consequently, the disputed question of whether the content of websites is public or private leads to legal insecurity. These legal insecurities are also increasing because of spatial convergence, which is more or less discussed as globalization. The combination of mainly national regulations and transnational services not only leads to the disputed issue of whether the regulations of the country of origin or of the receiver country are to be applied. It also raises the question of whether this leads to increased opportunities to evade national law, to the increased necessity of trans- and supra-national regulations and to increased self- and co-regulation. Altogether, from an economic point of view the legal insecurities are causing considerable transaction-cost increases. These include the cost of litigation as well as search costs for service-suppliers and consumers. There is also disorder in relation to broadcasting regulations concerning the democratic political process. Regulations governing the reporting of elections, for example, can be legally circumvented through internet-based services.

Beside the problems of obsolete demarcations outlined earlier, the convergence trend means that new regulatory responsibilities are arising and are growing in importance. These include the protection of intellectual property, the taxation of internet trading and the regulation of cryptography and of domain-name systems.

Altogether, convergence has led to a political control crisis in the communications sector. The controllability of the sector through communications policy is increasingly being called into question, especially with regard to the ability to achieve medium- and long-term objectives. This is also a result of the increasing complexity of the sector to be controlled,[8] because, among other things, liberalization and convergence mean that the number of players and their connections, which have to be taken into account, are expanding massively (see Cherry and Bauer, 2004; Verhoest, 2005).

The public regulatory objectives in the media and telecommunications sector remain the same. They are still made up of a mix of economic and social features. However, the potential to attain these objectives by means of traditional regulatory models is

decreasing. It is not only obsolete regulatory demarcations that are contributing to this, so are the shorter life-cycles of technological innovation and services, changes in the industrial structure and in user behavior and the increasing number of players involved.

An expected effect of convergence is the increased economization of the media sector. At the same time, there are fears that socially motivated regulation is being undermined, even endangering the principles of public-service broadcasting. The strengthening of the role of the general competition law in the convergent communications sector at the expense of sector-specific regulations (see Just, 2005) can be regarded as an indication of the undermining of socially motivated regulation. This has also been taking place in the telecommunications sector, as for example in the new legal framework of the European Union for electronic communications, and in the course of the convergence debate it is also being discussed as a variation of a standardized integrative strategy for the media sector.

It also has to be considered that convergence is leading to a strengthening of the characteristics of communications policy that arise from the mixture of socio-cultural and economic regulation (see Napoli, 2001). Now, increasingly, these also have to be taken into consideration in the telecommunications sector, particularly with regard to specific decisions. For example, social/cultural effects also have to be considered if there are changes in the ownership-structure of telecommunication corporations that now include TV services in their portfolios. In spectrum policy, the economic objectives of an efficient spectrum management are increasingly merging with social objectives such as diversity and serving national-identity development. Platforms that allow the whole spectrum of convergent services and apparatuses and support the whole gamut of the given services are increasing the economic value of the spectrum. The distribution of the 'digital dividends' of the freed-up spectrum via the digitalizing of TV, which is not bound to the specific application for further TV channels, is becoming more important in this regard. The traditionally differing licensing policy for telecommunications and broadcasting is no longer effective; the criteria and the conditions associated with them often no longer fulfill their original purpose. The fragmented regulation of telecommunications and mass media under the traditional governance model, together with different rulings depending on the transmission technology and with different allocation mechanisms and price structures according to industrial groups, can no longer ensure either the effective management of resources or the achievement of the socio-cultural objectives within a convergent mediamatics sector (see OECD, 2003).

Under convergence conditions, another cornerstone of communications policy – the universal service policy – calls for an integrative design with economic and social aspects being carefully balanced (see Simpson, 2004). An integrated approach means that all universal-service aspects are taken together and are jointly re-evaluated according to the new convergent environment (see Latzer, 2000). This calls for coordinated policy reforms in telecommunications (universal access to technology) and public broadcasting (universal access to socially desired content). The public interest should no longer be bound to particular communications services and (public) companies. Within the convergent mediamatics sector there needs to be scrutiny of which services (public and private broadcasting, www-services and so on) are best suited to achieving universal-service objectives and on which platforms.

