

# Questioning Convergence

Anders Fagerjord & Tanja Storsul<sup>1</sup>

Digital computers have entered all communications media. All wires and radio links can now carry digital signals, and the borders between long established business sectors are eroded. Figures of fiction and arranged happenings, like Harry Potter or Idol, are crossing over all kinds of media platforms. As an umbrella over all these developments following digitalization, *convergence* has been presented as the new order – in research as well as in industrial strategies and government policy.

Entering an electronics store may give a different impression, however. There is an increasing number of small devices on sale, with considerable overlap in functionality. You may choose to take your pictures with a camera that can also place phone calls, record video, backup your computer files, access the internet, or play back music. The same store may also offer you telephone subscription through a traditional copper network, mobile telephony network, television cable, or any internet connection including wireless local area networks. As the level of complexity is increasing, we ask: *Is 'convergence' an appropriate description of what we have seen, what we are seeing, and what we might see in future media landscapes?*

*Convergence*, according to the Oxford English dictionary, means "movement directed toward or terminating in the same point", and is used to describe a number of phenomena: in physics, maths, geography, as well as in media. Early concepts about media convergence were presented in the 1970s<sup>2</sup> and 1980s. In 1987, Itihel de Sola Pool described convergence as a process:

blurring the lines between media, even between point-to-point communications, such as the post, telephone, and telegraph, and mass communications, such as the press, radio, and television (de Sola Pool, 1987:19).

In the 1990s, the concept strongly impacted debates about media developments, and *media convergence* became a key issue in academic texts, policy documents and industrial papers.<sup>3</sup> Several reports and reviews were published in order to address the effects convergence would have on industrial

strategies, and on policy. In 1997, the EU published a green paper on the regulatory implications of convergence, and several states followed with similar reviews in the next couple of years.

What, then, is meant by ‘convergence’? The starting point for the assumptions of media convergence is digitalization of signals. Digitalization makes the signals themselves equal, regardless of what kind of information or communication they represent. As a result of this, it was assumed that a convergence would take place. But what would converge? There is a multitude of interpretations of media convergence which focus on different entities that come together. The EU green paper on convergence defined Convergence as:

the ability of different network platforms to carry essentially similar kinds of services, or the coming together of consumer devices such as the telephone, television and personal computer (COM(97)623).

Thus, in the green paper, both networks and terminals were converging entities. Other contributions emphasised integration of media, telecommunications and computer industries<sup>4</sup>, or the coming together of rhetorical expressions across media platforms (Fagerjord 2003b).

We have singled out six dominant interpretations of media convergence, i.e. the convergence of networks; terminals; services; rhetorics; markets; and regulatory regimes. These interpretations will structure our analysis, in which we outline expectations of convergence expressed in academic texts and policy papers of the mid 1990s,<sup>5</sup> and discuss the degree to which these concepts are still relevant in order to understand developments in the media landscape. We will argue that although concepts of convergence were instrumental in raising awareness about the impact of digitalization in the 1990s, they have less value in describing ongoing and future developments in the media landscapes. In a final section we discuss why expectations of ‘convergence’ still dominate media development discourse.

## Network convergence?

The concept of ‘network convergence’ implies that when digitized, any network can be used to transmit all kinds of digital signals – provided that speed and bandwidth are high enough. In contrast to analogue signals, there is no difference between sound, text and images in digital networks, as they are all transmitted as bits and bytes. Consequently, possibilities are opened for integrated networks and seamless communication between networks that had earlier been used for separate purposes (i.e. voice telephony networks, cable, satellite and terrestrial television and data networks).<sup>6</sup> Baldwin et al envisioned the development of a “full service network”, a network that would integrate telephony, data and video, providing a broad range of communi-

cation services and information (Baldwin et al. 1996:3). This could mean an easier future for consumers, as each household could have one network for all communication purposes.

These predictions were particularly strong in the mid 1990s. A decade later, we find that most networks are digitized, and most are used for multiple purposes. The copper networks formerly used for telephony only have now been digitized and in many areas enhanced to DSL-standards, implying that the same network can be used in communication with sound, text and images. Similarly, cable television networks are in many areas upgraded to not only transmit television, but also enable telephony and IP access (often called triple play). Thus, digitalization has enabled multipurpose networks and many enjoy seamless communication between the networks. Most households are, however, connected to even more networks than before, with recent additions such as wireless local area networks (WLAN), several different mobile networks (i.e., GSM, UMTS), DSL – and broadband services, as well as broadcasting networks. The main reason for this is that people rely on electronic communication for more and more purposes. Further, even if the networks are digital and, potentially, can transmit any services, some networks (such as terrestrial television) are still specialized for certain services. Broadcasting networks have different technical characteristics from IP, and these are put to different uses accordingly. Nevertheless, up to now, there has been a development in the direction of more integrated networks that carry more services.

