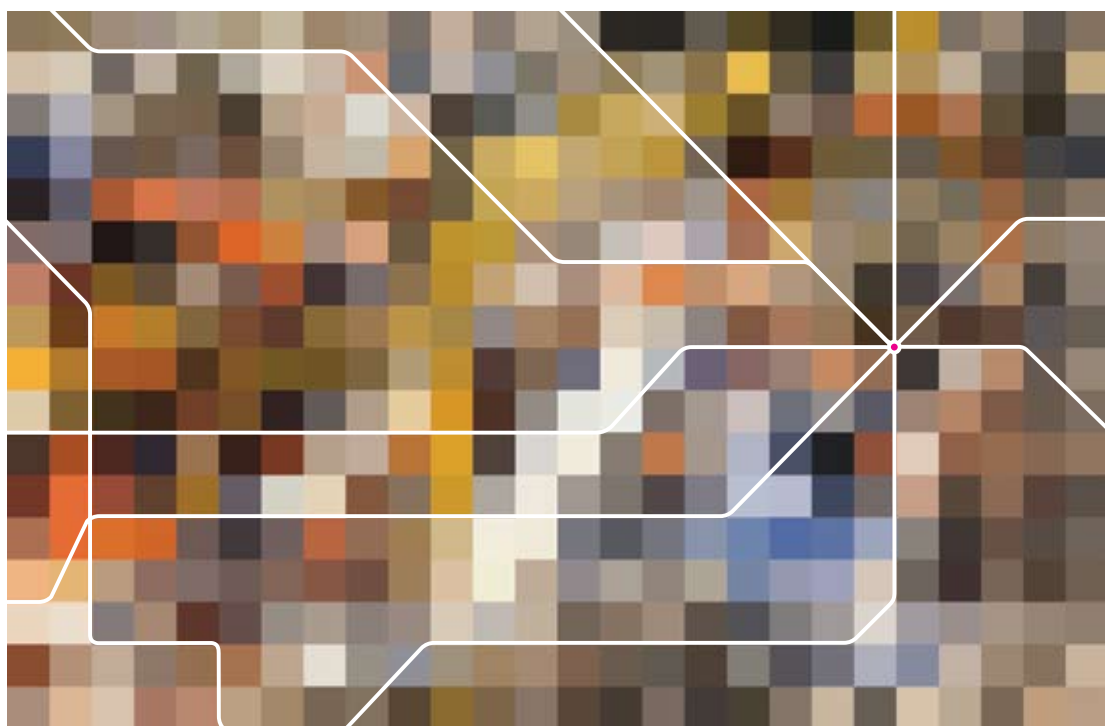


AMBIVALENCE TOWARDS CONVERGENCE

DIGITALIZATION
AND MEDIA CHANGE

EDITED BY TANJA STORSUL AND DAGNY STUEDAHL



NORDICOM

Ambivalence Towards Convergence

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Digitalization and Media Change

Tanja Storsul & Dagny Stuedahl (eds.)

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Preface

Convergence and converging processes has triggered much attention and activities in media research the last years. This has worked as an inspiring context for the discussion and analyses that this book reports. It has been a goal for the book to show a variety of understandings related to the concept of convergence, while at the same time to reflect on the analytical advantage of the concept.

The book is a collaborative project between researchers that have been related to the field of convergence in various ways. Some of the relations are connected to research in the field of digital media – and some have approached the concept on a theoretical and conceptual level.

An important aspect of the book is the reflections on convergence from multidisciplinary viewpoints. Within social sciences, and literature studies, social semiotics, linguistics, cultural studies, and history of ideas, the use of the concept is employed differently. Collected like this in a book, the analyses based on the concept of convergence illustrates the value of multidisciplinary. In some contributions the concept is used as an analytical concept to understand ongoing media processes – in other contributions it is used to understand media use or even design. Some analyses underscores the superficial character of the concept – whereas others underlines its usefulness as a communicational tool. Together they bring a more in-depth understanding of current processes of change (and stability) in media and communication landscapes.

The publication of this book has been supported by the strategic research programme Competence and Media Convergence (CMC), that was run at the University of Oslo from 2004 to 2007. CMC has financed the work with this book and made it possible to get a rather big group of researchers to reflect upon the concept convergence.

The editors extend warm thanks and best regards to the authors for their contributions to this volume. We are grateful for your patience, engagement and support. We will also thank our editorial assistant Siv Hege Blickfeldt, for her encouragement and thoughtful help along the editorial process. Last but not least we will thank NORDICOM and Ulla Carlsson for her support from the very start of this project – to the finished product.

Oslo in October 2007

Tanja Storsul Dagny Stuedahl

Introduction

Ambivalence Towards Convergence

Tanja Storsul & Dagny Stuedahl¹

In the 1990s, *convergence* became a buzzword in media circles. Suddenly everybody talked about convergence. Technologists had talked about convergence for a while. Now, policy makers started to use the term and green papers and white papers were written on how to approach convergence. Media and telecom companies talked about convergence. Analysts at stock markets forecast the economic consequences of convergence. Designers and producers talked about convergence. And – researchers studied and analysed convergence processes. For example, on the European arena, the research programme Changing Media – Changing Europe focused on ‘convergence’ as one of four thematic areas (Bondebjerg 2001). Other initiatives were taken in other universities to approach the new developments, and at the University of Oslo, CMC (Competence and Media Convergence) was established as a multidisciplinary research initiative that would address ‘convergence’.²

Thus, *convergence* rapidly became one of the key concepts in new media discourse, and it was used together with other new concepts. Concepts such as *the information society* and *interactivity* had their heydays with the diffusion of the Internet in the 1990s. In the new millennium the Internet is no longer a novelty, and the focus has now shifted towards *ubiquitous computing* and *user generated content* i.e. that we use computers in all situations and produce content ourselves.

The launching of new concepts, and the reformulation of old ones, is a necessary part of describing and understanding new media developments. Often the concepts themselves become powerful rhetorical tools. They promote specific understandings of challenges and media developments, and of how individuals and societies, institutions and policy should adapt. *Convergence* has become a powerful rhetorical tool that has stimulated change in a number of areas. The concept therefore deserves a closer scrutiny.

Visions about technology

One of the reasons why concepts like *convergence* become so influential is that although the concepts are new, they convey long-term vision. In the concept of convergence, visions about technological progress are combined with visions of how technological innovations may enable unified media systems.

In fiction, we find several examples of such visions, long before the advent of digital technology. In his utopian science fiction novel from 1888, *Looking Backward*, Edward Bellamy described a city in the year 2000. Here he envisioned the 'Music-telephone'. In the city, there were several music halls in which different sorts of music were played. These halls were connected by telephone with all the houses of the city so that all could listen to what they wanted, when they wanted. This book was published in the very early days of the telephone, before the radio, and certainly long before iTunes.

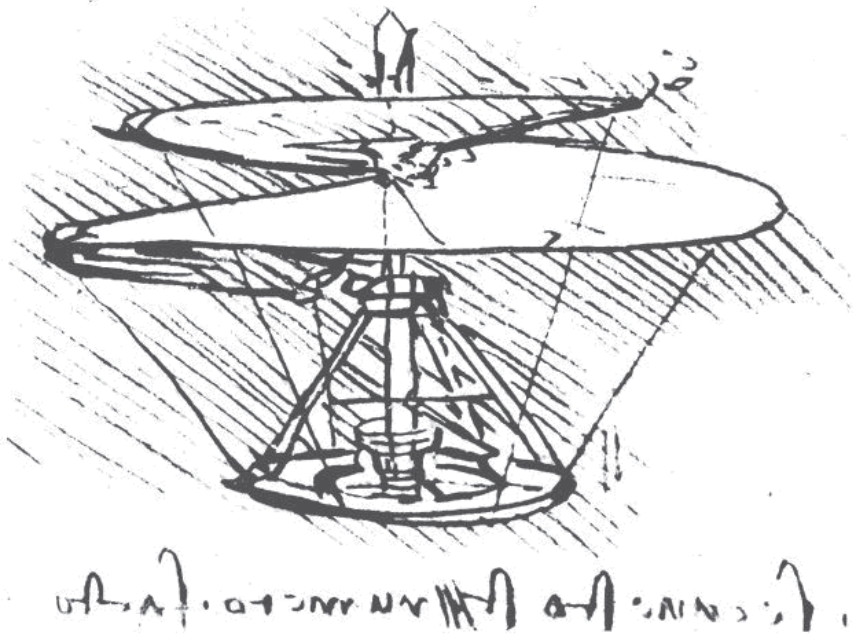
H.G Wells' novel *The Time Machine* from 1895 was also concerned with convergence. Wells suggested that time is a fourth dimension, and that humans can design suitable apparatuses that can converge these dimensions and move people, time travellers, back and forth between them. The novel serves as reference for the design of virtual worlds that manipulates time. Digital environments and technologies of today enable us to explore the past very much alike Wells' novel dramatises.

After World War II, an anti-utopian vision of technological developments was described in George Orwell's *Nineteen eighty-four* (Orwell 1949). This novel gave a dramatic description of a totalitarian surveillance society in which telescreens, which functioned both as televisions and as very sensitive security cameras, enabled the dictator Big Brother to control his subjects. Written long before the video-phone (and long before the television reality show), the novel provided metaphors for serious concerns about protection of privacy many decades later when information systems become integrated.

In the optimistic space-age of the 1960s, Stanley Kubrick's *2001: A Space Odyssey* (Kubrick 1968) introduced the error-free supercomputer HAL. HAL could not only calculate and talk, he had feelings and could think. Being an early representation of artificial intelligence, the computer, however, became so powerful that it tried to take command of the space ship.

These examples show how the idea of convergence is part of fiction, and especially science fiction. And it makes clear how fiction is used as points of reference in order to stimulate, explain and understand technological developments. Futuristic ideas in fiction matter for the development of ideas in the design of real life artefacts and functions. The link between utopian visions and technological development has been called technotopia and was important in the Italian futurist movement in the 1920s, and even in the Renaissance. Several of the ideas of the artist and scientist Leonardo da Vinci (1452-1519) may also be called technotopian. His ideas and approaches to develop flying machines remind us of the close relations between art, ob-

servation and invention. Leonardo studied the physical movements of birds in the air and used the observations to model designs of flying machines.



Leonardo probably merged his utopian ideas of making humans fly in air with existing knowledge about physical laws related to human movement in water. One of his aircraft inventions was the helicopter. This had a rotating spiral wing incapable of lifting the four men that were needed to power the machine (Kemp 2006). His helicopter would possibly have worked better in water than in air. But the story about Leonardo's helicopter does show how innovation and progress in many cases is based on fruitful exchanges between utopian visions, materials and artful experiments as well as existing knowledge and inventions.

Visions about converged technologies are also strongly present in academic and political discourse. For example, in discussions about the future of democracy, many have hoped that new technologies could enable a more participatory democracy. Considering the possibilities opened up by cable TV and local broadcasting, the political theorist Benjamin Barber in 1984 stated optimistically that:

The capabilities of new technology can be used to strengthen civic education, guarantee equal access to information, and tie individuals and institutions into networks that will make real participatory discussion and debate possible across great distances (Barber 1984:274).

Over the last decade, similar views have frequently been expressed regarding how new media and online technologies may provide new channels for information, deliberation and participation (see Skogerbø 1996; Storsul 2002). Typically, digital media was described as an “enormously liberating force ... the democracy citizens in advanced nations always dreamed of” (Nguyen and Alexander 1996:11).

The concept of convergence can be seen in perspectives like these. Basically, convergence carries a vision that digital technology leads to a more integrated media and communications landscape in which earlier boundaries between telecommunications, broadcasting and computing vanish. Similar to earlier visions of technological developments, enthusiasts emphasise how convergence will improve the quality of life and create new means for democracy, citizenship and participation, whereas the less optimistic are concerned with how converged media can be perfidious, and services are used for gambling, cyber criminality, and surveillance. But what is this phenomenon – convergence?

Ambivalence towards convergence

The early concept of convergence focused largely on technology, anticipating that digitalization would lead to a melting together of a number of entities. Not only were digital networks expected to converge, new terminals would be developed that could be used for multiple services – voice, video and text, personal and public communication. We would get new services, and genres from earlier distinct media would bond in a converged media market. In anticipation, firms merged across earlier distinct markets or developed expansion strategies to face the new converged environment. Later, such ideas were taken further and assumptions were that use of converged technologies would challenge old social practices. Economic and administrative organisations established systems to unify and rationalise functions and aspects of their work within one digital framework, which established a new focus on how new social media would change the way people communicated with each other personally and publicly, build collectives and construct identities. Today, however, more than a decade after convergence discourse entered media debate with full force, we recognise a more reflexive approach to the concept.

The non-arrival of ‘the unifying beast’ (Bassett et al. 2007) has led to a reflection on connections, relations and diversity instead. We reflect upon the relation between the empirical and the speculative, between the possible and the desired and between the economically implemented and the socially integrated technologies. Also we reflect upon the diverse and emerging modalities of digital media (Morrison 2007), the resistance that is embodied in practices and knowledge traditions connected to these change

(Stuedahl 2004), as well as upon the development of new understandings of concepts such as the public and the social and the individual.

Convergence is an ambiguous concept. It is used differently, both with regard to what is converging (networks, terminals, social practices etc), and with what happens when something converges (merging, new complexities etc). Many are ambivalent about the concept, some question the assumption that convergence is even taking place, whereas others find convergence a useful concept to explain new phenomena related to digitalization processes.

This book explores ambiguities of convergence through reflections from several studies of convergence processes. In order to grasp the complexity of such heterogeneous processes, insights across established disciplines are needed. This volume brings together researchers from media studies, sociology, literature studies, cultural history, political science and applied linguistics. These researchers share a common curiosity about the relation between digital technology, social practices and convergence in development processes in media and communication. In the contributions, this development is addressed through studies of regulatory and institutional change, communicative genres and social practices. Instead of a unifying process determined by technology, it shows a variety of connections and relations between technologies, modalities and communicational competencies.

Structure of the book

The contributions of this book discuss the impact of digitalization and to what degree the prospects of convergence is realised. The assumptions driving the convergence discourse have been that digitalization and convergence will change the media and communications landscapes significantly, not only in terms of technology, networks and terminals, but also in how the institutions are organised and integrated, on the development of new genres, and social practices.

The first section of the book brings up the big issues relating to the concept of convergence in media and communications discourse. *Anders Fagerjord* and *Tanja Storsul* explore the concept of 'convergence'. Building on dominant interpretations of convergence from academic texts and policy documents from the 1990s, network convergence, terminal convergence, service convergence, rhetorical convergence, market convergence and regulatory convergence, they critically discuss the functions and relevance of these concepts. They argue that even if the analytical value of the concept of convergence is limited, it has played and still plays an important role as a rhetorical instrument to describe and promote changes related to digitalization. But, rather than taking these changes for granted we should now research what changes are actually taking place, and why.

Divina Frau-Meigs' contribution illustrates the importance of a critical approach to the concept of convergence. Her analysis of the World Summit on the Information Society shows the challenges involved in developing a framework for Internet governance that complies with cultural diversity. She argues that the capacity for convergence should be seen in the social acts of people using the multimedia platform provided by the Internet, not in the technology itself. Technical convergence does not imply cultural convergence, especially when specific interactions are at stake.

The second section concerns how digitalization and prospects of convergence have been met by cross-media strategies in media institutions. Broadcasters and newspaper houses have expanded to new platforms but face similar challenges when they try to integrate production processes.

Anja Bechmann Petersen analyses the role(s) of the Internet as a media platform in a division of labour with other media in cross-media concepts. Through an analysis of a regional news organisation and a national broadcasting corporation, she argues that even though cross-media dominates in contemporary media debate, the Internet is not developing as a converged platform. The cultures of newspaper, TV and radio production are strong and limit the interplay between media platforms.

A similar approach is taken by *Ivar John Erdal* who has studied cross media news production in the Norwegian public broadcaster, NRK. He argues that although the NRK's strategies aim for a synergetic mode of production and convergence journalism, these ideals come up against the reality of structural constraints and counter-cooperative practices, as different media platforms require different journalistic and production skills.

Vilde Schanke Sundet investigates how four media institutions launch mobile media services as a strategy to regain market power. She illustrates how mobile media services are understood to be more directed towards individual users. However the mobile service provision is mainly a continuation of online activities, thus the mobile expansion of today resembles the online expansion of the 1990s.

The third section investigates how institutional practices are renegotiated. There has been an ideological push for professional practices to relate to converging processes by integrating across disciplinary or institutional boundaries. The cases in this part show how existing competencies challenge such ideas. They all underline the basic argument that institutional legacies and competencies form the implementation of new technologies.

Ilpo Koskinen describes the challenges of convergence processes for the design professions. He argues that design disciplines have responded differently to converging technologies and new media, and illustrates how in the end it is the designers' definition of convergence that guides the way in which they take action.

Dagny Stuedahl finds similar limits to convergence in her study of how museums and cultural heritage institutions have attempted to create joint database systems across institutions and disciplines. On a policy level, digitalization was interpreted as enabling convergence of information systems, whereas on a practical level, diverging practices, professions and conceptions of qualities limited the attempts at integration.

Knut Lundby reflects on early ideas about how new technology could make learning easier and less dependent on time or place, and shows how this was implemented in one specific R&D case on mobile opportunities for medical students. The project illustrated how convergence of networks and terminals could not be treated as a technical matter only, but must be understood through conventions and habits of individual use, as well as through institutional practices and structures.

The fourth section of the book concerns how convergence has been understood, not only on a technological and institutional level, but also in terms of converging genres and social practices.

Gunnar Liestøl explores the metaphoric value of the convergence-divergence dichotomy. He argues that convergence can only be understood in relation to divergence, and introduces a model in which phenomena that converge as a result of digitalization will later diverge and take new shapes – and that this also can help explain genre developments.

Marika Lüders investigates to what degree convergence is blurring previous distinctions between interpersonal and mass mediated communication. Through analyses of websites that enable social interaction and participation, she shows how a new grey area in between interpersonal and mass mediated communication is developing.

Lin Pröitz studies the development of new genres of mobile communications; love text-messages and camphone self-portraits. She shows that although love text messages borrow features from previous genres, it has its own distinctiveness. Further, the camphone self-portrait diverges from previous genres of self-portraits and may best be understood in relation to the more general media trends of self-broadcasting.

Andrew Morrison and *Synne Skjulstad* present studies of advertisements that may illustrate this point. They investigate how, in digital adverts, the advertising industry imports concepts and genres from popular culture and social culture; genres from blogs and social media are integrated into advertisements – and advertising practices are blended with social practices.

In the final contribution, *Göran Bolin* reviews the debate about digitalization and convergence and argues that what is less often discussed is the textural divergence that follows. Digitalization enables transmedia storytelling. He shows how this is instrumental in the commodification of media content, for branding and production of loyalty among consumers.

Thus, not subscribing to any fixed understanding of convergence, all authors are concerned with developing more nuanced understandings of the analytical value of the concept of convergence.

Notes

1. The authors are listed in alphabetical order.
2. See CMCs website: cmc.uio.no. This book is supported by the CMC initiative, and is mainly based on research projects from this and related initiatives.

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Part One
Approaches to Convergence

Questioning Convergence

Anders Fagerjord & Tanja Storsul¹

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 1970s² 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.³ 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 industries⁴, 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,⁵ 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).⁶ 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”.⁷ 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.⁸ 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.⁹ 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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Convergence, Internet Governance and Cultural Diversity

Divina Frau-Meigs

Internet governance has acquired high visibility with the beginning of the millennium. Compared to the utopian years of the early 1990s, the first decade of the twenty first century shows a turn towards the reality principle, precipitated partly by the September 11th 2001 terrorist attacks, partly by the World Summit on Information Society (WSIS, Geneva, 2003, Tunis, 2005) and partly by the growing need to “localize the global”. Localizing the global seems to follow some of the precepts of environmental cognition, which holds that:

A thoughtful use of new technologies can help root life in the local engagement of our human core desires. Thus new technologies might really herald an emerging global village, but life will never be rooted in it. It is the wrong scale for primary human associations, and to be lulled by its promise is to fall into the technocratic trap that created much of the 20th century’s dehumanizing technology. Instead if technology is to be aligned with human needs, it will do so by making life resemble a set of nested Russian dolls: multiple scales of life whose core is a reinvented local level, the community of place (Quartz and Sejnowski 2002: 274. See also Kunstler 1996).

Some current trends confirm this turn to the reality principle and to the “community of place”, as regulation by nation-states re-enters the stage, via the WSIS process:

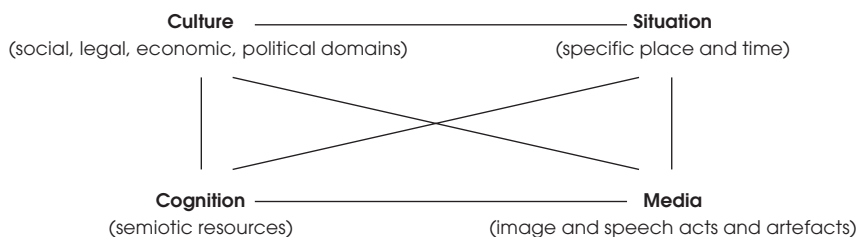
- 1) Internet governance is neither international nor inter-governmental it is government-driven, in spite of advocacy movements and the tentative inclusion of civil society in the WSIS debates. Even in multistakeholder partnerships, the nation-states use their sovereignty as a shield against pressures and a maintenance of nationalism;
- 2) The Internet is being turned into a form of media, and there are signs of its partial “broadcastization”. Though the Internet touts its novelty as an interactive communications tool, it is being “naturalized” or “normalized” by society and societal uses. In fact the latest commercial trends

show that there is a tendency to assimilate it to other existing mass media. Its development is closely co-related with other media businesses and as a result it is increasingly used for a variety of complementary services anchored in territorial grounds;

- 3) The Internet is perceived as having unacceptable real world effects on people. It is seen as a medium for terrorism, cybercrime, spam; all issues which have appeared on the WSIS agenda and have displaced the access and rights issues. There is an increasing overlap between real world decision-makers and Internet decision-makers as the founding fathers of the media give way to more ordinary users and developers. In spite of Lawrence Lessig's much touted phrase that in cyberspace "code is law" (1999: 6), the notion that technicians should decide norms without accountability is being challenged by the call for anchorage in national laws, if not international ones;
- 4) Internet convergence, presented as a technological asset, is no longer accepted as associated to governance in the strict technical definition of the Internet Corporation for Assigned Names and Numbers (ICANN), i.e. a set of standards and norms for allocating addresses, setting top level domain names and managing root servers. A larger definition encompasses interoperability among various systems, as the Internet becomes a digital platform for print, radio, television and telephony (via voice over IP), phasing out other media vehicles like paper and analogical signals. The negotiations around governance show that technological integration is not consensual worldwide and that other dimensions of convergence, social and cultural in nature, have entered the debate. They raise questions about the notion of the "global village" and the risks to the homogenization of cultures in the "Information Society". This phrase is more and more criticized for its unified and hegemonic version of globalization; Unesco and civil society actors tend to prefer "Knowledge Societies", thus denying the effects of convergence, if not convergence per se.

To be able to evaluate the ambiguous status of convergence on the Internet and its evolution, there is the need to elaborate a complex understanding of how our cognitive and semiotic resources have elaborated media uses and regulations within our contemporary culture (Merlin 1991, 2001. See also Norman 1993). The interdisciplinary framework of analysis adopted here attempts to cross sociology with environmental cognition and media studies. It follows a model for research that tries to integrate culture, cognition, and media to situation, in a dynamic systemic-functional process.

Looking at the evolution of media models since the eighteenth century shows that they have been predicated on specific functions: surveillance (of the environment), correlation (of ideas for exchange and debate), transmission (of values) (Lasswell 1948: 32-51). More recently, transaction (to im-

Figure 1. Relation between culture, cognition, situation and media

prove commerce) and entertainment (to occupy increased leisure time) have added value to global media systems. Three centuries later, the knowledge about human nature and “our human core desires” is drastically complexifying this picture (Clark 1997; Tomasello 1999; Harrison and Huntington 2000). In an open-ended process of distributed intelligence and exchange with the environment, new functions are emerging: plasticity, portability, responsiveness, connectedness; such are the new keywords attached to these cognitive advances (Salomon 1993).