New Order for the Convergence Era

> *(A)ny new paradigm has to recognize the fact of increasing convergence and has to encompass the domain of activity served by telecommunications as well as broadcasting and print. Thus, media policy and telecommunications policy are still on course towards an integrated communications policy. (Van Cuilenburg and McQuail, 2003: 201)*

Even strategies for core mass-media sectors such as the press and broadcasting (ranging from competition policy and market-power control over spectrum policy, to press subsidies and youth media protection) will remain out of touch with reality if they do not take account of telecommunications and internet developments – that is, if they do not adopt an integrative perspective of the convergent communications system of mediamatics.

Academic research and policy makers have produced reform proposals in reaction to the convergence trend and the control crisis arising from it. Through an evolutionary process, they are aiming for a changed governance regime, an integrated mediamatics policy (see Latzer, 1997, 1998) and the joint regulation of electronic communications (see OECD, 2003). In addition, they are developing the national specifics of the regulatory reforms (see Hoffmann-Riehm et al., 2000; Roßnagel, 2005).

The core of the new governance approach is often vaguely referred to as regulatory convergence. As with technological convergence, it would be misleading here to imagine it as a detailed, uniform solution for all networks, services and content of the convergent mediamatics sector. A differentiated glance at reform proposals and implementing steps makes it possible to recognize the direction and essential features of the new order that a growing number of researchers and policy analysts deem necessary. As in the traditional model, a more or less internationally uniform pattern for integrated mediamatics policies can be expected to emerge.

As Storsul and Syvertsen (2007) point out for the case of European Television Policy, some regulatory differentiations persist in the convergence era. There are differences in the intensity and speed of reforms, for example for television compared to new services, and the forces of stability should not be underestimated. Altogether, there will be divergences regarding the features, the intensity in sub-fields (TV, telecommunications, new services), and the timing of the reforms. The institutional reforms will and should differ in detail in the particular states, and they will have to be evaluated specifically on a country-by-country basis. This is necessary because the starting conditions, the legal framework, the constellation of interests and power relations, the extent of existing integration of telecommunications and media policy and the speed of convergence vary greatly from country to country. It thus makes a major difference whether, as in Germany, the political competences for telecommunications and broadcasting are distributed between central government (telecommunications) and the Länder/federal states (media), among various ministries, as in Austria, or are organized within one ministry, as is the case in Japan. Path dependencies of developments need special consideration, as do the positions of interest and the distribution of power related to them. In Germany, for example, this has resulted in a situation where the regulatory categorization of online services is not dealt with on an objective policy basis but is determined by political compromise between the Länder and the central government (see Roßnagel, 2005). There is thus a great deal of inertia in long-established systems, especially as every organizational change is associated with a gain or loss of power.

Despite all the differences in the details of national solutions, it is argued that some common developmental lines can be deduced from an institutional perspective, or that these common features can be derived from the analyses of recent developments in various countries. Results of scientific and policy analyses as well as the characteristics of reform steps that have already been implemented by particular nation states or transnational players have been used for this. Altogether, five common developmental lines can be identified, which are briefly explored next. These features are to be understood as predictions/hypotheses and not as a normative framework for the future common model of communications governance.

Integrated Strategy – Integration of Political Competences: All in Sight

In the traditional model of communications policy, the strategy development (regulatory framework) and regulatory implementation (regulators) were mostly located in one place in the particular ministry responsible. In the course of liberalization, a separation and removal of the telecommunications regulation from public administration to independent regulatory agencies took place. While only a decade ago nearly all European telecommunications regulators were part of the public administration, this is no longer the case in any EU member state. Of the OECD countries, only Japan and Korea still concentrate strategic and regulatory competence within one ministry (see OECD, 2005). The political strategy development has remained the competence of the public administration or of the parliaments.

An integrated mediamatics policy duly takes into account the convergence phenomenon and consequently strives to overcome the traditional but outdated telecommunications/mass-media dichotomy in policy-making. Its objective in developing strategies is to achieve an overview of the whole communications sector, including not only the electronic (broadcasting, telecommunications, online) but also the non-electronic media communications (print and postal services). From an institutional point of view, combined political competences ease the preparation of integrated strategies. Depending on the national starting conditions, in order to bring the political competences for telecommunications and the media together, institutional reform may be necessary at ministry level or in parliament, where telecommunications and media issues are often dealt with in different committees.