### Terminal convergence?

Another interpretation of convergence is the convergence of terminals. Digitalization enables the use of computers in production and use of all kinds of media services, and several voices have assumed, like the EU Commission, that convergence implied “the coming together of consumer devices such as the telephone, television and personal computer”.<sup>7</sup> The most radical versions of this view assumed that all terminals could be reduced to one “überbox” (Fagerjord 2002a) or “black box” (Jenkins 2006). As stated by George Gilder in the early 1990s:

The new system will be the telecomputer or “teleputer”, a personal computer adapted for video processing and connected by fiber-optic threads to other teleputers all around the world. Using a two-way system of signals ... the teleputer will surpass the television in video communication just as the telephone surpasses the telegraph in verbal communication. (Gilder 1994:45)

The most far-reaching versions of such scenarios were obviously too extreme. The mechanisms of capitalism ensure that we are unlikely to see the full

convergence into one über-box (if anyone ever truly believed that) – simply because the industry has very high stakes in always selling new and diversified gadgets. Different companies compete for market share, and try to distinguish themselves by putting together products that are different from those of their competitors. In January 2007, Apple launched their new Apple TV box that can connect a television set and a local computer network in order to play downloaded video, image and music files on the TV. This is in obvious competition to Microsoft's Windows Media Center, a computer with similar features, but where the focus is more on recording broadcast TV onto the hard drive. Even within one company's product line there are different models. Nokia's range of mobile phones, for example, offer several advanced models with different features. In January 2007, these were, among others, push e-mail, full keyboard, 3.2 Megapixel camera with Zeiss lens, DVD-quality video camera, 3G and WLAN connectivity, MP3 and AAC music playback, mp4 video playback, digital TV tuner, and GPS navigation. No model had all these features, however, and it may not just be because such an "über-phone" would be big and bulky. It is common practice in most industries to offer different models, targeting the needs of various user groups. The mechanics of capitalism makes it perfectly sensible that there are more rather than fewer types of terminals.

A basic technology may also be put to many different uses. The engine of a sports car is overall quite similar to a family mini-van, but they are put to different uses. Although personal computers, advanced mobile phones, and, to an increasing degree, television sets are becoming multi-use terminals, they are still different. Characteristics of different terminals mean that they have different social functions and are used in different user situations. As Michael Noll argues, similar technology does not mean one medium:

Indeed, television sets and most computers use the same technology of cathode ray tubes for displays. And TV sets are increasingly using digital processing to create the image on the screen. But similar technology does not mean that television and computers are converging into a single appliance in our homes. ... Television sets and computers are used for very different purposes (Noll 2002: 12).

This is not to ignore that digital television enables increased user playback control, video-on-demand and other personalised services, or that increased bandwidth enables high quality web TV on the computer. The boundaries between television and computer are therefore not as distinct as earlier. Nevertheless, the different terminals are used in addition to, not in replacement of each other. Most computers are placed in an office-like environment; on a desk, with a keyboard in front of the screen, and with a single chair pulled up. The television set is usually in the living room, and operated with a remote control from a couch where several people can be seated. One could describe the computer as a "lean forward" medium, requiring

constant selective activity from the “user”, while television is “lean back”, requiring only the “viewer’s” attention, but, while instructive, this distinction lacks the perspective of the computer as normally being operated by one person, while television viewing is a social activity (see, for example, Morley & Brunsdon 1999). To sum up, even though distinctions between different types of terminals are becoming less obvious, as many of them can be used for multiple purposes, different terminals are still constructed for and used in different social settings – and the number of specialized terminals is increasing.

### Service convergence?

A third interpretation of media convergence is the convergence of services. Digitalization enables the transmission of all digital media services over the same networks, and the use of different kinds of services on the same terminals. Consequently, the services themselves were expected to converge. Feldman described this as a seamless integration of individual media in a digital media environment.

‘Multimedia’ is the seamless integration of date, text, sound and images of all kinds within a single, digital information environment. By ‘seamless’ integration we mean so close an interweaving of the discrete character of the different types of individual media is submerged in the experience of the multimedia application (Feldman 1997: 24).