This view extends the reach of classic media into the realm of social capital and truly situated knowledge societies; it mitigates the view according to which human nature is individualistic, solely driven by instincts that need to be curbed by the state. It encourages the recourse to forces of civil society for participation in the regulation of media, and especially the Internet, as a tool for renewed connectedness with a common purpose. It has the potential to lay the grounds for a new political theory predicated on cognition, and using the distributed intelligence of the Internet network as its media of choice conveyance (Quéau 2000).

This chapter provides a critical assessment of convergence as it can be traced in and around the WSIS process. It specifically focuses on how the issue of global Internet governance was discussed in relation to demands for global cultural diversity. It surveys the existing competing models for media regulation and questions the possibility that the Internet could be governed using one of them. It argues that the Internet presents a high degree of hybridity and therefore will need to find a regulatory model of its own, as each media still maintains its difference, with specific regulations, related to its social uses and functions. Assessing the WSIS debates, it shows that technical convergence challenges existing power relations among countries and international markets, but doesn't really bring about cultural convergence. Cultural diversity remains a prevalent claim, as cognitive needs, very akin to human core desires and sustainability in a situated environment, remain actively at work within the evolution of media. From such a perspective, it doubts whether technological convergence is likely to happen, as cultural convergence doesn't seem to be a desirable outcome.

The competing media models

Classic media models

In the actual state of the law, in most countries, each media is taken separately and has its own policies to regulate it. The nature of every technology is taken into account, with a large flexibility in local interpretation of the rules. The law, like the media, seems context-specific (Garry 1996). There is no single all-encompassing vision, in spite of growing economic convergence, characterized by vertical integration and concentrated ownership at the hands of a few global media mega-corporations.

This evolution produces an implicit hierarchical organization, in which the older the medium, the more autonomous and the more protected it is by law. By this rule, the written press is the freest of all, and is considered as the fourth estate; the newer media try to construct themselves in reference to it, and in competition with it. Also, the older the medium, the more protection it claims from the new emergent media; conversely the newer the medium the less legislation it wants. Each medium or vehicle (paper, telephone, radio, television, cable, satellite, computer) in turn tries to get support from the government and regulatory bodies to solve competition within its industrial sector and across others. So focusing on the Internet mustn't make one preclude other media competitive strategies.

The different competing models present in the world today are being played out by a variety of actors: legislators, operators, industrial service providers, and end-users.¹ They have developed along the lines of some specific functions, defined by their use as the community at large has adopted them; a phase in which the Internet currently finds itself. This process tends to displace the early inventors and early technology experts and gives way to legal experts and industrial users, to the detriment of the public at large.

- **The *free press model*** of the written media (paper) has developed the most freedom of expression and the most freedom for its professionals. It benefits most from the notion of “publicity” as it was coined by Kant and developed by the philosophers of the Enlightenment, in the eighteenth century. Connected with civic views, citizenship and the formation of an informed public opinion, it has set some of the major functions of the media, mostly surveillance of the environment and correlation (public debates about events).
- **The *common carrier model*** (telephone) is the closest to the very technical notion of media as “utility”, as raw energetic material like water or oil. Government exerts its regulatory mandate to ask the private sector to produce services with “universal” access (not to be confused with “public” access). This model places communication and information in the hands of specialized agencies that take care of technical issues, like the Federal Communications Commission (FCC) in the United States or the Conseil Supérieur de l'Audiovisuel (CSA) in France, and at in-

ternational level, the International Telecommunications Union (ITU). This model mostly serves the function of transaction for economic development.

- **The *public trustee* model** (radio and television) refers specifically to audiovisual over-the-air systems of the twentieth century. It tends to substitute publicity and utility for “trust”: the privilege of exploiting public channels by a private operator is granted in exchange for a certain amount of public service obligations (Krugman and Reid 1980. See also, Cole and Oettinger 1978). The franchising and licensing process ensures a certain amount of public regulation, in the name of fairness and equal access. This model has allowed for editorial control and regulation of content that was controversial for the public, like violence, pornography, and advertising to young people, or for politicians (around issues of equal time and access to networks). It underlines the transmission function of the media, as the monitoring of its content relates to social norms and values.
- **The *public service* model** (radio and television) also refers to audiovisual over-the-air systems. It emerges directly from the publicity paradigm, especially within the European context. It gives the state a monopoly over media, with a mandate to provide for public representation, pluralism of opinions, minority views and access. This model has evolved from a paternalistic propaganda type of management to a more distributed mission for the protection and promotion of cultural diversity. Its primary function is the transmission of values, but it also serves as correlation, as a means for creating public opinion.

Hybrid media models for hybrid media systems

In many countries, these basic, historical models have been partially applied to recent, emerging media, mostly the *common carrier* and the *public trustee* ones. Cable tends to benefit from a mixed regime, between *common carrier* and *public trustee* (Custos 1999: chapter 4). Cable is not fully a *common carrier*, but since it can be in a *de facto* local monopoly situation, its services and costs are regulated (basic cable services only). Cable is not fully under the *public trustee* model either, but some of its content is regulated and it must cater to local diversity obligations. The presence of *must carry rules* makes cable akin to a *common carrier*. Cable operators must broadcast over-the-air television channel programs (for free, without compensation, contrary to common carriers) and they have to reserve channels for local community use (education etc.).

High Definition Television and satellite television also tend to benefit from a mixed regime, with a tilt towards the *public trustee* model. The main activ-

ity of digital TV is likened to over-the-air TV, overriding the other services it may offer (like data transmission). They also tend to obey the same *public service* obligations as traditional TV.

As for Internet and online services, the rule seems to be... no rules yet, or rather a moratorium on regulation in many countries. Considering its multimedia dimensions and its high level of hybridization, the Internet could be fit for the *common carrier* model (mail, home shopping). But it also offers services via operators and servers (*newsgroups* etc) that are more related to the *public trustee* model, and open the door to the control of access rights and of editorial content. Besides which, there are other multimedia specificities, like receiving radio and television programs, as well as newspapers, e-zines and newsletters, which can be assimilated to the *free press* model; the trend to blogging and the whole culture of collaborative exchanges and user-generated contents give it an additional dimension of *public service*, available to all, worldwide.

The stakes are high: the *common carrier* model allows no regulation of content; the *public trustee* or *public service* models do. In the USA, the FCC and the Supreme Court have dealt with complaints by using case-by-case jurisprudence, according to the functions and activities of the operators. The few existing court decisions regarding the Internet confirm the ambiguous perception of the new media. In the case of pornography (*United States v. Thomas*, 74 F 3d 701 6th Circ, 1996), the Court treated material accessible via the Internet as videotape, which comes under the legislation for obscenity and places it within the scope of the *public trustee* model. In the case of the rejected *Decency Act*, however, the Internet was protected and treated according to the *free press* model.

Telecommunications companies are the ones that stand to gain the most in relation to the Internet. They have been deregulated in most countries and no longer have a state monopoly. They often have been compelled to allow interoperability and interconnection to other local competitors, mostly cable operators. They have an interest in keeping their status as common carriers, which gives them a competitive edge over cable and other broadcasters and operators, whose editorial content can be regulated. Increasingly, however, information services are being distinguished from traditional telecom services in that they allow more user autonomy for data-mining and management (storage, transformation, production etc.), not akin to basic telephony. As a result, information services providers (ISPs) do not have the rights and obligations of a *common carrier*. Legislation so far is in the favour of telecom operators, as it allows them to carry home-shopping services, video and electronic mail. They are currently in a battle with ISPs and content-generating companies of the web in that they want to stop the so-called "neutrality" of the net, and charge differently, according to the bandwidth used (online games and VoIP need more powerful tools than e-mail).² The evolution of the web 2.0 is going to increase the needs for bandwidth and user-generated content...

The hyper-hybridity of the Internet

So there is an emerging model for the Internet: the *information provider* model, whose main function is data-mining. This model follows in the footsteps of the *common carrier* model of the industrial age and pushes the commercial dimension of the Internet, as it likens it to a raw resource, to be exploited for economic development. It pushes further the function of transaction, giving it a new twist in the information era. In such a view, economies of scale are still one of the guiding principles of the design of social arrangements, and technological convergence is essential.

Another emerging model tries to put forward conditions of use: the *open source* model, whose main function is participation. It is based on open source code that allows the exchange and modification of non-proprietary software. It is not unlike a model existing outside the realm of media, the *public forum* model, traditionally applied to territorialized public spaces (streets, squares, etc.) (Logan 1997). Promoted in the 1990s by Internet entities like the Electronic Frontier Foundation and pioneers like Richard Stallman, this alternative model promotes users' practices and welcomes improvements to its design, especially to serve local needs. It raises the idea of access and of public domain for a multidirectional use of the new media, with lots of capacity left at the end-points of the technology (known as the e2e open-endedness principle).

This model offers great editorial freedom on behalf of a plurality of forms of expression, not necessarily all for profit. It challenges the commercial interpretation of the Internet, on the grounds that the public – as a civil society not just made of consumers or users but also of citizens and designers – is the ultimate owner of all channels and bandwidths, having, as such, some rights, including those of requiring accountability from the leasers. It also challenges the current commercial enclosure movement of public domain goods.

This model has extensions in the *creative commons* initiative, an alternative legal model put forward by Lawrence Lessig. It aims at making the codes and standards of the Internet transparent and accessible to all and allowing the user-producer a whole range of solutions that are non-proprietary, especially the “share-alike” option. According to Lessig, cyberspace regulation, unattended by citizens, might become “not the locus of liberty, not a space of no control, but a technology of government and commercial power wired into every aspect of our lives”. (Lessig 2000, see also 2001). Though it has no formal regulatory status for the moment, *creative commons* chapters in many countries are in the process of adapting the model to local legal demands.

This *open source* model is based on public domain preservation and enhancement, to be achieved by convincing content producers to be active participants in the open access paradigm of knowledge, along the lines delineated in a variety of documents and initiatives (Budapest Open Access

Initiative, Berlin Declaration, Creative Commons, Open Courseware Initiative, WSIS Education and Academia taskforce Open Cognition Platform, etc.).³ In the matrix of models and functions, it is the only model predicated on a cognitive view of human nature as collaborative, responsive and involved in a distributed, sustainable exchange of intelligence.

Figure 2. The matrix of models and functions

MODELS	MAIN FUNCTIONS
- <i>free press</i>	correlation
- <i>common carrier</i>	transaction
- <i>public trustee</i>	surveillance
- <i>public service</i>	transmission
- <i>public forum</i>	participation

By default and contrast, this matrix points more clearly at the newly emerging Internet-specific models and functions, not yet translated into regulatory policies:

Figure 3. Internet-specific models and munctions

MODELS	MAIN FUNCTIONS
- <i>information provider</i>	data-mining and transaction
- <i>open source</i>	collaboration and participation
+ <i>creative commons</i>	+ sustainability

These two models in co-presence suggest the possibility of a bifurcation of cultures within the Internet environment, to accommodate their diverging trends: on the one hand, a protraction of the commercial market culture, on the other hand, a protraction of the media commons culture. These two emerging models were at stake in WSIS, and became one of the major issues of the second phase of the Summit, as the issue of Internet governance took centre stage.

Internet governance in WSIS

Power relations around convergence

The various actors, and their relative strength and capacity to mobilize, played different roles as their interests differed or converged. Multiple stakeholders (legislators, operators, industrial service providers, and end-users in civil society) referred to these models and functions, in a variety of combinations, according to their needs and constituencies. Corporate actors tended to side with the *information provider* model, while civil society actors were pushing for *open source* and *creative commons*. Operators and private sector actors

wanted to push for the regulation of the *information-provider* model, to promote its transaction dimension. The USA and a few other countries that stood to win most, as those who control the norms and standards also control the market and its evolution, supported them. Civil society pushed for the *open-source* model to emerge as a viable regulation of global public goods at a local level. Most governments found themselves as arbitrators between the two, trying to keep a balance between the need for public connectedness and the drive for private business. Considerable slippage took place, with its attendant risks and promises. The risk was that the public resource that the Internet is could become a national monopoly, as exemplified by the position of China, threatening to create its own root server, which contributed to making the USA reluctant to relinquish its control over ICANN.

The drive for convergence on the Internet as a commercial medium came from the numerous commercial intermediaries that aim at an enclosure and a broadcastization of the open-ended system: they only cared to give access to the services they have a stake in, often connected to other media entertainment and information processing strategies (Frau-Meigs 2000). This surreptitious enclosure was perceived by civil society as a real limitation to the end-user, and the citizen at large, as the commercial architecture of the network allows service providers both to trace and monitor usage and to constrain freedom of navigation.

Among governments, the pressure was high from intelligence-gathering agencies like the NSA in the USA, to proceed to a closure of the open-ended system, as has been the case with other media in the past. The Internet Engineering Task Force and ICANN have a capacity to resist and maintain some openness in the system, but with more and more difficulty. They are under pressure from the computer industry, which would like to use their expertise for strictly corporate purposes. Other industrial sectors have their stake in the closure of the system, as this would allow for a clearer way of defining costs, billings, returns on investments, etc. The value-added function they see in the Internet is data-mining, a function specific to the new media, with information databases as utilities and raw materials to be extracted and sold as services. They do not share the view that this function is also one of transmission of information by repository and patrimony, as the recent conflicts about intellectual property rights and public access in libraries and archives have shown. They do not welcome the *open source* initiative that would make this data-mining more largely accessible, collaborative and even, in some cases, free.

The *open source* model, with self-supporting systems, in-built maintenance programs and upgrading capacities, favoured local sustainability. Civil society actors (educators, researchers, NGOs, etc.) promoted it as they saw the benefits for situated cultures, open commons and global public goods in knowledge societies. They supported the *open source* model capacity for adaptability, though they didn't disclaim the need for interoperability. They wanted to make sure that the interoperability structure would be patent-free,

so as to allow for the non-proprietary evolution of the Internet. Convergence from this viewpoint was seen as a threat to such diversity of local situations.

The impossible “constitutional moment”

The debate around Internet governance during WSIS illustrates the difficulty of promoting convergence in a multipolar situation, with vying visions of convergence at stake, from the strictly technological to the openly cultural. This was mostly visible around the battle for the control of ICANN, the so-called global Internet community organization, created in 1998. In spite of its claims to be international, it is in fact legally a non-profit foundation based on California State law of the US, and under the ultimate supervision of the Department of Commerce (Mueller 2002; Kleinwächter 2000). During WSIS, the US government renewed the contract with ICANN, thus postponing the promised transition phase to a fully international governing body, and keeping the control of the Internet within the fold the US administration. Such a step significantly and permanently altered any American goodwill to modify a national sovereignty position: the reality principle made a singular return with the Bush doctrine (Lafeber 2002), whose principle, “what is good for the US is good for the world”, is to justify isolationism, unilateralism and the de-legitimization of most international bodies, especially within the UN system. The traumatic 9/11 events make it difficult to imagine the future without deep US involvement in any Internet governance matters. In many ways the federalist and market-driven model of American government is already incorporated in ICANN; its leanings towards the private sector and minimal regulation are presented as a *fait accompli*.

These events have been concomitant with the end of the first expansion phase of the Internet and the necessary legal stabilization that the industry calls for. They have made the virtual world contingent with the real world, dramatically so. They may have damaged durably the generous impulse of collaborative exchanges that was at the foundation of the worldwide web. There is little chance that the US will let international institutions tamper with their model, as was made visible in the confrontation with the European Union proposal.

This proposal was presented as a last minute compromise, proffered during the last prepcum in September 2005. It was presented as the potential “constitutional moment” for global Internet governance (Mayer-Schoenberger and Ziewitz 2006). It put forward the transfer of policy-making power to an international body, with self-constrained governance of the Internet by the governments, so as to maintain the architectural principles of Internet, that is to say inter-operability, openness and neutrality or end-to-end principle (e2e). This e2e principle held that the network was not to assume any function except transmitting data packets. It would have provided the basis for technical convergence, with shared principles and norms while maintaining

divergence and openness at the end-points, i.e. the operators and users. This is very akin to the *free press* model as it removes any editorial control over content from the system; it is also close to the *open source* model, as it removes the risk of fragmentation of the network via tiered-service differentiation and vertical integration. Such a solution echoed in many ways civil society's position, as expressed in the Working Group on Internet Governance (WGIG).⁴ So, the proposal would have preserved some of the most important values of the Internet community as a whole.⁵

The USA rejected it, though it would have been a solution for the internationalization of ICANN and for global convergence. So the Western countries did not unite, and the current status quo continues, leaving China and other non-democratic countries at liberty to maintain their censorship and hold on information exchanges... and the USA in control of the Internet. As a result, the transition procedure – regional root server? Worldwide server? – still remains vague and technical; it will be a long, and will need to be a cautious, process, all the more so as it is likely that it will depend on each country's Internet policy, as most governments are likely to model their positions on the American one.

Nonetheless, one of the positive outcomes of WSIS was the creation of the Internet Governance Forum as a compromise solution, if not a real counterweight to ICANN. The IGF doesn't have any regulatory mission and cannot make policies, as it is a tool for "a multistakeholder policy dialogue",⁶ with only "soft powers" like the opportunity to discuss, advice and promote – a definition typical of the governance *modus operandi*. WSIS failed to produce a global governance solution for the Internet, postponing it, and probably making it less and less likely that it will match the values of the pioneers of the Internet community. This may also have spelled out the domination of the *information provider* model over the *open source* model...

Yet, at the moment, in the United States as elsewhere, other forces are at work, which might favour a more public-oriented dimension of the media matrix. There is a growing distrust in federal government service delivery and a sense of disenfranchisement. A variety of societal movements are promoting ethnic identities and community-building at local levels. They express the need for human connectedness and the feeling that global media have not provided the appropriate scale for human interaction (Castells 1997).

Cultural diversity as a possible model?

Currently, on a global scale, the only model that takes care of the local and national needs and tries to translate them into an international law is the *cultural diversity* model (Frau-Meigs 2002).⁷ Within the UN system of international relations, the regulatory process has been placed under the auspices of UNESCO. It has run parallel to WSIS and some of its issues have rever-

berated in the WSIS debates. It is the only model that incorporates media and also all sorts of cultural goods and services into an international framework, and as such it has to be observed carefully. It is akin to a renewed *public service* model, in which the state is the intermediary link that fosters community-building and maintains cultural pluralism within its borders, provided it nurtures the paradigms and values of its diverse constituencies.

Vying versions of diversity

During the debates preparing the Treaty, what was striking was the strong feeling of legal innovation as a political slogan (“cultural exception”) was being turned into an international right. It became apparent that the old system of legal control by national governments has partly subsided under the shock of ICT-driven globalization and that a new system of transnational governance has emerged, trying to solve problems by convening a variety of actors around the resolution of a specific issue, as in WSIS. The implementation of cultural diversity is the litmus test of this transition phase between government and governance. The tension between the two contains a definite risk of bifurcation of political cultures (regulation vs. co-regulation) to be added to the risk of bifurcation of media models (*information provider* vs. *open source*).

Three specific issues related to cultural diversity in the media and ICTs were present throughout the debates. These are: national sovereignty and independence, ownership and control, personal identity and community participation. They led to different interpretations of cultural diversity vying for recognition. They confirm a multiplicity of perspectives, expectations and definitions of cultural diversity that moves it away from convergence: a shift towards an economy of culture (for Europe and Asia), a form of indigenous expression (for Africa and the Arab world), a tool for sustainable development and peace (for Latin America). None of these are mutually exclusive and they all appear, even in minor forms, in the different continents, according to the actors implicated (NGOs, IGOs or dynamic partnerships, coalitions and alliances mobilized both on-line and off-line).

Other instruments, within Unesco, and also in other forums, are buttressing the model. As early as 2003, the general conference adopted the “Convention for the protection of immaterial cultural heritage”, the “Charter for the preservation of digital heritage” and the “Recommendation on the use and promotion of multilingualism and universal access in cyberspace.”⁸ These various instruments enlarge the scope of cultural diversity and make it encompass language as well as media vehicles, analogical as well as digital formats (databases, websites, software, etc.), cultural goods as well as creative industries. They protect the notion of a public domain of media, with potential extensions of the public service model on the networks. They also emphasize the fact that the digital divide is also a cultural divide.⁹

Such instruments are related to governance in that they don't provide constraining legal frameworks as such, but if aggregated within the *cultural diversity* model, they provide a rather coherent view of the integration and breadth of the notion. If buttressed against the new Treaty (ratified in December 2006 and effective as of April 2007), they can actually give authority and legitimacy to the cultural diversity model.

The Treaty debates were relayed to WSIS, where the major preoccupation was with access and indigenous cultures. A working group on cultural diversity was created to relay these concerns, via official declarations.¹⁰ These express the need for multipartnerships and the urge to focus on open access to the global public domain, thus making the *cultural diversity* model converge with the *open source* model. The texts also underline the context-specific character of some concepts (like "information", or "technology") foreign to aboriginal cultures; they insist on the necessity to localize them and to expand multilingualism on the networks.

Cultural diversity as a rampart against convergence?

Interestingly, the regulatory emergence of this model has been relayed within the UN framework of WSIS, as the Declaration of Principles of the first phase (Geneva 2001-03) explicitly supports UNESCO's Universal Declaration on Cultural Diversity.¹¹ In the second phase of the summit (Tunis 2003-05), the agenda and the roadmap define ten priority action lines, one of which, action line C8, specifically refers to cultural diversity, while action line C9 deals with media. The official moderator, designated in October 2006, is UNESCO.

Another international entity has also become interested in cultural diversity, the IGF. Though it doesn't have to deal with WSIS action lines, the IGF, during its first meeting in Athens (October 2006) identified cultural diversity as a transversal theme, associated with sustainable development. The debates denounced a number of biases against diversity on the Internet: a historical bias in favour of the English language, a technical bias in favour of ASCII code, a cultural bias in favour of Western scripts and modes of encoding.¹² These biases tend to promote technical convergence but they were denounced by the Asian and the Arab world representatives, who announced initiatives currently under way to internationalize domain names and encoding formats and norms.

ICANN was supportive of these initiatives, while trying to downplay the enormous current advantage for American cultural goods and forms of expression. The tumult created by the creation of the ".cat" domain name (for Catalonia, thus paving the way for other regional entities) and the ".Berlin" (for other municipal entities) reveals the high stakes being played for digital and territorial sovereignty. The IGF finished with a proposal for a dynamic coalition with multiple partners, led by the Global Alliance for Cultural Diversity, whose task would be to monitor the evolution of diversity on the

web, test the options newly opened by the semantic web, version 2.0, with a report to be made public at the second IGF meeting, in Rio de Janeiro (November 2007).

In this global context, the chequered pattern of cultural diversity, with its flurry of recommendations, charters and dynamic coalitions (including the Global Alliance for cultural diversity, created at Unesco in 2002), shows a transition towards governance, away from government. The Treaty itself doesn't include sanctions but has a mechanism to solve disputes, whenever they occur. There is a large degree of freedom for national interpretations of the model. This trend doesn't favour convergence. On the contrary, it allows for local adaptations and adjustments while promoting a universal right.

The "liquidity" of cultural diversity shows a "cosmopolitical" trend to transnational exchanges that are not linear but multipolar (Beck 2003). It goes together with an increasing push for distanced social interactions that doesn't preclude other forms of local sociability and uses (Giddens 2001). Such slip-page shows that there is a real vitality and inevitability to cultural diversity. The vitality is visible in the various partnerships that have emerged, including with the private sector. Such corporations as Vivendi have created departments for sustainable development that monitor cultural diversity. The inevitability comes from the international conditions: diversity is in tension between the need for security (recognizing differences and promoting tolerance in order to avoid conflicts and the shock of civilizations) and the need for sustainability (recognizing the proximity with issues around the environment and bio-diversity).