The European Commission is an example of integration on a political-strategic level. Since 2004, the competences that previously belonged to the Directorates General XIII (telecommunications) and X (media) have been united in the Directorate General of the Information Society and Media. The already long-discussed idea of establishing a supranational European Communications Regulator has never been realized, because of power-political struggles associated with it. However, to a certain extent the Directorate General of Competition acts as a de facto European regulator both for telecommunications and the mass media. Convergence is also a key theme of the comprehensive *Strategy i2010: European Information Society 2010*. It aims, among other things, to establish a convergence between policy-making and technology. The proclaimed intention is to modernize and utilize all of the Union's policy-making instruments in order to further the digital economy.

Integrated Control Structures – Horizontal Convergence Regulators: Everything under One Roof

In any attempt to integrate regulation in the new governance model, one has to differentiate between the degree of integration of the regulatory agencies/control structures and the regulatory models/regulatory content. Before the convergence process, regulatory agencies were usually divided vertically between telecommunications and the media. Often, there were further divisions, such as broadcasting regulation, subdivided for organizational reasons into control agencies for networks, spectrum and content. As a result of convergence, there have been reforms in the past decade aimed at establishing organizationally integrated convergence regulators (see Wu, 2004; OECD, 2005). The rationale for the integration is basically the realization of synergy effects and the reduction of transaction cost. Thus, since 2003, the Office of Communications (OFCOM) in Britain has replaced the previous five control agencies. In Australia, the Australian Communications and Media Authority (ACMA) was set up in 2005, merging the broadcasting and the telecommunications regulator. All in all, convergence regulators with horizontally integrated competences for broadcasting and telecommunications already exist in a third of all OECD-countries, and this trend is also taking place in non-OECD states. In Austria in 2001, a somewhat less far-reaching variant was chosen, when the branches of the regulatory authorities were merged into the Rundfunk & Telekom Regulierungs-GmbH (including two sections and general managers), but with separate regulatory commissions for broadcasting and telecommunications.

In detail, the horizontal convergence regulators differ, as for example in their competences for the spectrum, for the print and postal sectors or for competition policy. In political practice, the relation between the sector-specific regulator and the general competition authority is organized differently. Thus, the British convergence regulator OFCOM is jointly responsible, along with the general competition authorities, for the application of competition law. In Australia, however, the general competition authority was given the sector-specific rights for the telecommunications sector. In several countries there are separate agreements with regard to the distribution of competence (see OECD, 2003).

The expected advantages also vary according to the degree of integration. Effectiveness and efficiency gains can be achieved, not least through synergy effects and transaction costs savings, even when integration is restricted solely to a joint organizational umbrella. Institutional precautionary measures such as transparency obligations can be put into place to counter the danger of a too great concentration of power in the hands of one convergence regulator.[9]

Technology-Neutral, Functional Taxonomy – Transmission and Content Regulation: Don't Lump Everything Together

Having everything in sight and all under one roof does not mean that everything can be lumped together. Convergence, though, demands a new taxonomy that moves away from the previous sub-division on the basis of the technology used or the industrial group. This is because technology/networks and content/services have become disconnected as a result of convergence.[10] The new classification criteria are functional, activity oriented

and technology neutral. In this regard, a sub-division into *carriage* regulation and *content* regulation is becoming apparent. As a result, a separation into *economic* and *social/cultural* regulation should also take place. A strict separation is impossible; however, as decisions in the transmission sector not only have economic but also social and cultural effects, as changes in the gatekeeper, for example, have an impact on content.

The carriage regulation of different technological platforms in the new model is uniform, while for content regulation, depending on the expected effects, no uniform regulation is applicable. For the organizational structure of the convergence regulators this could mean that there is also an organizational sub-division between carriage and content regulation, with the joint organizational umbrella ensuring that better account is taken of interactions. Spectrum allocation and a universal-service policy would rather be assigned to carriage regulation than to content regulation.

In Britain, after years of consulting – also considering the point of whether two regulators would be of advantage – OFCOM was set up as a convergence regulator that not only is responsible for carriage regulation but also for content. In the USA, the Federal Communications Commission (FCC) has been jointly responsible for telecommunications and broadcasting since the 1930s. However, it includes organizational units for telecommunications, broadcasting and cable TV, corresponding to the traditional division in industrial groups. Under convergence conditions, even this has been criticized as being inefficient, and reforms in the direction of a functionally oriented organizational structure are being proposed (see Garcia-Murillo and MacInnes, 2001).