Established services would become increasingly integrated with each other, and new multimedia services would develop. A decade later we see that new services have been developed within and across media platforms. In television, cross media formats, in which integrated e-mails and/or text messages from mobile phones are shown directly on the screen, are gaining importance (Beyer et al. 2007 forthcoming). And on the web, audiovisual services are combined with text services that allow for chat, instant messaging and network building (Fagerjord 2002b, 2006, forthcoming). iTunes, the music player program that is used together with Apple’s successful iPod music players, is another example. From within iTunes, one can also download new music from the iTunes Music Store; download “podcasts”, radio or television shows made by amateur or professionals; and install simple games. Nevertheless, although the services cross media platforms, the platforms themselves are still relevant. Most people still think of TV as something different from a podcast or a web video.

## Rhetorical Convergence?

The more radical versions of this line of reasoning have suggested that we will not only see the integration of services, but also a rhetorical convergence in which expressions and genres would no longer be distinct, but grow into one unified language (Nielsen 1998). This is a much more contested assumption than the integration of formats and services across media. Studies of new media show that what we do see is a growing number, and a differentiation, of genres in digital media (Fagerjord 2003a). Digitalization has levelled out the technological differences between media, and as a result, the typical genres of the different media may be mixed. A video editing style known from television news may be inserted as an illustration to a news article written within the typical newspaper idiom. The front page of a news site on the web may be constantly changed to reflect the development of a breaking news story or a large sports event, echoing the live coverage known from broadcasting (Fagerjord 2003a).

The term 'rhetorical convergence' is used to describe the process where new genres are created by mixing traits known from genres in different earlier media. Each of these genres may be seen as a convergence of traits from one or more earlier genres, but the total number of genres is growing. Rhetorical convergence is not a process of all media coming into one, but a proliferation of genres as forms of expression that may be reused across media.

## Market convergence?

A convergence of networks, terminals and services was further expected to lead to a convergence of markets: it would no longer be self-evident where telecom markets ended and media markets started. Distinctions would become increasingly blurred between infrastructure markets and markets for services, software and media contents. Thus ICT, telecom and media companies would merge or form alliances, we would see the development of multimedia companies (see for example Picard 2002; Hoskins et al. 2004).

In the 1990s and early 2000s, we have seen large fluctuations in the communications markets, including new alliances across the value chain, the most prominent example being the merger in 2000 between the internet service provider AOL and the media house Time Warner. Similar examples of alliances and mergers between telecom and content companies are many, both in national and regional contexts. In Norway, telephone provider Telenor has become not only the largest internet provider in the country, it has also bought one of the largest cable TV network. In 2006, Telenor joined forces with the television channel TV 2, and the two companies paid a billion Norwegian kroner (€ 120 million) for the exclusive TV, webcast and mobile phone rights to the national soccer series. Nevertheless, this is only one aspect

of market changes. In addition to these tendencies of vertical integration and blurred boundaries between old sectors, there is also a development towards new and highly specialized sub-markets, developing not only as a result of digitalization, but also because of political and economic driving forces. Until the 1980s, telecommunications and broadcasting in Europe were typically organized as integrated national monopolies controlling their own value chains. As these sectors have been liberalized, and competition has been introduced on all levels of the value chains, new markets have developed with new actors competing in specific markets. Furthermore, whereas the earlier media markets were national, the web is global. Consequently, even smaller services that nationally or locally have only a small market share may internationally have a critical mass, making niche products more important than the hits and market successes (Anderson 2006).

Summing up, even if the distinctions between market actors that used to operate in separate markets are changing, and big media mergers point in the direction of multimedia conglomerates, we do not see the emergence of one market. What is developing is a web in which several markets are interacting with each other. In this market-web, some corporations seek control of the whole value chain through vertical expansion, whereas others specialize in narrow sub-markets.

### Regulatory convergence?

The above perceptions of convergence between communication networks, terminals, services and markets have had a strong impact on the political discourse. Regulations of telecommunications, media and other media services had earlier been closely attached to the networks delivering the service.

In a converged digital environment, networks are increasingly neutral as to the nature of the service being carried over them. Thus, regulatory distinctions between different types of networks can no longer be mapped onto distinctive characteristics of the underlying electronic infrastructure (Østergaard 1998: 104).

The view of Østergaard quoted above is a typical example of the critique of the earlier technology-specific regulations. As mentioned above, several governments, as well as the EU, produced consultation documents in the 1990s about the regulatory impact of convergence. It was argued that many of the old regulatory instruments were outdated, as they were related to specific networks and technologies that were now converging – a development that produced inconsistencies in the regulatory framework. Such regulatory inconsistencies were regarded as a threat to competition and growth. The EU argued that:

regulating essentially similar services differently, particularly, on the basis of the technology used to deliver the service, could represent discriminatory treatment which might hold back competition, investment and the provision of services (COM (97) 623: 19).