The *cultural diversity* model shows the power not so much of media as of laws and legal systems. The open-endedness of the media in democracies has been allowed by the joint efforts of regulators and legislators. Arguably, the transfer of such an idea to Internet governance is an interesting prospect worldwide, provided it is transferred with its array of compulsory accessories, akin to a transfer of human rights, of a bill of rights and the checks and balances system that validate the whole procedure. It shows the impossibility of separating media functions from societal uses and visions. It confirms that Internet governance cannot be solved on a technological basis alone, separate from legal and political arbitration. Neither can convergence.

Lessons about convergence in the media

Phases of convergence/divergence

This social control by governments and corporations has consequences on all media in terms of their communication functions as the range of multipoint possibilities tends to be reduced. The notion of convergence in this context serves one main purpose: communication tends to become unidirectional and point-to-point, even in the digital open-ended world of networks and

interactive exchanges. The advantage of these characteristics is that it is easier to assess costs and to invoice private individuals (Streeter 1996: 60). They are taken as principles of efficiency and practicality, as well as being advantages in terms of service. The unregulated use of a competitive environment for profit, rather than giving access and information away for free, is becoming the norm in the application of operational commercial systems, with a minimum of legal limitations imposed for the common good. The commercial model for this success remains the broadcasting system of radio-television and its flexible capacity to enlist new technologies in its wake, including the Internet, which hasn't yet proved its economic viability as an autonomous medium.

Indeed, each media system seems to undergo a three-phase cycle of emergence, dominance and residuum. The emergence phase is largely based on participation by a group of marginal innovators; the dominance phase tends towards more delegation, with corporatist involvement; and the residuum phase tends to compensate for decline through a resurgence of participation by minority groups taking advantage of the decrease in costs in order to assert their community identities. Commercially, this pattern makes it possible to contain obsolescence and to maintain a pool of peripheral companies. Socially, it keeps alive the myth of mobility and success through the market. Politically, it reinforces the idea of a weak public sphere and a strong private sphere, while toying with the idea of participation in a direct democracy.

This three-phase cycle casts a light on recurring patterns taking place with media convergence in relation to democracy. The fate of older media is of particular interest: they don't disappear; they are appropriated by minor, alternative or diverging voices in civil society. These voices find a new forum and new forms of communication among themselves, which may lead to more democratic visibility. While dominant and converging media strain for consensus, residual media thus contain the potential for becoming radical media (Frau-Meigs 2000: chapter 2; Streeter 1996). In the context of Internet governance, this cycle leaves some leeway – and a future – to prior media, as well understood by the civil society groups that have fought to have traditional media and community media included in the WSIS process (and part of action line C9).

The risk of such cycles is for citizen direct participation to become the preserve of a limited number of die-hard amateurs and pioneers relegated to the local spectrum (narrow band and short band), which is perceived as neither commercially viable nor strategically threatening. They continue to do their own tinkering; making up micro-communities of radio hams, CB users, local stations video producers, and now, potentially, Internet hackers, bloggers and mobloggers. In fact, conflict may arise between the two extremes of democratic tension: the amateurs confronting the military while the middle forces (corporations, operators and the government) exploit their antagonism. When amateurs gleefully show up the weaknesses of a system,

or claim greater flexibility through spectacular operations such as transmitting viruses onto the sites of government agencies or major corporations, the military demand more security and more surveillance, which is renegotiated by governments and corporations without much public consultation. The WSIS process did not escape this trend: in spite of the presence of civil society actors, global public opinion was not moved to participate in the debates (Frau-Meigs 2007b).

Corporations and government agencies attempt to find negotiated compromises in issues raised by civil society concerning freedom of speech, and intellectual property and privacy in the new media and the Internet is a case in point. Tensions are dealt with by consultative committees of experts in specific cases such as the WGIG or the IGF in WSIS. These cases mark the final phase in the commercial evolution of the Internet system, as the compromises negotiated between the government and corporations stabilize. Despite internal conflicts and rivalries, there is fundamentally a broad consensus with regard to the private sphere and the need for unidirectional point-to-point communication, making it easier to assess the cost and efficiency of the system. The WSIS debates illustrate this phase, centred as they were on functionality, expertise and services arranged within a framework of a minimum number of predetermined regulations. The double aim is to eliminate all temptation to provide free services and to control competition. In the near future, it will probably lead to the creation of a double speed Internet, that will not help bridge the digital divide; the *information provider* model will tend to dominate, maybe in co-presence with other classic media models, while the *open source* model risks being marginalized on the fringes.

Social uses of models and functions: convergence as an unwelcome cognitive aim and output

The considerable slippage in the models and functions of the matrix (see figures 2 and 3) shows both the considerable adaptation of media regulations and also their constant adjustment to scale, context and to the three-phase cycle. These models and functions can be in competition and in synergy, can emerge and recede in time and are not altogether mutually exclusive. For each country, one could imagine a matrix of options, allowing for legislation and yet also user-interaction. In a socio-cognitive view, this matrix could be seen as a rule-evolving system, with a function-switching capacity. As a hybrid platform, the Internet offers a polycentric model of the media that allows each set of functions to cohabit and to migrate in different areas of its cyberspace.

This evolution does not plead in favour of convergence. It can be compared to the evolution of paper, a technology of convergence for a considerable time in history. The miscellaneous social uses of paper show that the problem is not really technological convergence. Paper has been the con-

vergent medium of the past but its functional uses have been very diverse, and even divergent: can the written press be compared to the novel? One satisfied the surveillance function, the other the entertainment function.

So the deterministic evolutionary inevitability of the Internet, the “techy” myth, is a fallacy. Even when convergence exists, as a facilitator of exchanges, it doesn’t result in a global panacea. Digital convergence may facilitate universal access to contents and their modification by the end users, but the functions of media in society are not likely to be altered: surveillance of the environment, correlation and transmission still remain core values that give media their legitimacy and their political validity. New functions are emerging to manage the new complexity of multilayered levels of exchanges, like interactivity and data-mining, but they will not eradicate the prior ones.

What history opposes to myth is the piling up of technologies, as the computer has not eradicated the book yet. They have a democratic complementarity that allows users to play one against the other: residual and/or emerging technologies are used by minorities that would otherwise not have access to hegemonic mainstream media. The underestimated resilience of radio and its important use among young people or, on a different scale, the emergence of local television channels, are witness to the vitality of cultural diversity in regions like Catalonia in Spain or Wales in the United Kingdom. One technology doesn’t chase out another, it encases it within a larger range of social uses. This also corresponds to the vested interests of the market and of the industrial logic: working from a perspective of programmed obsolescence, corporations need to maintain a variety of supplies in constant competition.

In other words, the capacity for convergence should be seen in the social acts of people using the multimedia platform provided by the Internet, not in the technology itself. It means considering convergence as practice rather than a technical determinism and fatality. Multimodality is key. It is important to see if people make a distinction between online and offline activities, and if so, to what purpose and how. In terms of diversity, it means that technical convergence doesn’t really imply cultural convergence, especially when specific interactions are at stake. For instance, radio can be listened to on the Internet but also via the traditional over-the-air sets. Moving from Internet chat to telephone contact is another example, as people may want to check the authenticity of the person behind the screen text. Generally, users tend to set up a variety of accounts for their various activities online: they have different lists, they have favourites, etc. They tend to establish separate tracks according to their temporary needs. Convergence is then closely connected to the users’ situations and their choices.

So the idea of convergence doesn’t really map the variety of activities possible in online and offline contexts; when it does, it is not in a stable way, which sort of defeats the purpose of convergence (the idea that one can have a universal do-it-all, stable tool). Technical change has to be compounded by users’ assimilation of new media in their everyday life, not in

virtuality only. Both producers and users of the technologies seem to have an interest in so doing, as they reprogram and reconfigure their tools and apply them to everyday-life problems.

Recent initiatives, such as the BBC's Creative Archive Project, which allows the British public to download and modify digital clips of BBC television, illustrate the roads that may be taken: the data-mining of archival repositories being done using an *open source* model. This test, if successful, would confirm that public value can remain territorialized, over-the-air as well as over-the-net, public broadcasters contributing to map digital territory on real territory. With this move, traditional public service media may extend their archival and patrimonial capacities, as they have been able to draw from a rich fund of past and timeless programming that new generations can discover and enjoy. So the Internet can become a platform for access to past broadcasts, a connection medium to make a lot of publicly funded material available on the web. Publishing and educational capabilities can be developed on-line, with materials produced off-line that can be given more visibility and availability for all. A similar trend can be seen in other countries that explore the same path, like NHK in Japan, CBC in Canada, and INA (Institut National de l'Audiovisuel) in France. The hybridization of models, between the *public service* and the *open source* in this particular case, points to many local variations in the new media matrix.

Convergence and the post-WSIS process

WSIS has turned into a protracted process, with the deadlines for implementation of the various action lines aligned with the Millennium Goals, in 2015. Different constituencies are recognized, but they have still to stake out their territory, their legitimacy and their grounds for accountability. The inclusion of the private sector and civil society, i.e. non-governmental stakeholders, is not yet completely integrated in the mechanism. It indicates that a trilateral model of global governance is still in the making as co-regulatory policies are difficult to envision within a framework of national sovereignties. The nation-states, under pressure from operators and corporations, are mostly concerned with technical standards. Policy-makers find it difficult to adopt a bottom-up strategy that would relinquish part of their power to a larger number of stakeholders.

The compromise solution for governance seems to be the inclusion of a fourth actor, Inter-Governmental Organizations (IGOs). They each can represent one dimension of the matrix of media models. ICANN, with its Governmental Advisory Committee, the consultative body of nation-states that is part of its framework, seems to relate to a *public trustee* model, with surveillance as its main function. ITU represents the technical interests of telcos: it is controlled by an industry-government partnership. With its focus on trans-action and economic development, it relates most directly to the *common*

carrier model. UNESCO provides a broader, cognitive view on culture; it has adopted the open code software, which brings it close to the *open source* and *creative commons* model, all the more so if it is combined with the *cultural diversity* model, whose regulation is under its mandate. So if ICANN and ITU tend to be strictly technical, UNESCO provides for a cultural alternative and counterweight.

None of the IGOs can represent civil society's plea for a more decentralized solution. ICANN and ITU seem too much tilted towards private commercial targets and corporate interests. UNESCO seems too much the realm of nation-states sovereignty, with some bottom-up capacity, that tries to accommodate the synergy developed by NGOs around the world.

So the functions of the different stakeholders will be defined as task-specific and they may remain narrow and technical, giving an edge to the private sector and the telcos. A larger understanding of ICTs and of the Information Society will have to emanate from other processes, more political and legal than technical. The outcome will probably offer a combination of solutions, especially if combined with the Cultural Diversity Treaty, leading to an awkward exemplification of the collaborative nature of human activity.

At the global level, it seems that the tripartite, multi-stakeholder approach will have difficulties in getting under way, as there is at the moment little consensus about the stakes, the functions, the respective needs of the various actors. The governments speak with many voices, though they are in agreement about their sovereignty as states; the private and commercial entities are also divided, though they share a liberal view of the marketplace; civil society hasn't reached a consensus either, though it pleads for an open program and process, guided by transparency and a bottom-up approach.

But the process itself is making a creative use of collective visions; alternative paradigms and metaphors for action are being circulated widely. Without intending to, the WSIS process is functioning as a *public forum*, the largest consultation off-line and on-line that has yet been undertaken on the management of media resources. This in itself is a positive sign that a measure of change is under way.

Notes

1. For a detailed description of these models, see Divina Frau-Meigs 2003.
2. See in the US, the "Communication Opportunity, Promotion and Enhancement Act", voted June 8th 2006, <http://wearetheweb.org>
3. *Open archives initiative*, available at: <http://www.openarchives.org>; see also open cognition platform, available at: <http://www.itu.int/wsis/documents>.
4. See *Report from the Working Group on Internet Governance*, August 2005, available at: <http://www.itu.int/wsis/documents/>
5. See the analysis by Mayer-Schenberger and Ziewitz 2006; see also Benhamou 2006.
6. See sections 72 and 73 of the *Tunis Agenda*, available at: <http://www.itu.int/wsis/index.html>

7. In English, French, Spanish and Catalan, available at www.audiovisualcat.net; see also Frau-Meigs 2007.
8. http://portal.unesco.org/fr/ev.php-URL_ID=17721&URL_DO=DO_TOPIC&URL_SEC
9. http://portal.unesco.co.org/culture/ich_convention/fr
10. See "Joint Statement of the Cultural Diversity Caucus / Indigenous Caucus of the Civil Society" WSIS, PrepCom3, Sub-Committee B, 27 September 2005, Geneva.
11. Article 52 of *Declaration of Principles*, under section 8 "Cultural diversity and identity, linguistic diversity and local content", document WSIS-03/GENEVA/DOC/4-E, 12 December 2003, available at www.itu.int/wsis/index.html.
12. See discussion by Divina Frau-meigs in IGF panel on Cultural diversity, November 1st 2006, http://www.intgovforum.org/wksshop_program3.htm

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Part Two
Convergence in Media Institutions

Realizing Cross Media

Anja Bechmann Petersen

At present, media organizations worldwide are challenged by possibilities in digital communication and production (Pavlik & McIntosh 2004). Convergence was described by economist Ithiel de Sola Pool as the 'convergence of modes' (Pool 1983). He described how technology brought all modes of communication into one grand system (Pool 1983). This grand system was digital. In the same way, in 1979 Nicholas Negroponte predicted a total overlap of the broadcast and motion picture industry, the computer industry and the print and publishing industry by the year 2000 (Gordon 2003). Contrary to these assumptions, cultural theorist Henry Jenkins is critical about the idea of 'one black box' (Jenkins 2001). In his comment *Convergence? I diverge*, he distances himself from the idea of convergence, arguing for a state of divergence: "...media will be everywhere, and we will use all kinds of media in relation to one another" (Jenkins 2001:93). On one hand there seems to be a "movement directed towards or terminating in the same point" (convergence according to Oxford English Dictionary), and on the other hand there seems to be a "moving off in different directions from the same point" (divergence according to Oxford English Dictionary). This same starting or vantage point is assumed to be digitalization in general and the Internet as digital network in particular (Jenkins 2001; Pool 1983; Pavlik 2001; Pavlik & McIntosh 2004; Gordon 2003).

Moving from a macro- to a micro-level, this chapter argues that the Internet plays a much more nuanced role in the actual media organizations than mere starting or vantage point for the specific productions taking place. The contemporary media scene is dominated by cross media and the starting or vantage point is not digital media or the Internet but, to a large extent, traditional media. Accordingly, the overlap of broadcast, computer, and printing industry is far from a reality and the older media platforms still exist side-by-side with new Internet platforms. This diffusion of media (Bechmann Petersen 2006) or co-existence of platforms still challenges the media organizations. Among others, the media organizations studied here have re-defined their communication strategies on different singular media platforms,

and they have changed their organization physically as well as structurally. However, cross media is a complex matter. The aim of this chapter is to examine the roles of the Internet as digital cross media platform in order to suggest to what extent the cross media potential is realized. This requires a short definition of what cross media means.

Cross media productions

The field of cross media is related to many similar or competing concepts such as transmedia (Jenkins 2003), multiple platforms (Jeffery-Poulter 2003), hybrid media (Boumans 2004), intermedia (Higgins 1966; Rajewsky 2002), and divergence (Jenkins 2001). This lack of homogeneity with regard to both concepts and meanings calls for a clarification of cross media in this chapter. Here, the term will be used to describe the communication of an overall story, production, or event, using a coordinated combination of platforms. Platforms are understood as physical devices such as TV-sets, mobile phones, newspapers and radio-receivers. The degree of coordination and cross-over between the platforms varies greatly, as shown by the cases studied here. Cross media can be conceptualized from an outward as well as an inward perspective: outward towards the users, and inward within the media organizations themselves. Cross media towards the users (the outward perspective) includes focuses on creating cross promotion (Dailey, Demo & Spiellman 2005) and cross media storylines (Jenkins 2003; Dena 2004). Cross media productions employ several media platforms in which each is involved in a communicative division of labour with an expected added value to the users, or increased user attention (shares) and retention strategies. Within the media organizations themselves (the inward perspective) cross media involves focusing on the cross media facilities in the productions. This includes possibilities of cooperation between platform employees: bringing them physically closer together, sharing knowledge, research and stories, planning cross media initiatives, and incorporating a cross media routine to enhance the efficiency of the organizations. Both tendencies – outward and inward – are termed cross media, and are fundamentally interrelated: Cross media communication is facilitated or decelerated by production processes.

The Internet

The role of the Internet as a focal point is based on the great expectations for this particular medium in convergence and divergence theories and practices. However, it requires a short definition of what the Internet means in the contemporary cross media landscape. Internet theorists such as Manuel

Castells (2001), James Slevin (2000) and Janet Abbate (1999) describe the Internet as primarily a network and secondarily as different applications (such as www). Castells states: "the Internet is the technological basis for the organizational form of the Information Age: the network" (2001:1). This digital network is said to inherit fixed essential characteristics of the computer, such as logics of remediation (Bolter & Grusin 1999:45), the procedural, the participatory, the spatial, and the encyclopaedic (Murray 1997), the trends of modularity, variability, automation and transcoding (Manovich 2000). In the contemporary media scene the Internet is not only network and applications but also products and platforms (Bechmann Petersen 2006). Media platforms are the physical devices for use and/or production. Platforms can supplement each other in relation to different user contexts and productions. The obvious Internet platforms are the stationary PC and the portable laptop. However, mobile phones and Personal Media Players can also act as Internet-related platforms when they communicate with the Internet network, for instance when downloading material from web servers. The media products on the other hand are the specific 'media outputs' of the productions, independent of on which platform they are distributed. Media products can also be embedded within each other, for instance TV programmes as podcasts or as a part of a website. In this sense theorists speak of media convergence on the level of products because in digital media they can be embedded within each other. However, when interpreting media as platforms, the Internet-related platforms still co-exist with platforms outside the Internet (TV-sets, printed newspapers and radio-receivers) in cross media communication, which is the object of this study. In this chapter the term 'the Internet' encompasses network, products and platforms. Accordingly, a distinction between the three will be made.

Current studies

Leaving little room for observing and describing variation, creation and interpretation in abstract theories on media environments in the media ecological tradition (Nystrom 1973), the study presented here will focus on the agent's point of view and how the employees and organizations are forming the media when analyzing the role(s) of the Internet in cross media productions. Swiss media researcher Lucy Küng-Shankleman (2000) has studied the strategic options and organizational culture of CNN and the BBC as they confront the digital challenge, the changing technological landscape and consumer tastes. Even though both media organizations are broadcasting industries, they handle the challenge very differently according to the history of the organizations. Australian sociologist Timothy Marjoribanks (2003) has made similar studies. However, his studies were conducted at the newspaper-oriented multinational News Corporation. He points to the agent's worldview, the history of the or-

ganization, and the national/global context as significant elements in understanding the digital challenges and transformations.

In the particular context of this chapter, the studies of Küng-Shankleman and Marjoribanks are interesting because they analyze the production processes of broadcasting and newspaper industries, respectively, in the challenge of the digital landscape, including the Internet. They point to the agents' worldviews and the history of organizations as important factors in the transformation of productions routines, as this study will also show. However, their studies concentrate on strategic options and execution, and do not aim at an analysis of the shifting role(s) of the Internet in the organizations. Communications theorist Pablo Boczkowski (2004) shares this interest. He has made empirical observational studies of three online newspapers – one having reporters from the newspaper doing the online version, a second having its own reporters, and a third using user-generated content in their production. The study shows that the established understanding of Internet potential reported by media theorists (for example Bolter & Grusin 1999) is challenged by these different types of reporters, resulting in totally different ways of using the digital material of online newspapers. The culture of the different reporters and organizational placement are the main factors to be considered when examining the use of the Internet in specific productions. Boczkowski's focus is solely on the online newspaper, and how the relationship between the reporters and the organization results in shifting online formats. He does not look at the Internet in relation to the printed newspaper, which is the focus of this study.

Case-sampling and methods

Inspired by Boczkowski's ability to put theories of the Internet into a more nuanced, agency-driven, perspective (Cottle 2003), this study shifts the focus to the Internet as a platform in collaboration with not only the printed newspaper, but with two to four other media platforms. This provides an opportunity to study the role(s) of the Internet in very diverse media production contexts. Prompted by Küng-Shankleman's and Marjoribanks' studies in broadcasting and newspaper industries, this study will bridge the two types of organizations by studying cross media productions in both. However, this increase in both the number of media platforms and the types of organization calls for the need to delimit the study considerably. Accordingly, two specific productions were studied. The first was the coverage of a premier league soccer match by a regional news production company called Nordjyske Medier, and the second was a weekly youth entertainment production in the Danish Broadcasting Corporation, DR. The case-sample (Hammersley & Atkinson 1995) aimed at choosing very different productions in parameters such as:

Figure 1. Parameters for the case-sample of the study

Parameters	Nordjyske Medier	DR
Economical and political conditions	Commercial	Public Service
Content	Sports	Youth Entertainment
Employees	Reporters	Different backgrounds
History	Newspaper	Radio/TV
Platform-constellations	Newspaper, TV, radio, mobile phone and PC	TV, mobile phone and PC
Market	Regional	National

Choosing radically different media organizations and content types was motivated by the need to have as broad a selection of qualitatively material as possible. This gave a potential background for discovering different kinds of Internet uses and cross media realizations. Finding similarities in the two radically different companies and content types would make the cross media realizations even more evident. The choice of the specific cases of Nordjyske Medier and DR is due to the fact that Nordjyske Medier was the first company to physically meet the challenges of cross media in Europe, and DR was in the middle of doing so when the study was conducted. The choice of sports and youth entertainment was due to the very different deadlines (live vs. pre-produced) and production routines. The empirical methods used include observation studies of daily work and the development of cross media productions, interviews with production employees and management, text-analysis of cross media productions and internal/external writings on cross media. The different approaches are used to place the observations in individual, organizational and historical contexts. However, the methods used for the two productions differ significantly according to the varying organization and production types. For example, in the study interviews and a questionnaire were used to uncover the past development and the general tendencies at Nordjyske Medier because they had very little written material, whereas the organizational culture at DR was self-reflecting, and material directed at the public and politicians was used. Nordjyske Medier's coverage of the premier league soccer match was analyzed in terms of registration and text-analysis of the actual end-products in all platforms, and by observation studies and informal conversations with the reporters before, during and after the game. Similar registration and text-analyses were made at DR. However, in contrast to the soccer match, the youth entertainment concept had a weekly routine concentrated around the TV programme, and an extensive planning and experimentation period. For this reason, the observations at DR were done over a one year period, with two intense observation periods: one lasting a month during the development of the concept, and one lasting one week at the end of the year of studying the actual production routine. As it was not possible to follow the whole process over the entire year, interviews were held with several employees from

the production unit to clarify understanding, experiences, and developments in the production.

Introduction to Nordjyske Medier

Nordjyske Medier is a commercial regional news production company which has a market share of over 90% in northern Denmark. The company has a history of newspaper production, but has recently expanded or merged with other media platforms, including a free newspaper, two radio channels, a 24-hour news TV-channel, mobile phone services, Tele-text, an online newspaper, and other web services. In September 2003, the production for all platforms was physically united in the former newspaper building now modernized for the multiple platform production. According to management, their decision to transform the newspaper into a multiple platform company was due primarily to decreasing newspaper sales. The reporters were forced to think not only in terms of newspapers, but of several platforms – in the management's own words, this meant a focus on '*stories instead of channels*'. The management introduced new physical facilities with the capability of producing for all media in the different content groups (for example sports), and the centre of the building was arranged to contain a so-called 'Super-Desk', where each media platform was represented by a media editor. The production unit studied was the sports group, and the specific production, the coverage of a premier league soccer match between the teams AaB and OB. The production unit is equipped with different recording facilities for the production on all platforms, but the individual reporters were hired for single platforms. The reporters are not obliged to produce for platforms other than their own, due primarily to a strong union. Additionally, of all the reporters, only two have the ability to produce for all media.