Integrated Legal Framework and Laws

The integrative-strategic view and the organizationally integrated convergence regulators are also increasingly leading to an integrated legal framework or to integrated laws governing telecommunications, broadcasting and online communications. The 1996 Telecommunications Act in the USA was an integrative step, previous plans for a dedicated regulatory chapter for convergent services having been abandoned.

The European Union, too, has reacted to the convergence trend. In effect since 2003, the *legal framework for electronic communications*, which is formulated in a technology-neutrally way and is subject to a review process since 2006, resulted in the integration and standardization of infrastructure regulations for electronic communications on different technological platforms. Created in 2002 in a first regulatory convergence step, the legal framework for infrastructure regulation in the EU mainly consists of six directives as well as one decision (see COM, 2007). The carriage of broadcasting, telecommunications and online services is thus subject to integrated regulation. In a second step, the regulation of content has now been adapted to the convergence trend. This took place through the *Television without Frontiers Directive*, now called the *Audiovisual Media Services Directive*. It was published as a discussion draft at the end of 2005, and politically agreed on a common position by the European Parliament and Council in mid 2007. As the title already implies, it goes beyond the scope of TV alone and is expected to set convergence-appropriate European standards for content regulation (see DLM, 2007).

In nation states, separate laws for telecommunications and broadcasting are the prevailing norm, even where integrated convergence regulators have been established. Britain, where a joint regulatory body was created under the Communications Act 2003,

is among the exceptions.[11] Germany is an example of the situation where an integrated legal framework may be regarded as advisable from a public policy perspective, but is considered to be unachievable owing to the role of power-politics. As a result, the reforms in reaction to convergence revolve around sub-issues in Germany, without a comprehensive concept – for example, the standardization of youth protection in the media and privacy protection on various communication platforms (see Roßnagel, 2005).

Alternative Modes of Regulation: From Government to Governance

The regulation – the establishment of norms, their implementation and sanctioning – is not taking place solely by virtue of national laws and other forms of centralized state regulation. The convergence trend is pushing the vertical and horizontal extension of classic government towards governance. *Vertically* extended, it is increasingly resulting in multilevel governance in the mediamatics sector. *Horizontally* extended, it is resulting in a reinforced integration of private actors in the regulatory process. With the growing application of *self- and co-regulation* (alternative regulatory forms), parts of the regulatory process at least are being handed over to private actors.[12] The role of the state is changing in comparison to the traditional model. The advantages of self- and co-regulation as opposed to classic state regulation can be well utilized because of the conditions shaped by convergence, such as the cross-border characteristics of services, rapid technological change and an increased number of players. The application of alternative, in part innovative regulatory forms is increasing in all segments, especially in the internet-based services, with the spectrum ranging from standardization to consumer protection and domain-name administration to youth protection in the media (see Latzer et al., 2002, 2006; Schulz and Held, 2004; Latzer and Saurwein, 2007). At European level, for example, the *Audiovisual Media Services Directive*, which replaces the *Television without Frontiers Directive*, explicitly encourages industry self-regulation and co-regulation.[13]

Conclusion

More than a decade after convergence was first placed on political agendas it is still a central driving force of regulatory reforms worldwide. Policy making is still lagging behind the changes contingent on convergence in the communications sector. The traditional policy model, with its fundamental division into telecommunications and the mass media, the underlying differentiation characteristics and the regulatory models founded on them are increasingly deficient. They are obstructing the development of the sector and diminishing the fulfillment of regulatory objectives. Combined with an increase in complexity through additional players and regulatory levels, not only is the attainment of the unchanged objectives declining, but the controllability in the convergent mediamatics sector is also deteriorating. Policy making as well as science and research are reacting to the slower than expected but still advancing convergence trend.

Despite all (necessary) differences in the detail of particular national strategies, which are not least the result of path dependencies and collisions of interests, this article has derived a rough outline of the new model for an integrated mediamatics policy based on policy analyses and conceptual reasoning. There are several reasons for the new (implicit)

international consensus on a new model, including efficiency considerations (economic reasoning), influential regulatory forerunners, imitation strategies and the EU's harmonizing activities.