The proposed implication was a need for a new regulatory regime in which the regulations were no longer attached to specific media, but were horizontal. Horizontal regulation meant that all electronic networks should be regulated within one common framework – and all media services and contents should be regulated in another common framework. Such views were also supported by academic writers who pointed at the inconsistencies between the technological and the regulatory levels (Cuilenburg and Slaa 1993; Skogerbø 1997; Noveck 1999).

Following these debates, regulations that used to be separate for different networks (for example voice telephony, cable television and broadband services), in the EU and in the individual states, have been integrated into common regulatory frameworks for electronic communications.<sup>8</sup> Thus, the *networks* have one common regulatory framework.

But, for media services and contents, regulations are usually still separate for different media. Generally, broadcasting, press, telephony and web services have been, and still are, subject to different sets of regulations (Storsul and Syvertsen 2007; Hills and Michalis 2000). The reason for this is, partly, that institutional legacies are slowing regulatory reforms. In addition, the convergence processes have been less pervasive than predicted in the 1990s. The media are much more than just technology. Many, maybe even most, differences between media are due not to technological factors, but are grounded in social codes, economy, rhetoric, and even our cognitive faculties. Thus, even if digitized, different media still vary in their characteristics, usages and purposes. Different media play different roles in society and politicians and regulators still perceive the need for regulation to be different.

### From convergence to complexity?

Over the last decades, media landscapes have changed significantly. Many of the changes have been related to digitalization, to the shift in analogue to digital production, transmission, storage and consumption. In the 1980s and 1990s, convergence became a key label for these processes of change. In the above review, we have argued that *convergence* is not a sufficient description in any of the areas we have surveyed.

We have argued that we do see developments in which earlier distinctions between different kinds of networks, terminals, services, genres, markets and regulatory regimes are changing. Networks and terminals are used for multiple purposes, new services integrate elements from audiovisual and



text media, and media and telecom corporations engage in activities that cross former market distinctions. At the same time, a number of closely related, yet quite different, developments are taking place. Specialised networks are developed parallel to the multipurpose ones. There is an increasing diversification of products and terminals. New genres are developed by cross-fertilizing, and we see regroupings of services. New sub-markets emerge where specialized companies prosper, and core regulations remain specific for different media services.

Thus, digitalization contributes to the blurring of boundaries between different media. This does, however, not imply that boundaries disappear. Rather, what we see is a stronger differentiation of media in which elements from earlier separate media and sectors are combined in new ways with new boundaries. These developments are all related to digital technology – but apart from that, the phenomena are quite diverse.

Thus, convergence is not a very precise description (or explanation) for the ongoing changes in the media- and communications landscape. As Michael Noll has argued:

The very term “convergence” is so all encompassing of a large number of concepts that by attempting to be everything, convergence is nothing more than an over hyped illusion (Noll 2002: 12).

The current media developments are diverse. What we see are several parallel developments resulting in a higher level of complexity, with new alignments of networks, terminals, services and markets.<sup>9</sup> Labelling them all under the one umbrella of ‘convergence’ does not contribute to a better understanding of the ongoing changes.

Such a view is not a new one. The concept of convergence has been criticised since it was introduced. In the mid 1990s Nicholas Garnham criticised the concept on the grounds that even if digitalization blurred previously clear demarcations:

the use of all-embracing terms like ‘multimedia’ and ‘convergence’ disguises important distinctions that should still be drawn between a number of separate but interrelated processes which affect the potential impact of digitization (Garnham 1996: 106).

Similar critiques were later raised by Jay David Bolter and Richard Grusin (1999) and Lev Manovich (2001) (see also Noll 2002). In spite of such critiques, and in spite of the empirical basis for the assumptions of convergence being questionable, the concept remains strong in political, economic and academic circles. Why is that? Why is ‘convergence’ still an attractive concept? What are the strengths of the concept?

## Why still convergence?

We will point at two interrelated functions the concept plays that may contribute to understanding the strong position of the concept: Convergence is a rhetorical tool, as it is used to gloss over complexity.

'Convergence' is used as a *rhetorical tool* in order to facilitate reform. The concept communicates a media landscape undergoing significant change. This has been instrumental in convincing politicians, regulators, investors and other market players that their strategies need to adapt.