Introduction to DR

DR (Danish Broadcasting Corporation) is a public service institution which is divided into production units responsible for the different productions, and three chief editorial staffs, responsible for Interactive media, TV, and Radio respectively. The chief editorial staffs are responsible for filling out the platforms and requesting productions from the production units, whereas the production units make production bids for the chief editorial staffs. The request is a platform specific routine. Recently, DR has hired a project manager to promote cross media between the different chief editors, but the production units are unacquainted with the project manager and her role. The production unit studied was DR-Ung (DR-Youth), and the specific production – their first experiment with user-generated content through mobile phones and other equipment with digital cameras. The production was first called *Blokken*

and later changed into *SPAM*. The original idea was that the users would send in material from their daily lives from camera mobile phones or digital cameras. The hosts acted as guides for the user-content under the slogan '*you deliver, we present*'. The users had the potential to film incidents that were not otherwise accessible to a camera-crew. This, however, did not work very well. The users were not interested in contributing to the production, and the material received was of very poor quality in to both resolution and storyline. DR changed the production to *SPAM*, which has similarities to home-video shows. The viewers can now send in funny, strange or wild content (not necessarily made by them) transmitted on their mobile phones or through the Internet (hence the name *SPAM*). A hit-list is added to ensure that only the most interesting movies are shown on the TV programme.

Results and discussion

The presentation of results from the study will focus on the role(s) of the Internet the perspectives of outward and inward cross media. The outward perspective is instantiated by a cross media circuit (Bechmann Petersen 2007). The cross media circuit registers the time and content/functionality of each platform, and shows the possible use of the productions. The inward perspective is instantiated by both viewing the Internet as a production tool and as a part of the production routine and organizational culture in general. This will be elaborated on later.

The Internet in the cross media circuit: versioning

The studies of the soccer match and *SPAM* show that the roles of the Internet (understood as website-products on the PC or mobile phone platform) are outwardly very different from one another. From the registration and text-analysis of the actual end-products in all platforms, a *cross media circuit* can be made to illustrate these differences.

The coverage of the premier league match between AaB-OB can be summarized as in Figure 2.

Even though the management at Nordjyske Medier has a strong idea of publishing on all platforms, the sports group could not describe any strategic connection between the content of the different platforms and the users. As many products (versions) as possible were made before, during, and after the game, but there was no cross promotion (Dailey, Demo & Spiellman 2005) between the different platforms. From an outward point of view, the user is evidently not supposed to cross between the different platforms, but to use only the platform which is relevant to him or her. This conclusion is backed up by an interview with the management: "Because of the commercial inter-

Figure 2. The media circuit of the Premier League soccer match

1. A newspaper story was published the day before the match in the sports section.
2. The same story was versioned for Tele-text and online newspaper, published the night before the match.
3. In the morning of the match day, a radio lead-up with the coach was broadcast.
4. The sound file was also versioned for the story in the online newspaper shortly after.
5. Just before the match, a TV-feature, containing a short interview with the players, was shown.
6. Radio transmitted the match live.
7. Just after the match, an SMS-alert was sent to subscribers with the result.
8. A TV-feature was shown on the 5 o'clock news with comments from players.
9. A short written version of the match was published in the online newspaper and Tele-text (the same version replacing the existing one) right after the TV-feature and was linked to previous stories on the local team.
10. The day after the match, a full-page in the newspaper sports section covered the match with background information, remarks and news material from the two teams pointing to future matches.

ests [advertisements] of the company the ideal strategy is not to have the user crossing platforms but to target the users on different platforms. In this way we can potentially target more users". An exception from the lack of cross-over between the platforms is the activation of SMS-alerts: the service can only be activated through the online newspaper. In the cross media circuit, the newspaper functions as lead-in and follow-up, with background statistics, longer stories, and additional material. The radio functions as both lead-in and live platform, as radio primetime is in the morning. The 24-hour TV-channel functions as a 'meeting' with the players before and after the game, with commentary on the match. (Nordjyske Medier does not have the TV-rights for the match). The mobile phone, or SMS-alert, functions as the fast and obtrusive ('push') platform. The Tele-text product functions as a secondary product, only versioning from the newspaper and online newspaper. Last but not least, the role(s) of the online newspaper is more complex. First of all, the versioning from radio and newspaper places it as a secondary product, but at the same time it functions as an archive, linking to different sound files and material on previous coverage of premier league matches. The 24-hour TV-channel product can also be viewed live from the website, but previous programmes cannot be accessed. Therefore, it has both an archival and a live function, corresponding to Manovich's (2000) notion of variability. Furthermore, the online newspaper demonstrates that media products can be transported or 'versioned' for the Internet, for instance through Web-TV, sound files, and online newspaper stories. On the other hand, the notion of participation (Murray 1997) is very limited. The coverage of the premier league match does not provide any return opportunities for the users. It consists only of communication from Nordjyske Medier, and the company does not need or request any input from the user to execute the coverage. With regard to the outward-directed cross

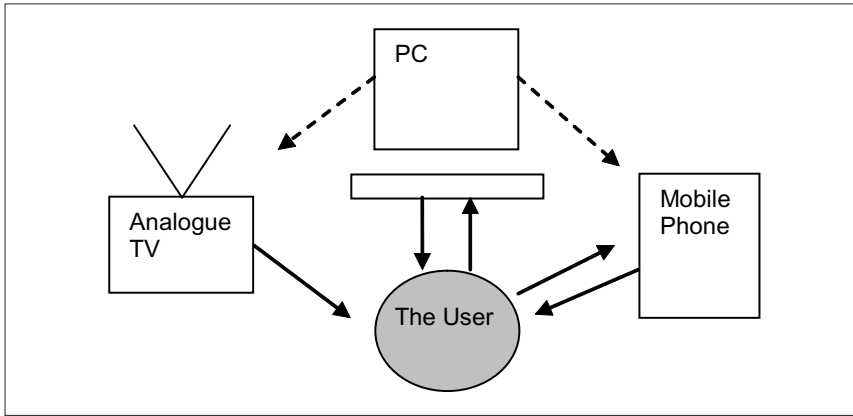
media, this case study is an example of the Internet being the object of versioning from newspaper, radio and TV. User participation is not prioritized, but the Internet has the role of being available with all products at all times (apart from WebTV which is only transmitted live). The different platforms are not interconnected in any way through cross promotion or through strategically planned storytelling. However, the different products on different platforms supplement each other according to different user-time, user-contexts, and target groups. The idea of 'one black box' is supported by the versioning on the Internet and the fact that the Internet incorporates all products and some platforms (such as PC and mobile phones). However, the idea is made less compelling by the fact that these platforms still co-exist with platforms outside the Internet, such as newspapers, analogue radio, and TV. The diffusion of media platforms gives Nordjyske Medier the opportunity to target more users.

The Internet in the cross media circuit: participation

According to the cross media circuit, the analysis of DR's *SPAM* shows other roles of the Internet. In *SPAM*, the explicit timeline from the soccer match is not present. However, there is a rhythm to the products themselves. The TV programme, containing primarily a presentation of the *SPAM* hit-list decided by the users, is sent once a week. The website is available and constantly updated, providing the opportunity to upload new movies, vote, view older movies, comment on *SPAM* movies, share information in a community, watch past TV programmes, and download *SPAM* movies for the mobile phone. The mobile phone functions as a user-controlled production and viewing platform. The user can record and download movies to the mobile phone at any time, and choose the movies he/she wants to watch. Accordingly, the use of this platform is not time dependent either, but controlled by the user. DR, as a public service organization, and DR-Ung, with a specific target group, are primarily interested in added user-value (according to interviews with the project manager of *SPAM*). The interest lies in showing the users the opportunities in cross media production by using the same hosts, graphics, explicit references (written, verbal, and visual cross promotion) to the other platforms, and strategically providing each platform with different roles:

Accordingly the TV set functions as a 'window' for user-voted content, and the mobile phone functions as a potential production unit and viewing device that enables the selection of one's favourite movies. Last but not least, the website has a central position as an archive of *SPAM* movies and TV programmes, a production channel for the users (uploading new *SPAM* movies, voting and share comments), and a viewing facility (individual *SPAM* movies and TV programmes). In contrast to the premier league match coverage, the website here has a fundamental participatory (Murray 1997) function, and extends the TV programme by retaining the users in the '*SPAM*-universe'. The website additionally serves as return channels for the TV platform, which does

Figure 3. The media circuit of SPAM, showing the central role of the Internet as user participation tool



Note: The arrows indicate the information flow.

not support this functionality. The website also plays a fundamental part in the very concept of the production. If the users did not send the *SPAM* movies to DR-Ung, and vote through the website, *SPAM* could not exist. As articulated by the project manager: “The website can do without TV but TV will die without the website”. In contrast to the soccer match coverage, this case study is an example of the Internet (PC) playing the central role of the user-generated production. The Internet is in focus as storyline (*SPAM* movies across platforms), as product (website), as platforms (PC and mobile phones), and as network (being able to send and receive content, and thereby expand the ‘editorial staff’). Both studies point to content, and to economic and political conditions as being possible influential factors on the outward role(s) of the Internet in cross media. The different types of content provide disparate bases for the strategic planning of the roles of the platforms. Additionally, the target groups for each type of content use different platforms. As for economic and political conditions, the case studies provide examples of ways in which the commercial company prioritizes the broad reach of target groups, whereas the public service corporation aims for added user-value and retention strategies.

The Internet and production routines: hierarchy at Nordjyske Medier

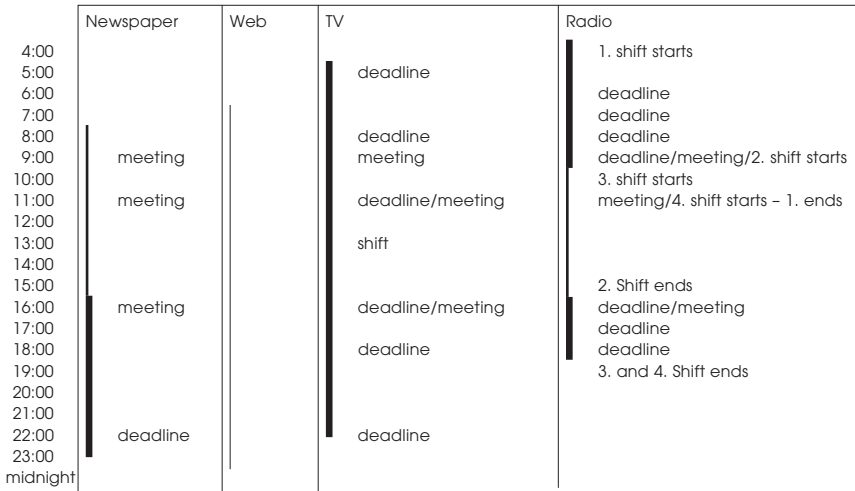
The inward roles of the Internet in cross media productions are surprisingly not studied in the few major international contributions to the field (Küng-Shankleman 2000; Marjoribanks 2003; Boczkowski 2004; Dailey, Demo & Spiellman 2005), but has recently attracted interest, particularly in Nordic

studies (Erdal 2007; Krumsvik 2007; Puijk 2007). As a communicative strategy, cross media also implies great challenges within the media organization, and the process of cross media production has not been without obstacles. Placing formerly separate production environments beside one another, integrating them with new media, and urging them to cooperate on shared productions – without knowing exactly what the end product looks like or how to get there – is a demanding task. Among other things, the production crew has to see their production routines in a new light. At least two perspectives can be used when studying the Internet in cross media productions from the inside. First, the Internet can be studied as a tool (especially as network) for the production of cross media products. Second, the Internet can be studied as the production routines surrounding production for specific platforms, for instance the PC in comparison with the other platforms.

Nordjyske Medier's coverage of the premier league match shows extensive use of the Internet network and products as tools in the production process. They use specific websites prior to the game to get an overview of statistics on the participating teams, and they use the network to send in their material from the stadium to the editorial building. When it comes to the Internet as a product and a platform in the production routines, the conclusions are less encouraging. In the specific match studied, the reporters do not produce for the web because, as stated by the newspaper reporter at the stadium: "it is not a part of my contract". The reporter who writes small updates for the web is not present at the stadium; he pulls the stories from live radio and TV transmissions. Taking a broader perspective on the organization from these observations, the neglect of the Internet in the production routine is evident. In a questionnaire (Spring 2005), the reporters at Nordjyske Medier, were asked: "Which media do you produce for?" 78% responded that they always produced for the newspaper, whereas 25% never produced for the Internet. One reporter from the Super Desk articulated it very precisely: "There is a problem with thinking of the web and the free newspaper at the same level as the other media." The study shows a strong identity connected to specific products. One explanation is that most of the reporters came from newspaper production, and accordingly feel identified with it. A Radio station was bought, and with it came radio reporters whose identities are based in radio products. TV reporters were hired because the competences of TV production were not available in the company. One reporter with a history in web production was hired to establish the production for the Internet, and student assistants were hired to version stories and update the product. The reason for this was that the reporters from the different platforms were also to produce for the web in their daily routine. However, because of increased skill and work pressure on the reporters (Aaløkke et al. 2005), union restrictions, and different routines, this is practicable, but not realizable. As a newspaper reporter states: "The rhythms of the media obviously do not supplement each other very well". This statement is supported by the fact that newspapers have a deadline once every

24 hours in the evening, whereas the web has a persistent, round the clock deadline. Therefore, the web products may interfere markedly in the production routine of the newspaper. Through the registration of the activity at the central editorial desk (the Super Desk) where all platform-responsible editors are seated, the low but constant activity for the web is manifest:

Figure 4. Summary of a daily workflow of the media, and hence the media editors, based on observations



Note: The thickness of the line indicates intensity in activity.

In counter-argument, the study does not show that the platforms, products or networks have rhythms *per se*. The rhythms are constructed by the work of the reporters. Accordingly, the production routines can be divided into media-specific routines and cross media routines. Media-specific routines support the idea of conflict between the different products and platforms, because the perspective enhances the focus on individual 'closed' platforms. An example is the conflict between web and newspaper routines. Cross media routines, on the other hand, support the idea of multiple 'open' platforms. Examples of cross media routines are neither conscious nor explicitly expressed by the reporters, but observations show that, for instance, the radio reporter at the stadium does interviews for the TV-channel as well, holding two microphones and acting out two different interviewing roles. The versioning done for the website and Tele-text is another example, even though the employees interviewed do not consider versioning as proper and satisfactory cross media. A potential cross media routine is also already present: The newspaper reporter sends in factual data on the match just before it has ended. This data could, without any obstacles, be published on the web. The writing of web summary from the live radio transmission could also be

seen as a cross media routine, even though it is not the same reporter making the different products. Even though there is an evident hierarchy in the media, with newspapers as first priority, TV as second, radio as third, and web/mobile phone as fourth, the cross media routines indicate a potential for incorporating the routines of the products for different platforms in the daily work processes.

The Internet and production routines: hierarchy at DR

In the production of *SPAM* at DR, the Internet, from the inward cross media perspective, has a more central position. In *SPAM*, the inward and outward perspectives overlap because the editorial staff includes the users as content producers. As a production tool, the Internet is used by the co-producing unit: the users. For the most part, the stories are found on the Internet on different websites, and shared by email or by mobile phones between users (sometimes also recorded by the users). The users collect the movies and send them to DR via the *SPAM* website. The Internet network, product (website), and platforms (PC and mobile phones) are central production tools for the users, and the Internet network and platforms are central to DR-Ung, because they are the backbone in the concept of user-generated content. Despite this central role as production tool, the role of the Internet in production routines is more vague. According to interviews with the production team members, *SPAM* was primarily: “a TV production with the intention of using the existing SKUM-community as the foundation of the production”. The request from the editorial staff of TV was to make a TV programme for young people. DR-Ung, though, wanted the Internet (both website and mobile phone movies) to be the central element and foundation of the production, including the website and mobile phone as production and return channels for TV: “as a public service organization we wanted to show what we can do”. Because the editorial staff of TV wanted *SPAM* primarily to be a TV programme, website and mobile phone employees adapted their wishes and routines to the TV routines. For example, ideas were discarded because they were not good TV, and meetings were held when problems with TV arose. According to an internal user-evaluation report, the website was a success but not the TV programme, despite the internal focus on TV. Studying this hierarchy of platforms and products on a broader organizational level shows evident media-specific (especially TV) routines. As stated earlier, the editorial staff of interactive media is placed under the editorial staff of TV. The reason for this is that management views interactive media not as stand-alone media in themselves, but primarily as supporting media for TV (according to an interview with one of the strategic managers). Accordingly, when requesting productions for the platforms, the Internet is only requested as linked to TV or radio. Only an insignificant part of the budget of interactive media is spent on non-programme related

initiatives (mostly developments). This means that, even though the production unit wanted to use the platforms on their own terms, they had to focus on TV or radio in order to receive funding. The controlling position of TV is even more significant, because the budget is substantially higher than the radio budget. Another parameter that enhances the media-specific routines is the absence of cross media evaluation: the evaluation primarily takes place for each individual platform, rather than the overall cross media production. This is the result of there being fairly separated editorial staffs, which are each mainly responsible for one platform. On the other hand, some cross media routines exist in DR. In the production team for *SPAM*, the average age is around 25, which gives a natural orientation towards experimenting with new platforms and different production ideas. For example, the TV hosts are interested in blogging on the website, and record small features just for the web. On a broader level, the organization (as stated before) has tried to establish a cross media project manager who is supposed to help the editorial staffs coordinate the requests for the production unit, so that major cross media initiatives can be launched. DR is also moving to new buildings to “enhance the co-operation across media platforms and organizational boarders” (DR’s website). In DR, the media specific routines primarily exist at the managerial level, whereas the media specific routines at Nordjyske Medier can be found predominantly in the content groups. The Internet plays a subordinate role in the production routine in both organizations, but a major role as production tool.

Conclusion

Even though cross media is one of the hot topics in contemporary media studies at the moment, and digital technologies make it possible, the culture of newspaper, TV and radio do not meet the expectations of interplay between media platforms at all levels. The cases studied in this chapter show a strikingly undermining low priority and status for Internet platforms in the production routines (inward perspective). In the public service institution, this occurred at the managerial level, whereas in the commercial news company it was most evident in the production unit. The similarly subordinate role of the Internet within the media organizations, in the two otherwise different cases, points to the organizations’ history, in newspaper & TV/Radio and traditional production routines, being dominant factors in this connection. Faced with the constraints of practical limits, such as time pressure, media skills and budgeting, the employees favour their ‘own platform’; the leap from media routines to cross media routines is still not realized. Despite this tendency, the Internet as a production tool played a central role in both cases. Looking at cross media from an outward perspective, the cases studied show two very distinct functions of the Internet. In the first case the website plays

only a small part within the overall platform-palette. It serves as an object of versioning for other, more central, platforms such as the printed newspaper and the analogue radio and TV. There is no cross reference to other platforms, and no content is being produced specifically for the website. In the second case the Internet has the central role of being the participatory platform for creating content and being the centre of navigation in the cross media platform-palette. This, on one hand, shows the flexibility of the Internet in conjunction with other platforms. On the other hand it points to the fact that cross media realization spans from pure copy-paste to strategically coordinated communication, depending on the ability of the media organization to realize that cross media is not about technology but being able to transgress traditional routines.

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Negotiating Convergence in News Production

Ivar John Erdal

During the past decade, fundamental changes have taken place in broadcast news journalism. Seen from the outside, the news output of many broadcasters has expanded rapidly since the early 1990s, and covers a wide range of media platforms from television and radio to tele-text, web and mobile phones. If we take a look at the inside, many broadcasters have undergone changes in the organization and practices of production. This is perhaps most evident with regard to production for multiple platforms in an integrated media organization.

The present chapter looks at news production for radio, television and web at the Norwegian public service broadcaster NRK, which has gone through convergence-related developments similar to other broadcasting organizations (see e.g. Cottle and Ashton 1999; Duhe et al. 2004; Klinenberg 2005). At the NRK, production for television and radio has been integrated with production for other, 'new' media. Gradually, the platforms of radio and television have converged in terms of organization and production processes, and the web and other platforms such as mobile phones have joined later. This form of journalism have been called "multimedia journalism" (Deuze 2004) or "convergence journalism" (Huang et al. 2004). In the present chapter, I will use the term *cross-media journalism*, emphasizing the relationship between different media platforms.

The technological foundation of crossmedia production is digitization of production. However, digitization is not a requirement for cross-media cooperation. Foreign correspondents of most larger broadcasters have for decades been reporting for both radio and television (Bromley 1997: 342). While digitization does not necessarily lead to cooperation across media platforms, it makes it easier. Digital production infrastructure allows for immediate sharing of information and content, in formats that are ripe for editing and republishing. This inevitably leads to increased focus on the relationship and interplay between different media as platforms, rather than separate entities.

Is it possible to study media production from a convergence point of view without falling into the technologically determinist trap? Does technology

change organisations, or more specifically the way media organisations work? Others have combined media sociology with an attention to the role of (digital) technology in studies of news production (Cottle and Ashton 1999; Boczkowski and Ferris 2005). Along these lines, the present chapter emphasises that the crucial point is that digital technology makes crossmedia co-operation and production *possible*. The main question is *how digital technology is used* in order to change the way news is produced and published.

In the introduction to his book on media industry insiders' views on news production post digitization, Quinn (2006: xiii) argues that the defining characteristic of 'convergence coverage' is that the news event should decide how it should be covered: "If pressed for a simple definition, I would argue that it [convergence journalism] is about doing journalism and telling stories in the most appropriate medium". This is, as I see it, an idealized form of convergence journalism.

However, reality bites. Defining factors of convergence journalism are not only the nature of the news event, but organisational structures, the structure of the newsday consisting of a mixture of news broadcasts with their temporally fixed deadlines, combined with the more flexible publishing forms of the web, the issue of the 'news battle' between news organisations, journalistic resources and so on.

The main topic of strategies and practices of convergence journalism is the relationship between organizational convergence and crossmedia journalism as a management ideal, and the way it is practiced and negotiated on the newsroom floor. Following a complete digitization of the news production, in relation to what is described as "the new reality of television", the NRK yearly report for 2003 emphasises cross-mediality as one of the distinguishing features of NRK's activities, especially related to news (NRK 2004a). What happens when this vision of a new borderless media landscape meets the reality of everyday news journalism? It seems that, while on a strategic level convergence journalism is a promising vision of synergies and journalistic cooperation, it is not as straightforward in practice.

Organizational convergence and increased news output

Over the last decade, news production for different media at the NRK has been integrated into one entity, the 'news division' (NYDI), something that can be described as a process of organizational convergence. During the same period of time, the amount of news produced and broadcast or published, and the number of outlets (media platforms and programs) has increased substantially. Convergence has thus lead the way for divergence.

The NRK's news output has increased significantly from 1995 to 2007, gaining momentum over the last few years. In 1995, the NRK produced and broadcast news for three radio channels, one television channel, and tele-text. News for television, radio and tele-text were produced in separate

departments within the NRK. In 2007, the NRK produces and broadcasts news for four radio channels (one of which is the 24 hour news channel *NRK Always News*), two television channels, tele-text, web, and mobile media. The production of news for different media is integrated in the division NYDI.

In the case of television, the increase is mainly due to an increase in the number of broadcasts, since the news shows have become shorter. A second television channel, NRK2, was launched August 31st, 1996. Along with an increase in the number of channels on different platforms, the number of news broadcasts on radio has gone up. A 24-hour news radio channel has been introduced, redistributing some of the content already made for other channels, but also producing its own content. The NRK has established itself as a major news source on the web, even though it is smaller in reader figures than the largest online newspapers. NRK's news production has been increasingly centralised in an integrated newsroom, a process which started with the creation of a separate division for news and regional services (NYDI) in 1997, and still continues.

In 2000, the board of directors voted for a new, cross-media organisation model, which separates the roles of *broadcaster* and *program production*, also named "The broadcaster model", with the BBC as inspiration. This continues the development towards a cross-media organisational structure that began with the creation of NYDI.

At the time of the fieldwork that is the basis for the present discussion¹, news production was organised around two main desks: *Dagsrevydesken* (television) and *Nyhetsdesken* (radio, web, tele-text and mobile media). Television news is further divided into Dagsrevyen (the main, prime time news programs) and Timesnyhetene (Shorter news updates or bulletins). Nyhetsdesken consists of Dagsnytt (the main, prime time news programs and bulletins), NRK Always News and Web (web, tele-text and mobile media).