In summary, central developmental lines of the emerging pattern can be characterized as follows. In strategy development it is becoming imperative to take a comprehensive view of the whole communications sector at the same time. The trend in control/regulatory structures is moving toward a joint organizational umbrella, although not everything should be lumped together when regulating through one horizontal convergence regulator. Unlike previously, not everything is now sub-divided according to the network technology used, but according to functional, application-dependent and technology-neutral criteria in a uniform carriage regulation as well as an effect-dependent differentiated content regulation. In precisely the same way, the correspondingly altered legal foundations are tending to be integrated. Increasingly, alternative modes of regulation (self-and co-regulation), especially regulations that are not legally set down in detail, are being applied, increasingly integrating private actors. Moreover, the rapid techno-economic change is leading to a dynamic framework in which periodic reviews are already included.

The implications of this predicted new model will be manifold. They not only transform the statehood in communications but may also affect the relationship between communications research and policy making. With convergence, not only is the economization of the convergent sector increasing, but the importance of the often overlooked interaction of social and economic implications in the mediamatics sector is also growing. Because of increasingly application- and effect-dependent regulation in the new governance model, communications research may gain momentum and growing relevance in the shaping of policy making, after being rather neglected in this field over a long period (see Braman, 2003). Policy making not only requires detailed institutional surveys (control structures, modes of regulation and regulatory instruments) as input for an integrated mediamatics policy, but also reliable estimates of (changed) uses and effects of the whole spectrum of applications. The core competence of communications research may not only acquire increased significance for effect-dependent content regulation but also for other policy fields, such as the control of market power and the regulation of ownership-structures. Here, the results of effect- and reception-research may be of greater relevance to the new policy model (see Napoli and Gillis, 2005). In the choice of a technology-neutral regulation, for example, it is interesting to see how far the usage patterns have changed, and whether and how the social impact of terrestrial TV is decreasing in a convergent service sphere. In order to play a more prominent role in the range of disciplines, communications research needs to be deeply engaged in such issues. Moreover, it needs the understanding that topical research on structures and organizations, and also the uses and effect research – which are core fields of communications research – demand a systematic extension of the traditional subject matter. Communications research that meets its requirements as an integrative science can contribute essentially to the interdisciplinary analysis of communications policy.

Notes

1 For the purpose of this article, the focus is on the predominant commonalities of governance regimes employed in industrialized countries worldwide. This does not deny the fact that there are several differences at a more detailed level as well. In this respect the new common model will be similar to the old one.
2 On the development of media and communications policy paradigms in the USA and Europe see Van Cuilenburg and McQuail (2003).
3 There have been differences between the US and the European policy approach. In addition to common-carrier goals, the European public service model for telecommunications has also aimed at fulfilling socio-economic goals (e.g. contribution to full employment, stabilization of investment cycles).
4 Vick (2006) argues that, once established, these models are difficult to change.
5 In political science, the term is used for the convergence of political regimes, especially of the western capitalist system and the eastern socialist one. In technology research, the approximation and fusion of nano-, bio- and information technologies with the cognitive sciences is discussed under the catchphrase NBIC-convergence (also 'converging technologies').
6 For an early analysis of these developments see Nora and Minc (1978).
7 This applies, for example, to the USA, where the FCC has declared broadband to be an information service, free of common-carrier obligations.
8 Complexity theory suggests, that so-called 'complex adaptive systems' are less governable and predictable. A communications policy implication of complexity theory would be that emphasis should be placed on the adaptability of policy processes and structures which is supposed to increase the sustainability of policymaking in communications (see Cherry and Bauer, 2004; Cherry, 2007).
9 Debated risks of an integrated regulator include, for example, that one regulatory tradition (telecommunication) will dominate the other (broadcasting), 'That social and cultural goals will take a back seat to the economic imperatives of the industry being regulated' (Vick, 2006: 59).
10 Nevertheless, the vivid discussion of 'network neutrality', which can be understood as a subset of 'technology neutrality' for the internet area, points at the interest-driven intentions of companies to 'artificially' differentiate their platforms and services.
11 For the impact of the UK Communications Act 2003, see Vick and Doyle (2004) and Vick (2006).
12 Self- and co-regulatory arrangements differ in the intensity of state involvement. In the case of self-regulation, the industry regulates itself with no or only minor contributions by state actors. Co-regulation is a system of alternative regulatory arrangements that are formed on an explicit unilateral legal basis (see Latzer et al., 2002: 40).
13 On the national level, for example, the UK Communications Act 2003 strengthens the role of self- and co-regulation (see Vick and Doyle, 2004: 40).

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