In policy documents and business plans, and to a large extent in academic writings, the convergent development has been seen as predetermined. The question of whether or not convergence will take place has not been posed, instead the conclusion that digitalization will cause convergence on all the dimensions discussed above has been taken for granted. As digital signals have the same form, regardless of network, service or terminal, other kinds of convergence would necessarily follow. Thus, the concept has strong technology-determinist overtones and is often used unfiltered as a metaphor for the 'technological development'. However, whereas technology determinism is frequently criticized, and there is a widespread awareness that the relationship between technology and society is complex, the concept 'convergence' has masked and reintroduced some of these simplistic understandings.

As a consequence, the argument that convergence is happening and will significantly change the media landscape has been an effective rhetoric argument. It is frequently used to encourage investment, and to legitimise political and regulatory change (Storsul and Syvertsen 2007). Our point here is not to criticise investments or reforms, but to show that strong economic and political interests have found the concept an effective rhetorical instrument in order to facilitate change.

The second function is that of *simplifying the complexity* of media and technological change. Complexity is difficult to communicate. In order to explain some of the current changes of media landscapes, not only to regulators, investors, and dedicated students of new media, but also to politicians and people in general, some simplification is necessary. Most people that are not heavily involved in media and communication are not even interested in understanding all details and complexities of the developments. Therefore, in order to inform people, politicians, and practitioners about the relevance and impact of media change, it is useful to have metaphors and pictures that are easy to communicate.

Convergence has served as such a simplifying metaphor. It has been used as a rhetorical instrument for economic and political interests, and it has also served to communicate some understanding of technology and media change outside new media circles.

One aspect of this is how convergence has been used as a simplifying metaphor for describing changes in social practices. The introduction of digital

technologies has enabled new practices and forms of communication both on institutional and interpersonal levels.

Several institutions have tried to use the introduction of digital technologies to unite parts of their organizations and systems that used to have separate functions. Typically, digital production techniques have made media institutions reorganize and unite journalists within the same journalistic area (news, entertainment, sports etc) regardless of whether they produce for TV, radio or the web. Also, on interpersonal levels, convergence has been used to describe phenomena in which the distinctions between mass mediated forms of communication and personal communication are becoming increasingly blurred. In the recent book *Convergence Culture* (2006), Henry Jenkins uses convergence to imply a participatory culture, where audience members become co-producers (“pro-sumers”) of media texts. Still, as the contributions in this book illustrate, an understanding of these changes in social practices may also benefit from more complex frameworks than the concept of convergence initially invites.

## Conclusion

At the beginning of this chapter we asked whether ‘convergence’ is an appropriate description of what we have seen, what we are seeing, and what we might see in future media landscapes.

A short answer is that convergence is a better description of what we have seen (especially in terms of network integration, multimedia services and vertical expansion), than what we are seeing (differentiation and complexity), and especially what we might see (complexity is likely to increase). From an analytical perspective, we can only conclude that convergence is not a very precise description.

A different perspective might be to look at the widespread use of the concept, and argue that it is certainly a useful concept; otherwise, people would not use it so much. As the contributions in this book show, the word is used by different people for a large number of analytically very different developments. Herein lies the rhetorical strength of the concept: It is a useful rhetorical instrument for strong interests that argue for all kinds of change that favours new media, exactly because the word fits almost any development within digital media.

What we need now are not more attempts to pinpoint the definition of ‘convergence’. What we need is to view the many phenomena subsumed under this heading in the detail they deserve. We need to realize that convergence is not one, but many developments; in technology, economy, genre, politics, law, commerce, social use, etc. Each of these developments in the digital domain needs to be studied on its own terms.

## Notes

1. The authors are listed in alphabetical order.
2. Stuart Brand (1988) reports of early uses of the term by Nicholas Negroponte and other researchers at the MIT.
3. See for example Cuilenburg and Slaa (1993); Skogerbø (1997); Baldwin et al (1996); Negroponte (1995); McQuail and Siune (1998); COM(1997)623; NOU 1999: 26; SOU 1999: 55; British Department of Trade and Industry (1998)
4. The Canadian Encyclopedia: *Media Convergence*, <http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1ARTA0009695> [visited 9 August 2006].
5. Academic texts from studies of new media, and policy papers on convergence from the EU and Scandinavian countries.
6. Bangemann 1994; Cuilenburg and Slaa (1993); Skogerbø (1997).
7. COM(97)623: 1.
8. EUs direktivpakke, ekomloven.
9. These developments are related to, but not determined by digitalization. Technological innovations such as digitalization enable new developments of media networks, terminals, services, markets and regulations. But, digitalization is only one of several driving forces. Other driving forces that impact media developments are economic factors, institutional legacies, cultural values, and political priorities (Storsul and Syvertsen 2007; Storsul and Sundet 2006).

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