Having more programs to serve, more slots to fill, structures the work practices of journalists. This is not caused by digitization as such, but the digitization of journalism increases the possibilities and expectations of cross-media cooperation, in an increasingly structured work environment.

Changes in the field of news journalism, particularly digital production technologies and the integration of previously separate media into more or less converged news organisations, have been followed by divergence on the part of news journalists and editors. Workloads increase as news organisations launch new platforms and programs demanding content. Multiple deadlines create new time constraints, and is followed by concerns about how this all affects the professional competences of journalists, and the perceived quality of journalism. This relationship between convergence and divergence is crucial to understanding crossmedia production.

This study is about journalists' everyday work; routines and practices in news production. News production is a complex process of both enabling and constraining elements which can be both material, discursive, intended, unintended, structurally determined, or culturally mediated.

Organizational Convergence and Media Convergence

Convergence is a concept that is used to talk about a number of developments, that all have in common a process of 'coming together'. The concept covers a wide range of technological, social and cultural processes. Media theorists often describe convergence as a 'melting together' of information systems, telecommunications and media technologies, on the one hand, and social and cultural convergence, on the other.

While the concept of convergence has been central in discussions of digital media developments, it is important to understand how convergence often goes hand in hand with divergence (Fagerjord 2003: 123). Actors, markets and technologies melt together and lay the foundation for divergence in relation to articulation and use of various media formats. As Bolter and Grusin (1999: 225) put it: "Convergence means greater diversity for digital technologies in our culture".

Two forms of convergence are central for studies of news production for multiple media platforms: *organizational convergence* and *media convergence*. In an organizational context, convergence processes merge previously separate entities, both with respect to chains of command and production routines. In this case, the previously separate departments of radio and television news at the NRK have merged with each other as well as with the web, tele-text and mobile media. The basis of media convergence processes is the digitization of production systems, which enables content to travel across media boundaries. Television footage and radio soundbites can be published on the Web, and television sound can effortlessly be used on radio. This needs to be followed by changing practices in news journalism.

Research into convergence journalism is not abundant in media studies. Boczkowski (2004) and Klinenberg (2005) have both studied digital technologies in newsrooms from the viewpoint of print media going digital and producing content for multiple platforms. Others have noted the divergence, or fragmentation, in news journalism following convergence processes, e.g., Klinenberg (2005: 51), who analyzes the interruptions coming from additional tasks and time pressures.

One aspect distinguishing cross-media journalism in a broadcasting organisation from that found in, for example, a newspaper organisation, is the meeting between static and dynamic content: writing and images versus audio and video (Liestøl 1999). Acknowledged, the web efforts of most larger newspapers are not pure republication of the newspaper on the web, and increasingly contains, for example, video. However, while writing and images are still the primary content of most newspaper organisations, in a broadcasting organization, it is audio and video. This seems obvious, but indicates that production involving more than one media platform will be different in the two organisations.

As a theoretical starting point for studying journalists' everyday practices, I look to Giddens' (1984) structuration theory. Giddens considers agents to

be both constrained and enabled by structure. While organisational and other forms of structure inside the newsroom do not determine the actions of journalists, neither do journalists have absolute freedom of action. Giddens' concepts of structuration of action can shed light on the relationship between, on the one hand, structures in the form of organisation of news production for multiple platforms. This covers, for example, to which specific media platforms and programs reporters are expected to deliver content, formal modes of cooperation, deadlines and time pressure.

Giddens (Ibid.: 14) defines structures as "rules and resources, recursively, implicated in the reproduction of social systems". Structure does not necessarily determine the actors' actions, but enables actions over which the actors themselves have influence. This theoretical basis is used to explain how structures like editorial organisation and professional norms relate to journalistic practice.

Methodology

The chapter is based on a qualitative study of news production at the Norwegian public service broadcaster NRK. Methodological inspiration was found in, for example, Schlesinger's (1978), Helland's (1993) and Cottle's (1999) studies of the inner workings of news organizations.

In order to get close to the production processes, I combined field observation and qualitative interviews. The field observation was carried out over a period of two weeks. During this time, I followed the daily work, both as it took place at the different desks and following single reporters on assignments, as well as attending editorial meetings. Open and semistructured interviews with reporters and editors on all levels were carried out towards the end of, and in direct succession to, the observation period.

The group of informants was selected from different desks, in order to get a sample that covered all functions and media platforms. The informants belonged to one of these groups: Reporters working solely for television, reporters working solely for radio, reporters working for both radio and television, web reporters, desk editors close to the daily news production, section editors (e.g., responsible for politics, economy or foreign affairs) and, finally, editors from top management.

Organizational convergence as strategy

News has always been at the centre of the NRK's strategies related to its position as public service broadcaster, as expressed in a strategic document from 1992, where one of four prioritized areas of programming, is "a broad news production containing critical, factual and thorough journalism", the others being programming for children, drama and sports. (Syvertsen 1997: 56).

In the NRK's charter, §3 states that the purpose of the organisation is: "... to offer public service broadcasting for the entire population of Norway on radio and television, and other media platforms. ... The NRK's public service activities should consist of core activities on television and radio ... and other editorial activities on tele-text, web and other media platforms that can mediate editorial content" (NRK 2005). The web platform is thus not considered part of the core mission, but is still placed safely under the normative wings of public service broadcasting.

So far, I have identified two main strategies for converging cross-media news at the NRK. One strategy is linked to a *resource and organisational* point of view. The other main strategy is related to the aim of creating a *cooperative journalistic culture* transgressing media boundaries.

Resources and production strategies

One of the fundamental synergetic strategies for crossmedia work is to get more news published on more media platforms, with the same, or fewer resources. This is expressed as a desire to create a synergetic mode of production, a strategy often tied to convergence journalism – not only between media organizations with the same owners (Klinenberg 2005: 52), but also within the same organization, as is the case here. Increases in the number of media platforms and the number of news programs have lead to demands for more content. Resources in the form of the license fee do not increase at the same rate. As one top management editor puts it: "We wanted fewer people to do the same job". One of the operationalisations of this strategy, is to have only one reporter covering a press conference for both radio and television;

"Then she or he can do a story for the television bulletin, and a radio version for the midday broadcast. And if we're lucky, make a version for Dagsrevyen in the evening as well. Then we get a lot more journalism for our money" (Section editor).

The background of this strategy is to achieve increased flexibility for managers in the daily planning of news production. Having multiskilled reporters gives opportunities for shuffling them between media platforms when needed. It is expressed explicitly that this does not mean that managers think that everybody should do everything, but that they should be able to;

This gives a degree of flexibility within the newsdesks. If you have free capacity, you can shuffle reporters around a bit. And if for instance a radio reporter is ill, and you have a free television reporter who is able to do radio, you can use him or her, and vice versa. I think that is a kind of flexibility the section editors like to have (Editor, top management).

Strategies for creating a cooperative journalistic culture

The second strategy is related to the journalistic product in several ways. Firstly, it is simply an overall matter of being present on all platforms. An explicit part of the NRK's public service strategies, is to be on the forefront of the technological development, and to have programming "for all viewer segments and have a presence on all important media platforms" (NRK 2004b). Public service broadcasting is described as the NRK's "foundation and unique competitive advantage. Our challenge is to maintain our strong position in a digital, commercial and interactive media landscape, and secure communication with our users in both old and new value chains" (Ibid.: 6). NRK wants to be seen as innovative both in content and form, and will aim to "implement new technology and new forms of production and distribution (...) the NRK shall be seen and heard in 'all channels' (television, radio, web and other, new platforms)" (Ibid.: 8-9). This is closely connected to a more ambitious, but also more fuzzy, goal of creating a crossmedia journalistic culture, which emphasizes cooperation, and where information and content are shared across platforms. This for the benefit of the NRK as a whole: to make the NRK news as good as possible, and in order to win the news battle. As one editor puts it; "The important thing is (...) that the NRK is the best, and not that radio or television or the web is the best. (...) That whatever channel can publish first gets the news story out. (...) Our main goal is for NRK to win the news battle" (Editor, top management). According to this strategy, convergence journalism can be seen as a tool – or rather a weapon – in the fight against competitors. But it can also be regarded more as a goal in itself, where managers express a desire to strengthen the NRK as a news provider over all, regardless of media platforms. This means both making 'better' news as seen from an audience point of view, and strengthening the internal "NRK news" identity, making reporters think about the NRK as a whole, not in terms of separate platforms and programs. A top manager expresses it like this;

The journalistic argument has been that we want to create journalistic cultures that support and strengthen each other. And thereby make the NRK news division stronger than when we used to sit separately, backstabbing each other and pulling in different directions (Editor, top management).

Strategies meeting practices

Giddens' (1984) understanding of structure does not necessarily imply that structure determine the actors' actions, but supports actions over which the actors themselves have influence. News reporters at the NRK are unanimously concerned about the increase in their daily workload due to development of multiple platforms and news programmes: cross-media cooperation and

production creates more work, as does the proliferation of programmes demanding news content on each platform.

Time is the most frequently mentioned structural constraint in this respect. While management wants more cross-media cooperation and production, reporters negotiate this in their daily work by stating that they don't have the required time. There is an endless stream of newscasts on all platforms that demand content. Related to concerns about time pressure, is the perceived effects on the quality of journalism. Internal competition is also an important factor against crossmedia cooperation.

Time pressure

Earlier, a television reporter could relate to a fixed deadline for Dagsrevyen. Today, the increased number of televised news broadcasts is combined with the demands from radio and the web, publishing continuously. There is always breaking news to be produced and published, a phenomenon Klinenberg (2005: 54) has referred to as the *news cyclone*. "Radio reporters have (...) no time to write anything for the web. There is more than enough work producing for those who want radio news" (Desk editor, radio). Among the frustrations, are the perception that the proliferation of platforms and programs increases the workload of journalists. This is not only the case when looking across media, since the number of programs and slots that need to be filled on both radio and television have increased tremendously over the last years. Most radio reporters have a number of deadlines during the day, which leaves little time for other platforms. "You're supposed to work as much across media as possible, and ideally make content for both web, radio and television. But reality gets to you eventually. You don't have the time, it is not practically doable" (Radio/television reporter).

The majority of the informants express frustration about having more responsibilities but not more time to fulfill them. This is similar to findings in other studies, e.g., Huang, et al. (2004) and Klinenberg (2005). Dupagne and Garrison (2006: 251), however, found to their surprise that the journalists in their newsroom study experienced few changes in their "core work". They explain this by the increased efficiency resulting from shared digital production systems.

While the majority of informants say that management does not demand that they have to work for more than one platform, it is expected that you contribute to media other than your own. However, when a deadline is approaching and time is limited, they have to focus on their prime medium. Thus, time pressure can be linked to more fundamental discussions about news culture, and questions about the relative status of platforms and priorities of what is most important in the institutional context. "Ideally we should have had more time to do [cross-media work], but the pressure, the pace is rather intense both in television and radio news. (...) Of course, we put our

own programs first, that is what we're supposed to focus on" (Television reporter). On the other side of the table, the web desk relies heavily on reproducing already produced content for radio and television, not only using television footage and radio sound as part of web articles, but transcribing and reversioning news stories. At the NRK, the web is treated, or used, as a reproductive platform. There are little or no resources for newsgathering or independent reporters, and the output is based on what is produced by the rest of the organisation, for radio and television.

We use a lot of the news stories from the morning radio news. We are supposed to have one reporter on duty to write independent news articles. But that is generally used to fill holes in the work schedule. So there are not many independent articles coming from our desk (Web reporter).

The time pressures experienced by the other desks are as much a part of everyday life at the web desk. This means that the web desk seldom receives finished web articles from radio or television reporters, and that the web reporters have to be very active in seeking out what material is available, getting hold of it, and producing content from it. Web reporters listen to and transcribe finished radio and television news stories. They also use the written manuscripts for reports that radio and television reporters store in the digital production system. But even that is not always ready at hand, as the reporters often don't store their manuscripts.

They are not very good at doing that, but now they have been told to do it and we have seen the first manuscripts. (...) But of course, there is more and more work to do on all desks, so this is something extra that they have to do which they don't always have time for (Web reporter).

Professional competences and the question of 'quality'

Convergence constraints are also found in the fact that different media platforms demand different professional skills from journalists. There is no general agreement among news professionals about whether convergence benefits or harms the quality of news journalism (Huang et al. 2006: 85)

Advocates of convergence journalism argue along the lines of the NRK management cited above, that convergence and cross-media work benefits journalism and media organizations. Among reporters, on the other hand, worries about their status as professionals, and the quality of their work, is common (Cottle and Ashton 1999; Huang et al. 2004; Klinenberg 2005). A majority of the informants in my study adhere to the view that each medium requires a certain set of skills, both journalistically and technically, and that the demands of cross-media journalism threaten the quality of their work. This view is most clearly expressed by television reporters.

I am often told that when people have learned a craft – and this goes especially for television, which is claimed to be more complicated than radio and the web – when someone has learned how to make television, and has become good at it, it is unwise not to take advantage of that skill in television production. And that by letting people specialize in television production, the end result is of a higher quality (Editor, top management).

But what do you define as ‘quality’? The informants use two conflicting arguments regarding cross-media journalism. One argument is that the quality that the NRK is known for, its legacy as a high quality public service broadcaster, is jeopardized, that quality goes down when they are not able to focus their time and energy on one medium.

The other argument emphasises the value of crossmedia work and cooperation for the NRK as a whole, in order to make the NRK the best possible in the news battle with competitors. A significant proportion of the informants, most clearly expressed in radio reporters and editors, sees as an asset or a quality in a journalist them being able to master different platforms. Even if this doesn’t involve working for several platforms on a regular basis, the understanding of ‘how things are done’ in other platforms facilitates cooperation and sharing of information: “I think it is important for the NRK as an organization” (Radio reporter).

While some reporters see crossmedia work as valuable, others are worried about the consequences for journalistic professionalism and the quality of their work, expressing concerns about the end result being less than optimal for all media platforms:

In my view, crossmedia work degrades both, or all three, media. I’m talking about competence, skills and time pressure. There are limits to how much one person can do. It affects quality (Television reporter).

Most of the reporters indicate that they recognise the desire from above to work crossmedially, to at least share information and, for example, interview materials, and ideally produce news for other platforms in addition to the primary one. But this is negotiated against time pressures and concerns about the quality of the end product.

If you have to do everything for several media, eventually the finished product is of a lower quality. I think the synergy of crossmedia work has to be found in the planning and information gathering stages... you have to respect that it takes time to do a quality news story for either radio or television (Radio/television reporter).

However, observation in the newsroom indicates that the feared ‘platypus reporter’ working for all platforms at once but not really mastering any of them, does not exist in practice. Or, s/he exists, but does not work for sev-

eral platforms at the same time. Some reporters are able to work for both television and radio, and are put on a form of rotational work schedule. The web is not part of this scheme. It seldom happens that reporters make versions of their stories for other platforms. As seen, the main reason given for this is that time does not allow it.

Convergence journalism and internal competition

Another bump in the road towards convergence has to do with journalistic ambition. Although the NRK is one news organisation, internal competition proliferates. The production cultures of journalism hails the exclusive story. Cooperation across media platforms within the NRK therefore is closely linked to competition. There is a marked difference between what is regarded as 'common news', i.e. news that is shared by all media, and exclusive stories. One example of the first may be an accident or a robbery. This kind of news is covered by most national media outlets, and here the NRK stands more as a whole in the news race against its competitors. The main aim here is to publish the news fast, get it out before anyone else, regardless of platform.

It depends what kind of news story it is (...) event news, things that happen during the day, we want to publish as fast as possible. And then there's more or less free flow of information and content between the media. But if you're working on a news story on you own, that you research, then you don't want to give it to the radio or the web (Television reporter).

We see that when the news story is the result of extensive research, however, the media platform, or indeed the specific program, gets more important. This is partly due to program identity, partly because this kind of news is not expected to be picked up by other media, hence no need to get it out there before anyone else.

If you have a good news story for radio, you often want to keep it to yourself... because you don't want Dagsrevyen to steal it and air it in their program in the evening, and then the news is out when radio has it's prime time the morning after. That creates conflict sometimes. (...) It is said from the top that we should share, but you don't always do it anyway. But there is a big difference between event news that is common for all media, and our own, exclusive stories. But it is a bit up to the reporter as well. Some think about the importance of NRK being first, no matter in which medium; others don't (Radio/television reporter).

As the last interview statement indicates, reporters are given a fair amount of freedom regarding how much they want to embrace crossmedia cooperation. When developing investigative stories, editors discuss whether it

should go first on radio or television. In case of disagreement, the golden rule is that the medium where the reporter in question works has the rights to the story. Medium identity is given more weight than institutional identity, something that is reflected in the view of this editor:

I definitely think that Dagsnytt (radio) can suffer in crossmedia cooperation. One of the challenges is the crossmedia specialised sections. Where do the reporters have their identity, their loyalty? Where do they want to publish their best stories? (Editor, top management).

Conclusions

Convergence strategies in news production lose some of their force when they meet the reality of everyday newswork. While organizational convergence has taken place and crossmedia journalism is a clearly expressed goal, the vision of news journalism without media borders is negotiated against structural constraints and counter-cooperative practices.

This chapter has identified two main strategies concerning crossmedia news at the NRK. The internal strategy is linked to a resource and organisational point of view, where a synergetic mode of production is the desired ideal. The other main strategy is related to the aim of creating a cooperative journalistic culture transgressing media boundaries.

However, an idealized form of convergence journalism where all media platforms work happily together, comes up against the reality of structural constraints and counter-cooperative practices. Proliferation of platforms and programmes has increased the workload of reporters, leaving too little time for crossmedia cooperation and production. Different media platforms require different journalistic and productional skills, and this slows down convergence processes where content and reporters travel across media borders. Scepticism towards crossmedia journalism for this reason is most clearly expressed by television reporters. Internal competition also slows down the development of crossmedia journalism, even where there is a marked difference between what is called 'common' news, and more exclusive, research-based news.

Note

1. In January 2007, the NRK went through another reorganization of the news division. The news production is now organized under two main desks: One is responsible for the main news broadcasts on radio and television, the other is responsible for news updates on radio and television, in addition to NRK Always News, Web, tele-text, mobile media, and a planned news-only television channel.

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The Dream of Mobile Media

Vilde Schanke Sundet

The industries of mass media are under pressure. Digitalization, convergence and the development of new media platforms threaten traditional revenue sources at the same time that the competition for audiences' attention has increased. Both the press and broadcasting industries experience decline in the numbers of readers, viewers and listeners as audiences move to digital media platforms. Digital media not only provide audiences the freedom to choose what they want to read, view and listen to, and when they want to do this, it also gives them the tools to produce, post and share content. As user-generated services and online communities such as YouTube and MySpace gain popularity, established media institutions are facing one of the biggest challenges of their time.¹

As a way of adjusting to these changes, and to try to re-gain control, many established media institutions have experimented with the use of new digital media platforms in addition to their traditional content production. In the 1990s, media institutions started launching Internet services, and during the 2000s they are moving towards mobile phones. The use of these new platforms has two main functions for established media institutions: Firstly, new media platforms are used as *channels of distribution*; channels through which media institutions can distribute their content more widely. Some examples are newspapers' online news services, broadcasters' Web-TV services, and mobile distribution of text, music and video (see e.g. Fagerjord 2002; Siapera 2004; Andersen 2003; Noam et al. 2003). Secondly, new media platforms are used as *channels of communication*; channels through which the press and broadcasting institutions can receive feedback from their audiences, as well as channels through which audiences can communicate with each other. One example is the way SMS-messages has been used in formats such as *Pop Idol* and so-called SMS-based television (see e.g. Kjus 2005; Enli 2005; Beyer et al. 2007), other examples cover the way e-mail and other digital feedback possibilities are used in chat rooms and communities online (Fagerjord 2006; Maasø et al. 2007; Sundet and Ytreberg 2006).

This chapter focuses on the first function of new media platforms: channels of distribution. It emphasizes how established media institutions adjust to technological change and *expand* their services to new – and more personal – media platforms.² Of particular interest is the way media institutions from the press and broadcasting industries plan for *mobile media* by distributing media content to mobile phones.³ *Why do established media institutions wish to exploit mobile media as a new channel of distribution? How do they do this? And to what degree does the exploitation of mobile media fulfil the goals of expansion?* By discussing these three questions, this chapter seeks to investigate how media institutions translate the challenges of digitalization and convergence into the need for them to develop services on platforms beyond their original domain. Whereas the industry's conceptions of 'convergence' in the late 1990s were driven by the idea that *terminals* would converge into one, the dominating perception in the mid-2000s seems to be that media content should run easily between as many different media *platforms* as possible (Fagerjord et al. 2006). This is an important shift in views, since the first one indicates a unification of different types of media content into one *überbox*, whereas the latter points to the expansion and re-use of content to a network of multiple media platforms (see also Jenkins 2006). The current chapter investigates how the challenges of convergence are interpreted as a need for the media institutions to develop multi-platform strategies – with a focus on the role the mobile phone plays in these strategies.

The mobile phone has some distinct features influencing the way it can be used as a media platform: Firstly, it is *portable*, which means that its use is independent of fixed places, and that user contexts are as varied as the places a person visits within a day (Ito 2005). Secondly, it is *constantly connected*, which means that not only is it independent of time and mass media's traditional deadlines and schedules. Thirdly, it is *interactive*, which means that it gives users the opportunities to make choices, give feedback and communicate (Feldmann 2005; Orgad, 2006). Forthly, it is *personal*, since it relates to a person instead of a location, which may indicate a more private and personal use than that of more traditional media (Ito 2005; Feldmann 2005; Orgad 2006; see also Castells et al. 2007). And finally, it has a *small screen*, which limits the amount of information it can show at the same time (Orgad 2006; see also Feldman 2005).

The dilemma of mobile media

The development of mobile media has brought about a general dilemma for established media institutions, namely how to make the most of the opportunities given by new technology at the lowest risk possible. On the one hand, the development of mobile media content – and especially mobile TV – has been *driven by high expectations* of future income opportunities: Both within the media industry itself and in the public debate more gener-

ally, a common assumption, since 2004, has been that mobile media is the next big market application and a potential “cash cow” for media institutions (see e.g. Orgad 2006; Feldmann 2005; Andersson et al. 2006).⁴ For well-known media brands, the mobile platform therefore represents yet another way of distributing already produced and popular media content (Feldmann 2005). Further, as a personal media platform with an already established consumer-relation through the telephone bill, the mobile phone brings new hope for those promoting personal and payable media services (Orgad 2006; Andersson et al. 2006). While many media institutions have succeeded in creating attractive online services, these services have not completely fulfilled the industry’s financial hopes of more direct user-payment, as most content has been offered to the users for free, financed by advertising.

Despite the high expectation of future income opportunities, the development of mobile media has, on the other hand, been followed by *many uncertainties* (see, for example, Reding 2006; Burgelman et al. 2004; Stango 2004). As always with the introduction of new media platforms, the early phases are characterized by experiments and ambiguity, where different technical standards, content categories and business models are tried out (Flichy 2006; see also Lievrouw 2006; Williams [1974] 2005; Bolter and Grusin 2000). The early phases are also when different industry players come together to compete for future position and market shares. In the case of mobile media, the development is complicated by the fact that key players from fields as different as IT, telecom and media are brought together to *both* compete and collaborate, in order to make an attractive mobile media market that the audiences will demand.

Within this context of high expectation combined with many uncertainties, this chapter seeks to analyze the difficult task established media institutions have when making decisions on expansion. It seeks to analyze how the expectations and uncertainties of the mobile platform are translated in to mobile media strategies, services and financing models. As many media institutions painfully learned from the dot.com bubble in 2000, expansion is not without risk or difficulties, and timing can be essential. While profitable and high-quality online media services have developed over time, mobile media are still in their youth, struggling to find their form and role. For established media institutions, expansion to the mobile platform is therefore both a risky and difficult task, but, if successful, with much to gain

Mapping the field of mobile media in Norway

In order to study how established media institutions adjust to technological change and expand their services to new media platforms, this chapter looks at the development in four established and trendsetting Norwegian media institutions. The Norwegian mobile media market is an interesting case to

study for several reasons. Firstly, the coverage of mobile network is high and the penetration of mobile phones is almost universal. Secondly, the mobile market is well developed, where large parts of the population use mobile content services in addition to calls and messaging (TNS Gallup 2005).⁵ Thirdly, many established media institutions have been successful in expanding their services to the Internet, as some of the most visited online sites in Norway today are provided by established media institutions.⁶ Altogether, this may indicate that the Norwegian market is particularly favourable for developing mobile media, and that it can be seen as a laboratory for new media developments (Karlsen et al. 2006).

The four media institutions selected have their core activities in the press, television and radio respectively. They range from a tabloid newspaper (VG), a publicly owned and license fee-founded public service broadcaster (NRK), and two commercial broadcasters with public service obligations (the television channel TV 2 and the radio channel P4). They each represent the largest player in their core market at the same time that they all have expanded extensively to other media platforms, particularly the web. With the exception of the radio channel P4, they also provide some of the most visited mobile media portals in the Norwegian market.⁷

With their dominant market positions and multi-platform appearance, they strongly influence the development of the Norwegian media market. Studying these institutions, therefore, gives us insight into how established media institutions may adjust to the development of new – and more personal – media platforms. By comparing their strategies, the chapter further seeks to illustrate how institutional roots, organization and business culture influence strategies and decision-making about expansion and the adoption of new technology.

Different methods have been used to analyze these media institutions. Annual reports and strategy documents produced by the institutions have been analyzed to identify general goals and strategies for media expansion in general and for the development of mobile media in particular. Further, the institutions' mobile media services have been used and tested in order to get an overview of what types of mobile media content they created, as well as how the services worked.⁸ Finally, the analysis is based on interviews conducted in 2006 with mobile media executives from each of the four media institution. In addition, a qualitative interview study from 2005 with 45 Norwegian media executives is used as background information.⁹ Using industry documents and interviews as a key empirical source naturally creates a particular need for a critical approach to the material. Executives have an interest in their statements, in the same way that annual reports are written to present the company at its best. That being said, interviews and annual reports are fruitful to analyze when searching for expansion strategies, simply because they illustrate how media institutions themselves describe and legitimize their actions (Sundet and Ytreberg 2006).

The analyses focuses on the period from 2004 through 2006, which in Norway represents a crucial period for strategic positioning in the mobile

media market. In 2004, the first third generation mobile network (3G in short) for commercial use was launched (Telenor 2004), which allowed for faster and larger data transmission, and new services such as video transmission and mobile TV. Even though more basic mobile content services and wap (Wireless Application Protocol)¹⁰ had existed since the mid-1990s, 3G was expected by both the press and the informants from the 2005 study to be the technology that finally kicked off the mobile media market (Fagerjord et al. 2006; Sundet and Ytreberg 2006).

Why established media institutions expand to the mobile platform

Based on the analysis of annual reports and interview statements, four key reasons can be identified as to why established media institutions planned to exploit mobile media. These are *the need for new income opportunities*; *the need to reach new user groups*; *the need to be innovative*; and finally, *the 'necessity' of being mobile*. The need for new income opportunities can be said to be the most important, since the financial potential of the mobile phone also underlines the other three reasons. However, this is not to say that the development of mobile media is entirely driven by economic motives, or that the four media institutions put the same weight on the financial opportunities, because they did not. The four reasons are similar to strategies found in other studies of media institutions' developments of audience activities (Maasø et al. 2007; Enli 2005) and multi-platform formats (Syvertsen 2006), which may indicate that they are general strategies used by media institutions in times of technological change.

New income opportunities

The first – and most important – reason why established media institutions say that they plan for mobile media is the *need for new income opportunities*. As traditional revenue sources are under pressure, the need for new ones increase. Due to the digitalization process, content is not fixed to a particular terminal or network, but can be distributed to multiple media platforms. As media content is costly to produce, but cheap to reproduce, re-packing and re-using popular content on several platforms is one way to exploit content rights and gain economy of scale (Shapiro and Varian 1999; Doyle 2002; Norbäck 2005). The financial benefit of re-using content, emphasized by all four media institutions in similar ways, is illustrated in this example:

The VG House is determined to bring out the synergies between online and print, and have great success with cross-promotion between publications. [...]

VG will further emphasize these types of coordination between online, print and mobile, with a clear goal of building all the publishing channels to be even bigger and stronger.¹¹

Besides the benefit of developing synergies, expansion is also a way to spread financial risk, as media institutions become less dependent on the success of one particular media platform or source of revenue (Picard 2002). One aspect of the logic behind the media institutions' use of SMS as a return channel for audience activity, is that, thereby, these activities get partly or fully financed by the users (Enli 2005; see also Syvertsen 2006; Maasø et al. 2007). In line with this, expansion to new media platforms gives media institutions more "legs to stand on", as described by Rune Hafskjær, Head of Format and Development in the commercial radio channel P4:

Right now, we only have one leg to stand on, since radio advertising adds up about 98% of our income. To have more legs to stand on is strictly necessary. [...] When new channels arrive, they eat at your leg. It is important to either eat your own leg, or to own those who are doing the eating (Rune Hafskjær, Head of Format and Development in P4, interviewed 07.09.06).

Similarly, the commercial television channel TV 2 stressed the importance of developing services financed by the users in order to make their television channel less dependent on variations in the advertising market (TV 2 Group 2004: 23).

Besides these more general economic reasons for media expansion, the mobile phone had some distinctive features which were perceived as making it particularly profitable as a media platform. The media executives stressed in particular two revenue forms well suited to the mobile phone. Firstly, the mobile phone was perceived to be fruitful for exploring *direct user payment*, since a billing system already existed through the telephone bill, and users were already used to paying for telephone services. In the previous interview study, this view was illustrated by one of the television executives, who claimed 3G and mobile television was "the most important strategic area", because "willingness to pay is great and revenue might be substantial" (Eivind Landsverk, Head of Programming in TVNorge, interviewed 19.05.05). Similarly, an executive working with interactive mobile media stated:

Mobile phones are extremely well distributed. People use it as their most important interactive medium, and there is a built-in payment solution in it. The only thing left is to build high quality content services (Steinar Brændeland, Director and Chief Editor in Mobile Media Interaktiv, interviewed 18.05.05).

Further, the mobile phone was perceived to be a particularly suitable *advertising channel*, since so much information could be gathered about the users (see, for example, *Aftenposten* 17.12.04; *Propaganda* 06.09.05). The key

to this point of view was not to sell content to users, but instead to sell information about users to advertisers. Based on the information gathered about users, advertisers could target ads to fit a person's habits, needs and taste. The benefit of personalized advertising was not only recognized by the commercial media institutions (VG, TV 2 and P4), but also by the licence fee-funded public broadcaster, NRK, which, due to the Broadcasting Act, was allowed to explore advertising on their online and mobile platforms:

We are allowed to have advertising on our web pages, and that's a potential source of income. In particular when it comes to personalization, since we know so much about users. We know where they are, their interest and so on. Depending on what we communicate outwards, advertisers can have greater knowledge of whom they are approaching, which again means they can offer personal advertising which have a higher value (Gunnar Garfors, Director of Mobile Services in NRK, interviewed 27.10.06).

In the eyes of the advertiser, an identified mobile user is therefore much more valuable than an anonymous television viewer, radio listener or newspaper reader. Further, as with online advertising, mobile advertising has the benefit of measuring accurately how many people have actually seen or clicked on a specific ad, naturally of great value for advertisers. In short, the mobile phone brought about multiple expectations of future income opportunities in the media industry.

Attract new user groups

The second reason why established media institutions said they wanted to exploit mobile media was *the need to reach new user groups*, especially youth (see also Syvertsen 2006; Maasø et al. 2007). This strategy is naturally strongly connected to the first, as the number of audiences is the most commonly used measure for market share and success in the media industry. Established media institutions have, in recent years, experienced a decline in the number of readers, listeners and viewers, and the greatest losses have been among the younger age group (TNS Gallup 2006b). This audience group is, however, of key importance for media institutions, as it represents one of the most attractive target groups for advertisers. Further, there seems to be a general assumption in the media industry that brand loyalty has to be developed at an early age, as illustrated by one of the informants from the public broadcaster NRK:

If they have seen children's TV [at NRK], they will return when they become parents themselves. But if they haven't seen children's TV and if they don't have that NRK anchoring from the beginning – whether that's from a mobile phone or online – they might not come back. [...] I think it is really important

not to neglect the mobile phone as a media channel, because if we do, we are in deep trouble (Gunnar Garfors, Director of Mobile Services in NRK, interviewed 27.10.06, see also Maasø et al. 2007).

In general, the media industry seems to view young users as at the forefront of the digital revolution, and turning away from the more traditional media platforms such as the newspaper, radio and television. Further, young users are perceived to use new participatory opportunities related to digital media with a degree of facility and confidence that the older age groups may never achieve (Sundet and Ytreberg, 2006). For instance, one of the informants from the previous interview study labelled the older age groups “immigrants in the digital society” (Are Nundal, Director of NRK Online, interviewed 16.08.05). The younger age groups, on the other hand, were perceived to be digital natives, as they were “used to participate, be heard and communicate in both directions” (Torry Pedersen, Director and Chief Editor in VG Multimedia, interviewed 25.04.05; also see Sundet and Ytreberg 2006). The explosive growth of user generated services and online communities such as YouTube and MySpace were used as proof by the media executives to illustrate the young users’ active, forward-leaning and social media use, where producing, posting and sharing content was as important as simply consuming it. By imitating these online services and user habits within the frames of the established media institutions, institutions seek to lure younger age groups back to their nest again.

Since young people already have a tight and personal relationship with their mobile phone (Skog 2002; Ito et al. (eds.) 2005), using it as a media platform was perceived to be a good way to re-connect with the communicative and on-demand needs of the younger age groups. Informants from all the four media institutions expressed this view in similar ways, as the quote below suggests:

The mobile phone is the media channel of the youth. Already today, one out of five teens uses mobile media weekly. Those who don’t learn from the youths’ media habits will experience every new trend as a surprise. (TV 2 Group 2005: 21, see also Syvertsen 2006; NRK 2000: 21).

In short, established media institutions seemed to want to use the mobile platform to fill the needs of audiences not satisfied by, or interested in, the more traditional media platforms.

The importance of innovation

The third reason why established media institutions said they wanted to exploit mobile media was the *need to be innovative and gain experience* with what they believed would become a new and important media platform of the future (see also Maasø et al. 2007). In general, the development of new

media platforms disturbs the established ecosystem of the media industry by enabling some institutions to re-position themselves to the good, whereas others are left behind. In such times of change, established media institutions seem to be driven by expectations of 'first-mover-advantages' and the logic of 'winner-takes-all', where being first in new media markets is viewed as crucial for later positions and market shares (Küng 2004). For instance, the informants from the public broadcaster NRK and the commercial radio channel P4 both claimed that their late expansion to the Internet was one of the reasons why their online market shares were still low (Gunnar Garfors, Director of Mobile Services in NRK, interviewed 27.10.06; Rune Hafskjær, Head of Format and Development in P4, interviewed 07.09.06). As illustrated by Rune Hafskjær, Head of Format and Development in P4, gaining experience with new technology in an early stage, was therefore of high importance:

It is important to be involved from the beginning: To learn and get the experiences inside your organization and to make some mistakes. When it first takes off, it's a good thing to have stopped making mistakes. (Rune Hafskjær, Head of Format and Development in P4, interviewed 07.09.06)

Besides taking market share and gaining experience, being in front also meant having the power to set standards and influence the premises of the new media platform. By being proactive, established media institutions could define areas of conflict and promote solutions supporting their interests. Further, being perceived as innovative and in the lead also had an important symbolic value, as it gave established media institutions a modern and youthful appearance, as realised by Gunnar Stavrum, Director of the interactive department of the commercial television channel TV 2:

By using the mobile as a tool, a traditional TV channel can be modern. It shows that you are cutting edge and in front (Gunnar Stavrum, Director of TV 2 Interaktiv, interviewed 12.09.06).

Being perceived as "cutting edge and in front" does not only have value for attracting audiences. It also sends the message to advertisers that the media institution is still going strong and embraces the opportunities given by new technology. Further, being in front also means becoming an attractive alliance partner for other companies who want to test and experiment with new technology. In short, the media industry seemed to promote the concept of innovation, and associate it with other positive words such as creativity, originality and the ability to 'think outside the box'.

The public broadcaster NRK was perhaps the media institution most strongly promoting the importance of innovation. It was not only reflected in their mobile development, but also understood to be an important part of the NRK brand and their public service mandate:

In order to maintain our brand, the NRK have to be innovative. It should be a common perception among people that some times we are in front. That is important in order to achieve loyalty and secure a willingness to pay the license fee (Svein Aronsen, Director of NRK Development, interviewed 22.06.05).

However, as many of the informants pointed out, being in front meant putting oneself in a risky position, as the Internet launches in the early 2000s had painfully taught many of the media institutions (see also Maasø et al. 2007). The goal for established media institutions was therefore to balance on the thin line between being in front without spending too much money in being so.

The 'necessity' of being mobile

Besides the more explicit mobile media strategies presented above, the informants from VG, NRK, TV 2 and P4 all seemed to have a more diffuse perception of the *'necessity' of being mobile*. The emphasis on mobile media was therefore not only motivated by strictly strategic reasons; it was also considered to be a natural path for the future. *Not* expanding to new media platforms was perceived as unnatural and unthinkable by the informants:

You can't be a big media house without being online. I don't know what to call it, whether it is the people's demand or what it is, but you quite simply can't think of us without a website. In a year or two, I think it will be strange not to be on a mobile platform (Rune Hafskjær, Head of Format and Development in P4, interviewed 07.09.06).

Similarly, the informant from the tabloid newspaper VG claimed people expected to find a good VG service on the mobile phone, and that VG therefore had to fulfil these expectations (Morten Holst, Head of Development in VG Multimedia, interviewed 13.09.06). The informant from the public broadcaster NRK even indicated that new media platforms would replace some of the importance of the more established media platforms, when stating: "If we don't expand online and to mobile phones, what's left of NRK in, let's say, 10-15 years?" (Gunnar Garfors, Director of Mobile Services in NRK, interviewed 28.10.06).

The naturalness of expanding to the mobile platform can also be found in the previous interview study, where many of the informants stressed the importance of being mobile, without having a clear picture of how or when. The *'necessity' of being mobile* thereby points to the importance of *'intuitions'* and *'gut feelings'* in an industry trying to wisely manoeuvre between (often contradicting) trends and hypes. However, the *'necessity' of being mobile* also points to the importance that *accessibility* is given by established media

institutions in general. The basic idea seems to be that media institutions should make their content available for users on as many platforms as possible, so that users could access it whenever and wherever they like. By establishing a universe of services on multiple platforms, media institutions seek to increase their availability and thereby regain control of their audience. This view has been reflected in many of the slogans launched by established media institutions since the beginning of 2000. Mark Thompson, General Director of the BBC, used the concept 'Martini Media', echoing the Martini commercial "for anyone, anywhere, anytime" (referred to in the *Guardian*, 25.04.06). Similarly, the public broadcaster NRK used the catchphrase "Something for anyone. Anywhere" (NRK 2004a). The commercial television channel TV 2 stated their vision of accessibility as:

The whole of Norway. Day and Night. On all platforms. That's our goal, and that's where we are going (TV 2 Group 2005: 15).

To summarize, we see that the analysed media institutions use the same four reasons to justify why they have moved into mobile media. This is an interesting finding, since the four media institutions represent such different industries as the press, radio and television, and since they represent both public and commercial institutions. Their mutual interest in mobile media indicates the strategic importance expansion has for established media institutions, trying to adapt to challenges of new technology and convergence.

However, VG, NRK, TV 2 and P4 did not place the same weight on these four reasons: VG and TV 2, in particular both stressed the need for new income opportunities, which must be seen in the light of their nature as a tabloid newspaper and a commercial television channel respectively. The public broadcaster NRK, on the other hand, emphasized in particular the need to be innovative and reach new user groups, and translated these needs as an extension of their public service mandate. The commercial radio channel P4 seemed most driven by the 'necessity' of being mobile, maintaining a reserved attitude to the development of mobile media, and stressing the importance of being prepared, without putting themselves at too much risk in doing so.

How established media institutions expand to the mobile platform

From looking at *why* established media institutions expand to new media platforms in general, and the mobile platform in particular, we now turn to look at *how* they do so. What types of content do they envisage, and how do they plan to get paid? Do their plans for mobile media echo their strategies?

As we saw in the previous section, an important reason behind established media institutions' expansion to the mobile platform was the opportunity to

re-use content and thereby gain economies of scale. However, the ambitions of being innovative, as well as the distinct features of the mobile phone (portable, constantly connected interactive, personal, small screen), point at the same time to the need for *adjusting content* and establishing *new content categories* particularly suitable for the mobile phone. The consultant company Informa Telecoms & Media claims, for instance, that mobile content needs to be compelling and to have a degree of ‘stickiness’ (2006: 4) in order to compete with other media platforms. Similarly, Orgad (2006: 6) predicts the future of mobile content to be based on visual spectacle and close-ups, short and ‘snackable’ content (e.g. ‘mobisodes’) and locally based information.¹² In short, consultant companies have predicted many different paths of mobile media content. However, as none of these paths has been settled on as the dominating standard, the development of mobile media content can still, as Forrester Research puts it, be compared to “throwing expensive spaghetti at the walls to see what sticks” (2005: 3).

When it comes to models for gaining income, the media industry has traditionally been founded on four main financial sources; public founding (license fee, general grant aid and tax), payment from readers, viewers, listeners or users (sales, subscriptions, pay-per-view/click), payment from advertisers (including hidden advertising, sponsorship and product placement), and secondary explorations of content or rights (for instant re-selling programme rights, merchandise and so on) (Doyle 2002; Henten et al. 2000; Koboldt et al. 1999). As we have seen, the media industry expressed high expectations of future income opportunities related to mobile media, in particular mobile advertising and direct user payment. However, neither of these financing models has been settled on as the dominating standard. Further – as we will see – different media institutions seemed to favour different financing models, illustrating the degree of uncertainty characterizing the development of mobile media.

With these different content categories and financing models sketched out, let’s have a closer look at how the four selected media institutions exploited mobile media on their 2006 wap portals.

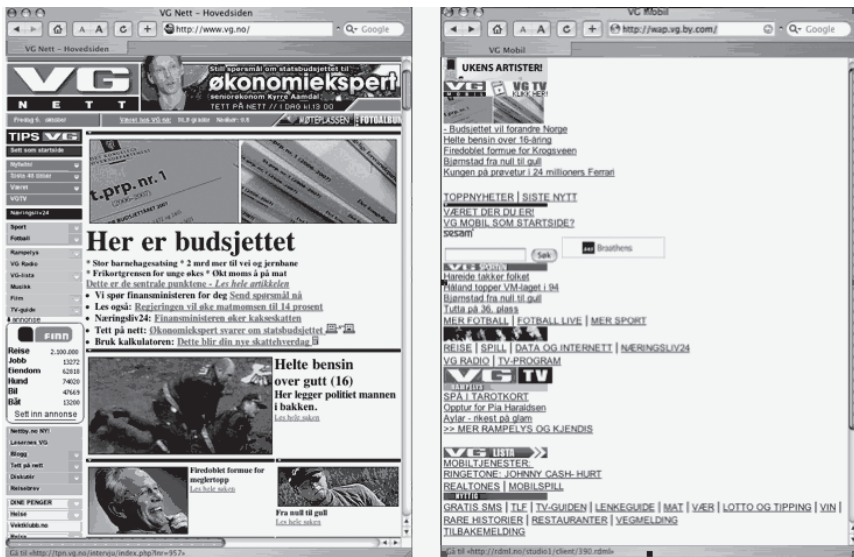
VG Mobil

Of the four analysed media institutions, the tabloid newspaper VG provided the most visited mobile portal, VG Mobil. As VG also provided the most read tabloid newspaper and the most visited online news service, it had one of the strongest multi-platform media brands in Norway.¹³ On their wap portal, VG Mobil offered a mix of traditional media categories such as text- and picture-based news stories, video clips (labelled ‘VG TV’) and music (labelled ‘VG Radio’), in addition to information services (e.g. television schedule, weather reports and traffic information), and more general mobile content services (e.g. games and ring tones). In line with their printed newspaper

and online news services, VG Mobil was structured around the three basic content categories of news, sport and entertainment. As we will see, this basic structure can also be found in the mobile portals of NRK, TV 2 and P4, indicating a fundamental consensus on how to incorporate mobile media within the Norwegian media industry.

Even though VG Mobil used traits from newspapers, radio and television on their mobile portal, what it resembled more than anything was an online news service. When comparing VG's wap portal with their online news service¹⁴, the wap portal clearly echoes both the basic structure and the design of the online service, if in a more basic and simplified way (see picture 1). VG's wap portal does not only resemble the visual elements and the architecture of their online news service, it also used the same content categories and brands, as well as the same journalistic stories. In short, VG's wap portal can be seen as extension of their web portal, built around the re-use of highlights from their online services.

Picture 1. VG's web and wap site, October 2006



The re-use of already produced content is in line with the vision of VG Mobile, namely to “mobilize most of what we do” (Morten Holst, Head of Development in VG Multimedia, interviewed 13.09.06). More practically, the goal of ‘mobilizing’ sought realisation through a multimedia publishing system distributing a predefined selection of online news stories automatically to the mobile platform. Even though the mobile platform was seen as an extension of their online services, the mobile platform was still perceived to have some unique features distinguishing it from the online platform:

We see Internet and mobile quite parallel, but with clear differences. ... Not every online story is as relevant on a mobile platform. ... This is analogous with online and print. You need to make it fit. (Morten Holst, Head of Development in VG Multimedia, interviewed 13.09.06).

Among other things, Morten Holst, Head of Development in VG Multimedia, pointed to the opportunities of personalization, and knowing the preference of the users, which the mobile platform gave:

Why should we present sport every time you visit VG Mobil, when you never read it? Why shouldn't we just put that further down, and instead bring up more entertainment, which we know you often use? (Morten Holst, Head of Development in VG Multimedia, interviewed 13.09.06).

In order to fully develop the potential of the mobile platform, Holst expressed the needs of a mobile conductor or moderator "who can take some decisions on the right way to present the front page, so it works on a mobile platform" (interviewed 13.09.06; see also Ytreberg 2006; Jones 2004). Interestingly, Holst did not envisage "services only to be found on a mobile, and not online" (interviewed 13.09.06), illustrating, in his view, the sovereignty of the online platform compared to the mobile one. This view may be due to the difference in maturity of the two media platforms, as online media services are far more developed than mobile media services. Still, it may also indicate a more fundamental view of the mobile platforms as subordinated online media, instead of seeing it as a new and distinctive media form.

When it comes to pay models, advertising was the dominating revenue source for VG Mobile, as it also was for their online news service.¹⁵ Except for a few services (among them VG TV), most of the mobile media services were free of charge.¹⁶ Morten Holst (interviewed 13.09.06) was not only a strong supporter of exploring mobile advertising, he was also a strong critic of the direct payment approach used by some of the other media institutions. His main argument was that "you don't get paid for things on a mobile that you don't get paid for on online" and that "payments follow content, not channels" (interviewed 13.09.06). Further, Holst claimed high prices and poor quality of mobile services functioned as a crucial hinderance to the development of a mobile mass market, since it "shows everyone that the mobile is expensive and that the qualities of services are not in proportion to the prices" (interviewed 13.09.06). In his view, the same mechanisms working online would therefore soon dominate the mobile platform, where "it becomes strategically more important to build traffic, size and user habits than taking in a few millions" (interviewed 13.09.06).

To summarize, VG Mobile can be described as the largest mobile media provider on the Norwegian market, promoting the safe and established content categories and financing model that had created the success of their online news service.

NRK Mobil

The second mobile portal analysed is NRK Mobil, provided by the public service broadcaster. In common with VG Mobil, NRK Mobil consisted of a mix of traditional media categories concentrated around news, sport and entertainment (NRK 2004a: 86) in addition to information services and mobile content services. Even though NRK Mobil was not the most visited mobile portal in Norway, it was definitely the biggest mobile television operator in both the number of users and the variety of content. NRK had been one of the first broadcasters in Europe to offer television programmes for mobile networks (NRK 2004b: 86)¹⁷ and provided in 2006 a wide range of mobile television services. Among others, NRK Mobil offered direct transmission of all in-house produced programmes scheduled on the main television channel (NRK1). NRK Mobil also offered a selection of archive video clips, mainly selected from their most popular television programmes.¹⁸

As emphasised by Gunnar Garfors, Director of Mobile Services at NRK, NRK's main goal was to re-use already produced content and thereby "bring out the synergies and make this as cost efficient as possible" (interviewed 27.10.06). Further, as Garfors and other informants from NRK highlighted, brand recognition was important on new media platforms, as "the big successes on TV also are the big successes online and on the mobile platform" (Bjarne Andre Myklebust, Director of Technology in NRK Development, interviewed 26.05.05).

Still, to greater extent than the other three media institutions, informants from NRK Mobil emphasized the need for adjustment in order to make content fit the mobile platform. For instance, Garfors argued for already integrating the mobile aspect in the process of ordering new television programmes, instead of leaving it to the end:

We are working on getting this more integrated in the orders, so when we for example order a new program series on 12 television programmes of 25 minutes, there would be 24 mobile-TV programmes of 1 minute each. ... Even though there are some additional costs, they are kept low (Gunnar Garfors, Director of Mobile Services in NRK, interviewed 27.10.06).

Further, NRK Mobil did not only re-use already produced content on its mobile portal, it also experimented with producing content specially made for mobile distribution, where there was no synergy at all:

We also test new entertainment series particularly made for mobile. Then we make something entirely new, which of course cost more, as we have to put up al the equipment and rent actors (Gunnar Garfors, Director of Mobile Services in NRK, interviewed 27.10.06).

NRK Mobil's experimentation therefore reached further than simply testing new technology, as it also involved experimentation with new content categories

and services. In addition, NRK Mobil's experimentation – and early launch of mobile television – had made the broadcaster noticed both within the Norwegian market and outside the borders of Norway. NRK's development of mobile services had on several occasions been quoted in foreign press, and representatives from NRK Mobile had frequently been invited to talk at industry conferences.¹⁹ Further, NRK Mobil was judged the second best international mobile websites (surpassed only by Google) by the Swedish business magazine *Mobile* (*Mobile* 2006). In sum, NRK Mobile's actions clearly echoed their goal of becoming an innovative and in front player on the mobile platform.

When it came to income models, NRK Mobil experimented with several revenue sources. As a public service broadcaster, the license fee was the main financing source, even though the Broadcasting Act from 2000 gave NRK the right to do business through subsidiaries (6-1), and to have advertising on teletext, online and mobile platforms (6-4). As most of NRK's mobile content was based on the re-use of content originally produced for NRK's other media platforms (radio, television and Internet), the license fee indirectly financed most of NRK Mobil.

However, informants from the NRK also expressed the need to explore new income opportunities, and mobile distribution of content was regarded as one way of increasing revenues streams in addition to the license fee. Several of the NRK informants interviewed in the 2005 study pointed to the personal on-demand aspect of the mobile platform, which, in their view, distinguished it from mass distributed public service broadcasting financed by a license fee:

If we start with services with personalized content where "I" can have something, I don't think we will call it public service broadcasting. ... It cannot be financed through the license fee meant for public broadcasting (Are Nundal, Director of NRK Online, interviewed 16.08.05).

... this is something extra, something especially made from me to you, and not something from all of us to all of you. If you want it, you have to pay for it (Kari Werner Øfsti, Director of NRK Broadcasting, interviewed 18.05.05).

According to Gunnar Garfors, Director of Mobile Services at NRK, the most important mobile financing model of the future was advertising:

I think advertising will become the most important revenue source. It is the same as online; it is important to be big. ... The more users you have, the more advertising you can sell. Users have little willingness to pay for these types of services (Gunnar Garfors, Director of Mobile Services in NRK, interviewed 27.10.06).

NRK Mobil thereby supported the view of VG Mobile: that mechanisms working online would also work on the mobile platform. This view partly contradicts the high expectation of direct user payment, expressed by the

informants from the 2005 study and in the public debate more generally. As Garfors from NRK and Holst from VG both emphasized, it was the content and not platforms that influenced users' willingness to pay:

There has always been a willingness to pay for phone related services. ... It is accepted that it costs money. But it is different when it comes to content and getting content from a wap page. I think this is where the advertising comes in (Gunnar Garfors, Director of Mobile Services in NRK, 27.10.06).

To summarize, NRK Mobil can be described as the leading mobile television provider in the Norwegian market. Further, NRK Mobil is clearly one of the more innovative players, experimenting both with new technology and content categories. In contrast to VG Mobil, NRK's mobile portal was not simply an echo of their online news services, but a platform where the uniqueness and media-specific traits of the mobile phone was, at least to some degree, tested out.

TV 2 Mobile

The third mobile portal analysed is TV 2 Mobil, provided by the commercial television channel. In common with VG Mobil and NRK Mobil, TV 2 Mobil consisted of a mix of traditional media categories in addition to information services and general mobile content services. TV 2 Mobil was also built around the re-use of content already produced for one of the other TV 2-platforms; first and foremost TV 2's many online services (e.g. 'tv2.no', 'Side 2', 'NA24', 'TV 2 Nettavisen'). TV 2 Mobil, therefore, to a large extent paralleled VG Mobil's approach, where the mobile platform echoed their activities online:

Our mobile approach is similar to our online approach. Our idea is that what we offer online should also be available on the mobile (Gunnar Stavrum, Director of TV 2 Interaktiv, interviewed 12.09.06).

Even though news and entertainment were important content categories for TV 2 Mobile (Gunnar Stavrum, Director of TV 2 Interaktiv, interviewed 12.09.06), sport – and in particular football – had an especially important function in TV 2's expansion to the mobile platform. Sport had been one of TV 2's main building blocks since the television channel was established in 1992, but the importance was highlighted in 2005 when TV 2, together with the Norwegian telecom operator Telenor, bought the exclusive rights to transmit Norwegian elite football from 2006 to 2009/2010. The agreement became historic as the sports rights were the most expensive content rights ever to be bought in Norway. The rights included both free-TV, pay-TV, online and mobile distribution (TV 2 Group 2005: 6), indicating the importance of using sport as an opening for navigating the TV 2 brand to different media platforms.

For TV 2 Mobil, therefore, sport was the field where most of the experimentation and innovation with the mobile platform took place. As emphasized by Gunnar Stavrum, Director of TV 2 Interaktiv (interviewed 12.09.06), the long-term aspect of the football agreement (2006-2010) gave TV 2 the ability to test different mobile services, and improve them within the next football season. The football agreement was also an important catalyst for collaboration between TV 2 Mobil and Telenor, as both had a common interest in creating a good mobile sports service (Gunnar Stavrum, interviewed 12.09.06).

When it comes to pay models, TV 2 Mobil was a strong supporter of direct user payment. The emphasis on user payment must be seen in the light of TV 2's general strategy to "convert viewers to consumers", as described in several of TV 2's annual reports since the early 2000s (TV 2 Group 2002: 35, 2004: 23; see also TV 2 2000: 6; Syvertsen 2006). The main logic behind this strategy was the fear that the advertising market would decline, which for TV 2 meant the need for new revenue streams:

In a long-term perspective, the TV 2 Group's financial development will to a high degree depend on the ability to convert viewers to customers, and to grasp a key role as a provider of content and services on new technological platforms (TV 2 Group 2002: 35).

In their model of direct user payment, the football agreement with Telenor again played a crucial role. It was stated to be "an important part of the TV 2 Group's strategic goal of increasing revenue streams related to distribution and user payment" (TV 2 Group 2005: 13).

To summarize, TV 2 Mobil can be described as a media institution testing out the launch of exclusive and on-demand content, financed through direct user payment in strong relationship with the largest telecom operator, Telenor. This is in strong contrast to VG Mobil and NRK Mobil, which both supported a more open launch of mobile content, financed by advertizing. TV 2 Mobil's promotion of direct user payment resembles their strategy more generally of transforming their viewers into paying customers and thereby becoming less dependent on the advertizing market (see also Syvertsen 2006; Syvertsen et al. 2006; Maasø et al. 2007).

P4 Mobil

The fourth and last mobile portal analysed is P4 Mobil, provided by the commercial radio institution. Of the four mobile portals, P4 had the most modest, with only a few – primarily text-based – news services, in addition to a limited number of information services and mobile content services. P4 also provided mobile radio, which was a re-distribution of their FM-radio channel. Interestingly, nor P4's online site was well developed, which indicates the importance a strong online appearance has for media institutions

seeking to expand to the mobile platform. P4's modest mobile portal must also be seen in light of P4's limited multi-platform appearance more generally, which meant P4 had less content to re-use for their mobile portal.

When it comes to income models, Rune Hafskjær, Head of Format and Development in P4 (interviewed 07.09.06), claimed that P4 Mobil didn't really have any model at all, which of course is partly explained by their limited scope. Further, Hafskjær pointed to two key explanations for why the revenue sources have been limited. Firstly, he claimed, radio was a difficult medium to get payment for, since listeners were used to having it for free:

We are founded as a free service, which creates some problems. [...] Radio is by its nature free (Rune Hafskjær, Head of Format and Development in P4, interviewed 07.09.06).

The second reason Hafskjær used to explain P4's modest expansion online and on the mobile platform was related to a period of uncertainty and political turbulence in 2002-2003. In 2003, P4's time-limited licence agreement from 1993 came to an end, which meant that P4 had to apply for renewal. P4 did not, however, get the licence agreement renewed, and had to apply yet again in order to continue as a national radio channel (for more, see Enli and Sundet 2007). According to Hafskjær (interviewed 07.09.06), the main goal of the leaders of P4 in this period of uncertainty was to keep the organization alive, and P4 had none of the necessary long-term conditions to expand to new media platforms. As a consequence, Hafskjær claimed that P4's new media appearance was underdeveloped, compared to other established media houses in Norway:

In this period [2002-2003], we had some strategic thought about it, but we didn't have the opportunities or the strength to do anything. ... Quite simply, we struggled to survive. All the media bureaus we talk to say we have an unnaturally low position, regarding our size as a nationwide medium (Rune Hafskjær, Head of Format and Development in P4, interviewed 07.09.06).

However, the period of uncertainty may only be part of the reason why P4 has such a modest new media appearance. In the late 1990s, P4 expanded extensively with both media and non-media activities, but was painfully damaged by the dot.com bubble. Their caution about new media platforms may therefore be influenced by earlier mishaps.

Further, what made P4 consider expansion again in 2006 seemed to come, primarily, from outside the media institution. According to Hafskjær, advertisers were asking for new media platforms to promote their products, and P4 had to expand in order to meet the demands of the advertisers:

In media bureaus, money moves. When we can't supply them with enough numbers of advertising banners online, we get less money (Rune Hafskjær, Head of Format and Development in P4, interviewed 07.09.06).

To summarize, P4 had the least well developed mobile portal of the four analysed media institutions, which also reflects its modest online platform. This may indicate that P4 is more of a safety-seeking media institution, which only expands to new media platforms when they can see a clear financial benefit. However, it may also be explained by the fact that P4 had less content to re-use, since it had less of a multi-platform presence than the other three analysed media institutions.

Successful expansion strategies?

In the previous sections, the main reasons for *why* established media institutions expanded to the mobile platform as well as *how* they did so, in terms of content categories and financing models, has been discussed. To what degree does the exploitation of mobile media fulfil the goals of expansion? When it comes to the *need of new income* opportunities, the use of mobile media clearly have the potential of generating revenues, even though the income per 2007 has been modest. Further, the high expectation of direct user payment connected to the mobile phone has been challenged, as users seems less willing to pay than the industry expected. However, since most of the content provided on the mobile platform is based on re-use and redistribution of already produced content, the costs of expanding to the mobile platform are kept low.

When it comes to the *need of attracting new user groups*, the development of mobile media has only partly been successful. Whereas the use of mobile media increased in 2004 and the first parts of 2005, user numbers have stabilized, and even slightly decreased in 2005 and 2006 (TNS Gallup 2006a). Morten Holst, Head of Development in the tabloid newspaper VG, described the year of 2005 as “extremely disappointing”, claiming that media institutions expanding to the mobile platform “really have to be strong in their beliefs to continue” (interviewed 13.09.06). When it came to attracting younger audiences, several studies indicate their social and communicative needs (see for example, Skog 2002; Ito et al. (eds) 2005). However, the four media institutions in this study still mainly planned for the *consumption* of media content on their mobile portals, despite the interactive features of the mobile phone. This may point to the need to develop new mobile content categories, fully making use of the communicative features of the mobile phone.

The *need to be innovative* as a goal was fulfilled in a technological sense, as all four media institutions experimented with new technology to distribute and publish mobile media content. However, the innovation in genres and content categories was still limited, as most of the mobile media content was based on the re-use of already produced content and content categories. As we have seen, the public broadcaster NRK can be said to be the most innovative, as they experimented both with new technology and new

content categories. This can, at least partly, be explained by the fact that NRK has by far the largest organisation, which meant that, compared to the other three institutions, it had a greater number of people working with mobile media. Further, NRK owns a wide range of content rights to experiment with, as most of the content production is done in-house.

Conclusion

Digitalization, convergence and the development of new – and more personal – media platforms challenge established media institutions. In this chapter, we have seen how four established media institutions translate these challenges as a requirement to expand their services on multiple platforms beyond their original domain. The expansion to new media platforms is driven by the need to re-gain control and market power. One way that established media institutions can achieve control on new media platforms is to make the new platforms their own by transferring well-known content categories and brands. As we have seen, the four media institutions analysed all seem to view the exploitation of mobile media in parallel with their online activities. In the eyes of the media executives, the mobile platform is an extended branch of the online platform, and the dominating view seems to be that these two platforms, over time, would offer more or less the same content. This, however, was not to say that the two media platforms would converge, as the executives stressed the differences between the two media platforms and the importance of adjusting content to fit the specific features of the platform on which it was to be distributed.

The idea of transferring well-known content categories and brands to new media platforms is not a new strategy. Raymond Williams, as early as 1974, pointed to the fact that television was established as a combination and development of earlier forms. Similarly, Bolter and Grusin use the word ‘remediation’ to describe the process where “older electronic and print media are seeking to reaffirm their status within our culture as digital media challenge that status” (2000: 5). Their main point is that new visual media achieve cultural significance precisely by paying homage to the rivalling and refashioning of the aesthetic and cultural principles of earlier media.

However, as Williams ([1974] 2005) and Bolter and Grusin (2000) point out, the development of new media is clearly not just a question of combination and development of previously forms, since the “adoption of received forms to the new technology has led in a number of cases to significant changes and to some real qualitative differences” (Williams [1974] 2005: 39). Even though the expansion to the mobile platform mainly resembles media institutions expansion online, it is natural to think the mobile platform over time will develop its own distinct form with specific content categories particularly suitable for the mobile phone. Also, it is not just that new media is

influenced by the established media industry, the influence also goes the other way, as established media institutions are framed by the introduction of new media platforms. In line with this, the concept of convergence is clearly more than a technological term, since it covers both the expansion strategies of established media institutions as well as the development of new content categories and genres. Further, it points to a reciprocal relationship between established media institutions and new technology, since both established media platforms and new ones are developed and formed by paying contributions to each other.

Notes

1. The changes in the mass media industry have been closely covered by the press, see for example *Economist* (20.04.06, 24.08.06), *Newsweek* (03.04.06), *Time* (13.12.06) and *Business Week* (31.01.07) for an international coverage, and *Kampanje* (17.01.07, 19.01.07, 01.02.07, 20.02.07, 05.03.07, 08.03.07a, 08.03.07b) for a debate on the changes in the Norwegian media market.
2. The concept of 'institutions' has been used in multiple ways. An important division lies in the understanding of institutions as either *spheres* – which brings together a number of organizations, discourses and practices in the media industry at large – or as specific *organizations* in a more limited way (see Moe and Syvertsen 2007 for further discussion), which is the case in this article.
3. As with any buzzword, the term 'mobile media' has been used in multiple ways. Andersson et al. (2006: ch. 1) uses the term widely, including as varied services as ring tones, music, radio, video, TV, games, adult content and gambling, but separate it from wireless Internet services (e-mail, web, corporate access) and communication services (voice, texting, pictures, push-to-talk). Feldmann (2005: 9) take a more institutional approach and define mobile media as "content and services produced or reproduced by mass media institutions for the consumption on a mobile portable device and transmitted via mobile cellular networks or next generation networks that may integrate more wireless networks". I will use the latter definition, focusing on media content and services offered by a selection of media institutions, distributed through the mobile network for consumption on a mobile phone.
4. For instant, Ric Brown, Director of Market Development in Telenor Mobil stated "Everyone likes television" and "there is no reason why they should not like to have it on their mobile" (quoted in *Propaganda* 07.05.04, my translation, see also *Economist* 05.01.06, 12.10.06; *Newsweek* 26.09.05; *DN* 16.02.05; *Propaganda* 25.06.04).
5. This is partly due to a standardized agreement provided by the national mobile operators, giving content providers following the agreement rights to develop and offer content and services to mobile users in Norway (Nielsen 2006).
6. As for the last week in 2006, the most visited website in Norway was VG Net, the online version of the tabloid newspaper VG. The other analyzed media institutions in this study were rated as respectively nr 5 (TV 2 Nettavisen), nr 11 (NRK.no) and nr 61 (P4). See more: http://www.tns-gallup.no/index.asp?type=tabelno_url&did=185235&sort=uv&sort_ret=desc&UgeSelect=200652 [08.03.07]. VG's extraordinary positions online has been notified by international press, see for example *The New York Times* (19.02.07) and *Economist* (24.08.06).
7. Based on a survey from 4Q 2006, an average of 9.1 % of the population (357,000 persons) stated they had used at least one mobile content provider (wap or mobile Internet) within the last week. The telecom operator Telenor Mobile had the most users (133,000),

- followed by VG Mobil (129,000), Dagbladet Mobil (61,000), TV 2 Mobil (51,000) and NRK Mobil (46,000) (TNS Gallup, 2006a). P4 Mobile was not a part of this survey.
8. The wap portals of VG, NRK, TV 2 and P4 were tested on a Nokia N80 mobile phone, in August and September 2006. Thanks to research assistant Erlend Krogstad for help during the tests.
 9. The four informants interviewed in 2006 were Morten Holst, Head of Development in VG Mobil (interviewed 13.09.06), Gunnar Garfors, Director of Mobile Services in NRK Development & New Media (interviewed 27.10.06), Gunnar Stavrum, Director of TV 2 Interaktive (interviewed 12.09.06), and Rune Hafskjær, Head of Format and Development in P4 (interviewed 07.09.06). The study from 2005 was conducted by the research group *Participation and Play in Converging Media*, at the University of Oslo, and consisted of structured interviews with executives, leaders and strategists from the press, radio, television, audiovisual production and mobile content production. See Fagerjord et al. (2006), Maasø et al. (2007) and Sundet and Ytreberg (2006) for other analyses based on this study. See also; <http://media.uio.no/pap/>. The interviews were conducted in Norwegian. All quotes are my translation.
 10. Wap is an international standard for wireless transmission of data. A wap browser provides all of the basic services of a computer based web browser, but simplified to operate within the restrictions of a mobile phone.
 11. Available: http://www.schibsted.no/eway/default.aspx?pid=269&trg=MAIN_5512&MAIN_5512=5583:0:10,1735:1:0:0::0:0 [20.08.06].
 12. The concept of 'stickiness' has similarities with the concept of 'snack culture' promoted by Wired: "We now devour our pop culture the same way we enjoy candy and chips – in conveniently packaged bite-size nuggets made to be munched easily with increased frequency and maximum speed." (*Wired* 15.03.07a, see also *Wired* 15.03.07b).
 13. In 2005, the printed newspaper had a market share of 34 % in the printed newspaper market, while VG Net had a market share of 25 % in the online news market. Market shares available at: <http://medienorge.uib.no/> [15.10.06].
 14. <http://www.vg.no>
 15. The main revenue sources for the VG Group is, firstly, subscriptions and sales of newspapers, and secondly, advertising (Schibsted 2005:32). The importance of advertising is however increasing in line with the decline of printed newspapers sales.
 16. Mobile users would still need to pay for traffic when using the free mobile media services, but this is a revenue stream for telecom operators and not media institutions.
 17. According to the NRK, their mobile TV service works on GPRS, EDGE and UMTS (3G).
 18. In September 2006, these videos included archive clips from *Tre Brødre*, *Melonas*, *Tippeligaen 2005*, *Deadline Torp*, *Brødrene Dahl*, *Dracula*, *KLM*, *Rally-Petter*, *Tazte priv* (audio) og *Autofil*.
 19. See among others the BBC (14.12.06) *International Herald Tribute* (06.12.06) and *USA Today* (03.10.05) for coverage of NRK's mobile services in the foreign press. Since the beginning of 2006, representatives from NRK have participated in international industry conferences such as 3GSM World Congress (Barcelona, 12-15. February 2007), Digital Hollywood (London, 29. November 2006) and Mobil Entertainment Forum (London, 23-24. May 2006).

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Interviews

The informants are addressed by the title and affiliation they had at the time of the interview.

All quotations are translated from Norwegian to English by the author.

Are Nundal, Director of NRK Online, interviewed 16.08.05.

Bjarne Andre Myklebust, Director of Technology in NRK Development, interviewed 26.05.05.

Eivind Landsverk, Head of Programming, TVNorge, interviewed 19.05.05.

Gunnar Garfors, Director of Mobile Services in NRK Development & New Media, interviewed 27.10.06.

Gunnar Stavrum, Director and Chief Editor in TV 2 Interaktiv/TV 2 Nettavisen, interviewed 12.09.06.

Kari Werner Øfsti, Director of NRK Broadcasting, interviewed 18.05.05.

Morten Holst, Head of Development in VG Multimedia, interviewed 13.09.06.

Rune Hafskjær, Head of Format and Development in P4, interviewed 07.09.06.

Steinar Brændeland, Director and Chief Editor in Mobil Media Interaktiv, interviewed 18.05.05.

Svein Aronsen, Director of NRK Development, interviewed 22.06.05.

Torrey Pedersen, Director and Chief Editor in VG Multimedia, interviewed 25.04.05.

Part Three
Competencies and Institutional Practices

The Design Professions in Convergence

Ilpo Koskinen

The political economy of convergence

This chapter looks at what has happened to convergence by analyzing how it shows up in several fields of design. By convergence, I mean the once-popular idea that, with digital technologies becoming ubiquitous, technologies would sooner or later converge (for a useful clarification of “ubiquitous”, see Hargraves 2007). The original technological dreams for convergence, popular at the end of the 1990s, were, if anything, vast. One of the ideas was a New Alexandria: the dream of connecting anything to the digital networks, and being able to access anything from any type of terminal at any time, was like the famous historical library of Alexandria, in which all knowledge was accessible under one roof. Companies like Razorfish created mottos that told us that everything that can be digital will be, and were on a crusade all over the world selling these ideologies. Media houses joined in and, as the mobile industries jumped onto the bandwagon, it seemed that, indeed, the world was about to experience convergence, led by digital technologies.

As we know now, this development has been much slower. Even meager knowledge of the history and sociology of technology could have told industry and politicians that convergence was just one facet of digitalization, another technological change in progress, and one possible competing claim about its direction, rather than a law or even market-based development that would happen whether people wanted it or not. The paradox of the concept is that, although the term as such is little used today after the dot.com bust and massive failures like WAP and 3G in the mobile domain, the idea still lives, though under different names, including transmedia and – perhaps most notably – ubiquitous computing (one of its meanings denoting technology that is everywhere). Many types of social processes drive these developments, even though it is questionable whether we can use the word “convergence” to describe their outcome. In writing about media convergence, Graham Murdock distinguished three meanings of the term: media can merge into multimedia prod-

ucts, media systems can merge, and media institutions can merge. Clearly, convergence has been taking place at all these levels, although much slower than in more aggressive forecasts (cf. Negroponte 1995).

Thus, throwing out the concept altogether would in many ways be like throwing the baby out with the bathwater. For example, just to mention some of the social processes that are still driving convergence: European Union's 7th framework pushes many initiatives that are in spirit, though maybe not in words, heirs of convergence, and many types of institutional agendas nourish research in the most advanced industrialized nations, their research institutes and universities¹. And, of course, there are many types of market- and semi-market-driven processes: the media world packs content into many types of devices instead of focusing on one main interface only. The mobile industries have actively integrated many types of multimedia technologies into their products, making it possible for people to create content in one device, edit it on another, and view it on a third.

This chapter takes a slightly different angle on convergence than the one typically written about. My methodic trick is that I approach convergence from a sociological standpoint. Instead of focusing on what has been said about convergence, I will survey how the design professions see convergence in their work around 2005-2006. I focus on those designers who received their training in art and design departments, rather than in engineering. When it comes to this distinction, the English language is more ambiguous than European languages that clearly distinguish engineering from such areas as *formgivning* and *Formgebung* (for instance, see Koskinen 2006). The design professions provide a good window for studying convergence for two reasons. They tend to be up-to-date technologically, taking action before technologies become available for the common public. They are also fairly small, mostly market-driven, professions. For these reasons, major technological changes take place quickly in these disciplines, and they may shift the balance of the professional field dramatically in the space of only a few years.

Three convergences in design

As I have argued above, many social processes drive design disciplines towards convergence. However, it is important to realize that, although political economy created conditions for convergence, these function separately from designers and what they do. It is the designers' definition of convergence that ultimately guides the way in which they take action and make convergence something more real for them.

The best way to see the importance of these definitions is by comparing three different professional strategies towards convergence. In many design disciplines there has been, with a few art pieces aside, little interest in convergence. In such material-bound disciplines like glass and ceramics, and

also textiles, there have been precious few attempts to combine digital technologies into the actual design material. For example, even though there has been much exploration in intelligent and smart textiles, most work has concentrated on the new materials rather than on digitalization, or bringing media into textiles (Redström et al. 2005). The most important exception is research, which naturally strives towards more abstract thinking. In research, various technologies and media are, to an extent, converging.

In contrast, two recent design industries, media design and industrial design, have been more receptive to convergence. What explains their receptivity to new ideas and technologies is probably simple: these two disciplines are process-oriented and work routinely with complex problems and content. Of course, these two disciplines differ in terms of their relationship to convergence. In industrial design, the main driver has been production technology that has gone through a revolution during the last 15 years from manual to digital technology. However, even though some industrial designers have been working on issues related to convergence, this has mostly taken place through user-interface design, a field in which many industrial designers have excelled. But, few industrial designers have been working on actual media technologies beyond traditional shape-giving and semantic design. Media designers, on the other hand were certainly working in the very hub of convergence – the Web and digital television – pushing people to design and management positions in the media industries that were going through several revolutions, some of which were related to convergence.

Naturally, several issues explain the divergence in how the design disciplines have responded to convergence. Perhaps the main issue relates to how subdisciplines in design construct their identities, and how these identities are built into what we can loosely call the founding institutional practices of design, including the way in which design schools and specialties are constructed. For example, people in design disciplines make distinctions between process-oriented and material-oriented disciplines; those disciplines that work on two-dimensional surfaces and those that work on three-dimensional objects; and artistically oriented disciplines and those disciplines that base their identity on technical knowledge, the marketplace, or research. The main institutions of the design world tend to reify these differences through education and the workplace. While industrial designers and media designers tend to adopt new technologies quickly, in areas such as glass and ceramics technological change is grounded in age-old techniques and traditions. Similarly, the workplace realities differ, and management decisions construct environments that variously expose design disciplines to issues like convergence. When visiting an industrial design company, one sees traditional workshops (wood, plastic, metal) but also a lot of new technology (laser cutters, Rapid Prototyping machinery, CAD/CAM, traditional 3D models). If you go to a glass studio or a ceramics workshop, you find pipes, furnaces and burners. The connection to digital technology could hardly be more different.

There is far less convergence than there used to be

Of course, it is media design, which works with the most malleable of materials in design, which has seen the most dramatic changes. For example, when the Helsinki University of Art and Design established its Media Lab in 1995, it was supposed to work on video and digital art, and also somehow get into the Internet. Almost immediately, the Internet turned into the World Wide Web, giving the Lab a new charter. Knowledge created for the Internet was not enough to cope with the Web, which needed skills in multimedia. All of a sudden, the talk of the Lab was file formats, IP protocols, communication and soon after, other forms of media and media production based on an increasingly digital production process. When mobile phone industry became prominent – and this took place in Finland much more than in most other countries – the Lab got a new reason for living.

The talk of the town was convergence. It seemed inevitable that everyone can fairly quickly access practically any type of content anywhere at anytime through a multitude of terminals, the most prominent of which were to be computers and mobile phones. Even though thought models were not built on the notion of convergence, the argument was there, giving an almost evangelical spirit to media designers, whose design discipline would be in the vanguard because they were comfortable with the digital technology that was supposed to be *the* way forward for design. Not just development in traditional AV media – remember how digital TV was supposed to spread because of the Sydney Olympics in 2000 – but also issues like games and interactive narratives were supposed to offer new work for those designers who were able to ‘get digital’.

As the first decade of the new millennium is slowly coming towards its end, TV is finally becoming digital, even though the wildest dreams of how narratives and all other types of content would become interactive have turned into much more modest claims about better picture quality, improved text-based TV services, and improved interaction with the program guide. What will happen with downloading movies and video on demand remains to be seen.

In addition to digital TV and games, another area in which media convergence is taking place is the 2nd generation of the World Wide Web, which is driven by user-generated content and interaction between people. For instance, Flickr has become almost synonymous with Web-based photo albums, and there are several software startups that have developed ways to integrate the Web and camera phones. Good examples are Yahoo’s ZoneTag and Jaiku.com, a Helsinki-based startup with a mostly American customer base. Of course, one may accuse YouTube, the most popular video-sharing Web page, for various problems. It is easy to be ironic and join the followers of Theodor Adorno when you find one hit for the classic Case Study 21, an iconic house situated in Hollywood Hills and designed by the Los Angeles-based architect Pierre Koenig, but easily a million hits for “Britney Spears

Nude on the Beach”. However, with YouTube, sharing videos has become a part of normal life for millions. Or, take the instance of just how much the Web has eased driving in cities: in what must be the ultimate car culture in the world, Los Angeles, even locals routinely go to the Web to search for driving directions and maps instead of consulting the Thomas Guide, a hefty map that used to be the bible for anyone who wanted to navigate the megalopolis. This is made possible by the fact that the Web and WLAN are virtually ubiquitous in America’s Southwestern metropolis.

With other design disciplines, we find far less evidence of convergence. Take, as an example, industrial design, which is *the* design discipline most eager to adopt new technologies. Industrial design has become thoroughly digital over the last decade. However, even though practically the whole design process takes place in the digital domain, and user interface design has become an important subdiscipline, few industrial designers work directly on converging technologies. Although industrial designers have certainly been active in developing applications for embedded technologies, with the exception of interaction design, industrial designers have been relatively slow to work on media. Industrial designers have been getting more work over the years from IT and media industries, but convergence is not in industrial designers’ vocabulary. It goes without saying that in more traditional design specialties like furniture design and ceramics, convergence has been even less on the agenda.

Small convergences that may get big

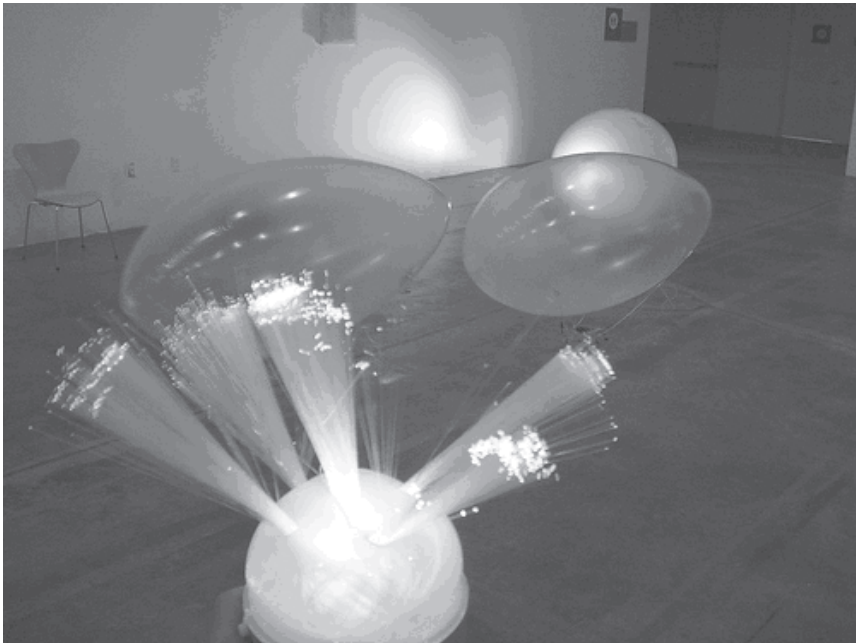
However, this is not the whole picture. What we can call “small convergences” still happen. In particular, there are active research frontiers in which many types of technologies converge with media, mostly pushed by institutional agents such as technology programs on national and European levels. Take the currently fashionable notion of “ubiquitous computing”: with the main exceptions of RFID (radio frequency identification) and mobile phones, few successful applications have come out of “ubicom”, despite more than a decade of intensive research work². However, working largely on public and military funding, researchers have produced many conceptual pieces and technological innovations that illustrate not just the potential of the concept, but also its problems.

As a case study, we may look at “Alavs”, Autonomous Light Air Vessels, designed by Jed Berk at the Art Center College of Design in Pasadena³. Alavs are large, helium-filled air vessels – looking like small Zeppelins – that carry a small circuit underneath them, with a few behaviors coded into them, a communication module, and two fans that move the Alavs around.

Alavs are transmedia devices *par excellence*: they transgress many traditional lines of media and design (Picture 1). For example, they have animis-

tic qualities built into the devices using principles found in biomimetics. Alavs are networked, and are aware of each other's location; they flock together, and seek the company of other Alavs. They also transgress species boundaries: people can "feed" them with a fiber optic device; an Alav shows with red color when it is "hungry"; when approached with the device they beep; and when approached with this feeding device, Alavs "eat"; when they are full, they change color and disappear from the sight. Finally, humans can connect to Alavs using digital communication devices. By calling a certain number, one gets two alternatives to choose from: one can either tell the Alavs that he is a friend or a foe. Depending on this piece of information, the Alavs get closer, or flee from the caller.

Picture 1. Feeding an Alav



Picture: Ilpo Koskinen, Dec. 2006.

Many ideas typical of convergence are at work here. They break many traditional boundaries that people use to make sense of digital technology. However, they also illustrate many of the problems with this notion. The Alav is a nice art piece, and a good technological demo, but it is difficult to see how it could become a mass phenomenon, which, naturally, it was never intended to be. But how could one use it for useful purposes? Or even as a toy? In fact, the critique that evolved in Pasadena, where Berk presented his design, became a collective effort to make sense of how one can understand

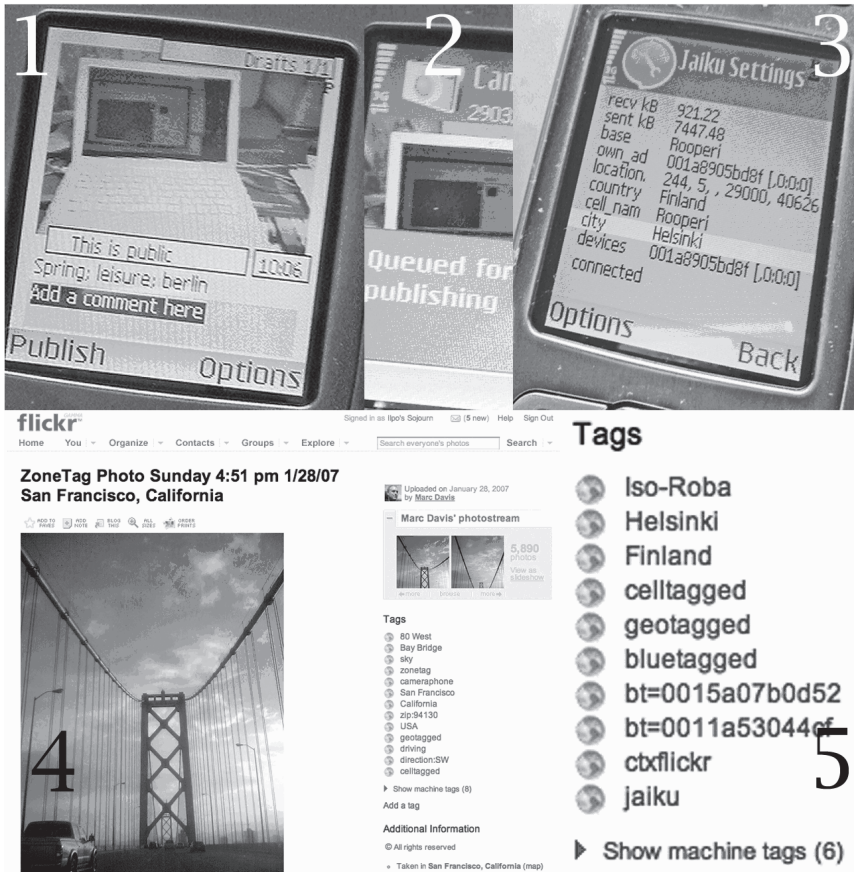
Alavs, not a traditional design critique. Alavs also illustrate another problem in convergence. During the last few years, it has become relatively easy to make things communicate with other things, creating new kinds of behaviors for things that had traditional uses. Also, it has become possible to build networks of things so that these responses were not centered just on individual objects, but also on communities of objects. The problem is that, as it does not fit into mundane categories, technology becomes difficult to understand.

Over the last few years, we have seen many technologies that are ultimately like the Alavs: they are interesting, fun, and initially sound as good ideas, but one doesn't know exactly how. Even though it has become relatively easy to build new things that break the boundaries of mundane thinking, it is often difficult to find uses – or any other rationale than art – for them. Industrial designers, with their hard-nosed attitudes and practices geared towards the market, shy away from things like the Alavs. Such attitudes constantly create only small pockets of convergence.

Occasionally, things in these small pockets may grow into something more significant. Take the example of camera phones. Multimedia messages are far less popular than text messages. For example, in 2005 in Norway, about 489,000 multimedia messages were sent daily, compared to the 504,000 text messages that were sent each hour, making over 12 million daily text messages (e-mail from Rich Ling/Telenor, Jan. 2006). However, several pieces of software have recently come out that simplify the process of sharing photos on the Internet. Using Jaiku.com and Yahoo's ZoneTag, I can take a photo with my camera, track Bluetooth-enabled devices (BT) in the vicinity, and attach cell and even GPS information into pictures. People who browse my Flickr site not only see my pictures, but also know where they have been taken, and which other (open) BT devices have been present when the picture was taken. Picture 2 is a five-picture collage of Jaiku and Flickr images. When browsing the collage, note at least the following things:

- Images 4 and 5 in the collage, cell tagging: I-80, Bay Bridge, Iso-Roba [Stora Robertsgatan], etc. These are named by users.
- Images 4 and 5, geotagging (GPS).
- Image 4, zip code tracking: based on cell information, zip codes have been named by hand by the user.
- Image 4, direction (driving southwest): this tracking is based on calculations from GPS information.
- Images 3 and 5, and below right: Bluetooth tracking. Up, the phone recognized one BT device. Below, two devices were recognized (both images on right).

Picture 2. A collage of camera phone use



Note: Images 1-3: capturing tagging and publishing a photograph, as well as information collected by a smart phone using Jaiku.com software. Images 4-5: a camera phone shot on Flickr.com, and a detail of tags in another Flickr image sent to Flickr by Jaiku.com.

A good deal of thinking behind these technological developments have come from the design world, including my own work on mobile multimedia, but mostly through design students and researchers like my colleague Esko Kurvinen (see Kurvinen 2007; Koskinen 2007). Obviously, it is difficult to know whether these technologies will be smash hits in the marketplace, but, Jaiku.com and Yahoo's ZoneTag are used by tens of thousands of people worldwide (exact numbers are confidential), showing how experimental work in research laboratories may translate convergence-like ideas into working realities for small groups, if not for a mass audiences.

A reflexive view of convergence

The last point deserves elaboration. Design, as with any other form of human activity, can be thought of in reflexive rather than causal terms. Technologies are interpretations and statements made by humans, rather than just technical creations. As my argument above implies, there are many types of reflexive processes at work in the design world. Top-end Danish furniture represents the high artistic end, while toy design represents the most market-driven design in which producing more variation is the key business driver. Similarly, designers work differently. While some designers' inspiration is artistic, other designers distance themselves from art and artistic imagery, and self-consciously orient to technology or the market instead. Concepts like convergence, and trends they aim to capture, become parts of the designers' world through their own definitions and decisions.

Thus, for instance, many ideas in the digital literature may have sounded like a good idea in abstract, but not in context. What is the point in selling the idea that digital TV makes it easier for us to order pizza when any modern city already provides plenty of opportunities for ordering pizza? Or given that current locks are safe, who would trust the function of opening the door at home through an IT-based identification system after years of experience with blue screens in Windows? Some ideas have been just naïve. Take the notion of interactive narratives, which gained some popularity about 10 years ago in media labs in Japan, Europe and North America. Where is it now? There are good cultural reasons for not going in the direction that Sony took then, building a movie theater in Manhattan (where else!) in which the movie stopped at certain points, and continued only when people had cast a vote on where it should go. Some narratives cannot be changed. No one in his right mind can write an alternative ending to the story of Jesus Christ. Or what is the point in taking *Romeo and Juliet* and attempting to "improve" its dialogue by making it interactive? How could people improve its dialogue and characters? Unless smartly rewritten into, say, a game, rewriting, changing a classic is sacrilege. Similarly, there are common-sense limitations that set limits to what one can do with technology. What would be the production cost of a pack of Alavs? Clearly, it is difficult to build a business case for Alavs.

From the standpoint of this chapter, the important thing is that designers take these – and other – issues into account differently, depending on things like their expertise, work environment, and mindset. For most people in the traditional design disciplines, their expertise, machinery, and ideology directs them to work on traditional topics and ideas. Industrial designers tend to take these limitations, whether based on common sense, the market, or production technology, seriously throughout their work process. In the media design world, it has been easier to play with new ideas and to push at the boundaries of existing reality. The main exception has been the universities, in which researchers have played with many ideas related to convergence. For example, in my university in Helsinki, industrial designers have

recently been exploring proactive information technologies, interactive maps, and mobile games. With the exception of user-interface design, the city's industrial design offices have not gone into these experiments since about 2003.

In fact, given these limitations, it is astonishing that so many new technologies have come to the market in the first place. Again, we come back to powerful social forces. It is possible that without institutions like the Finnish Broadcasting Company, the future of digital TV would be far less certain. When monopolies take action, they change society and technology; as sociologists say, these institutions not only restrict development, but also enable it.

However, it is important to realize that, in research in particular, traditional professional identities stemming from disciplinary differences play a far less prominent role than in key institutions and business. When one looks at one of the most recent developments in design research, the increasing importance paid to "ubiquitous technologies" – meaning information technology that is embedded in our environment rather than in grey boxes called computers (Weiser 1994) – one typically faces an area in which the traditional identities play a small role. The main developers of Jaiku.com have been software engineers, interaction and industrial designers, and sociologists. Or, when space becomes a key notion in interior design, architects have skills that come in handy. For example, Ludvigsen (2007) explores *iFloor*, an interactive floor system built to Aarhus City Library, and develops terminology for understanding this interaction. Involved in imagining and creating new worlds, research in design breaks traditional identity lines, and makes it possible for people to pursue lines of activity that hardly fit into the traditions of the design world.

Discussion

In this chapter, I have outlined a few ways in which designers have responded to convergence. Although the term as such is not a part of designers' vocabulary anymore, it is obvious that the media in particular have converged at many levels, and the design world has not been untouched by these developments. Traditional design disciplines have largely positioned themselves outside convergence. Industrial design, more fluent with new technology, has benefited from convergence to an extent. In particular, industrial designers have been important in defining such new specialties as usability and interaction design. In contrast to these orientations, media designers have been in the very hub of action in convergence. In addition to being involved in developing the Web and Web 2.0, media designers have been working on games, mobile technologies, and interactive books, among other new technologies.

As we have also seen, this is not the whole picture. In research in particular, many designers are constantly working on what I called “small convergences” in explorative R&D and research. The example of Alavs, Autonomous Light Air Vessels, illustrates well the ways in which designers create new concepts for exploring the boundaries of existing technologies, and question existing categories, thus opening up possibilities for the future. Alavs also illustrate many types of mundane and cultural problems in convergence which set limits to convergence.

However, as I have stressed, designers are not passive agents in convergence. They are shaping it at many levels through many types of action, all the way from actual product development to explorative, high-risk research. Design, just as any other form of social action, is reflexive. When we understand design as reflexive agency rather in reactive terms – that is, we pay attention to the fact that designers are also shaping society – we begin to see some of the reasons why different design disciplines have taken different paths at the face of convergence. Media designers have been at the heart of convergence, adapting to change, whether technological or content-based, and often even driving that change. Industrial designers’ work has become increasingly more technological, which has opened ways to work with digital materials. However, their identity has changed more slowly. Finally, at the more material end, there has been little, if any, interest in convergence, with identities ever more firmly rooted in traditional and artistic understandings of the self. However, as I have shown, in some areas of professional action, these lines have been less pronounced. The best example is research in which traditional professional identities – such as being an artist of an industrial designer – play a far less prominent role than in more established areas of design. Thus, even though the main lines of professional identity may explain a good deal of what designers are doing in the face of convergence, the design world also has practices in which these lines of identity are questioned.

Acknowledgements

This chapter is based on a series of informal conversations at the Art Center College of Design in Pasadena, IDEO in Palo Alto, and Palo Alto Research Center. The chapter was written at the Art Center, which is reflected in its content.

Notes

1. <http://cordis.europa.eu/ist/about/fp7.htm>
2. <http://www.ubicomp2006.org/>
3. <http://www.alavs.com/>

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Convergence, Museums and Digital Cultural Heritage

Dagny Stuedahl

This chapter will explore the challenges of convergence and divergence processes in mediation of digital cultural heritage in museums. On the one hand, the idea of convergence of digital media has brought to the front a vision of future cultural heritage institutions as multidisciplinary crossings of the institutional borders of archives, libraries and museums. On the other hand, the convergence of technologies, software and categorizing systems and standards mirrors the diverging practices, professions and conceptions of qualities that are involved in documenting and archiving, as well as mediating, cultural heritage.

There are several major aspects of the discussions about convergence that are relevant for museum communication, such as convergence of content (audio, video, data), convergence of platforms (computers, TV, Internet and games) and convergence of distribution (Forman & Saint John 2000; Milekic 2001). These all point to practices of museum collecting and mediation. Also rhetorical convergence (Fagerjord 2003) offers a valuable direction for design of museums communication and exhibitions, as language and image are connected to different meaning making processes. Further, the notion of genre convergence (Liestøl 1999, 2003, 2006) that articulates "the way in which the media elements are combined to form conventions, structures and messages (documents) of certain types (genres)" (Liestøl 2006: 262), are important in helping create museum experiences for multicultural visitors, and as a means to meet the challenges of making connections to multiple individual interpretations.

A strong motivation for transformations and converging processes in museums is related to establish accessibility to cultural heritage material (e.g. Lund principles 2001) on policy level, and on public level in growing expectations for archives, museums and libraries (Usherwood, Wilson & Bryson 2005). Museum institutions are in the process of transformation from being focused on collections to being focused on making narrative connections with other cultural heritage institutions, as well as to a focus on learning and experience. So it is that "In the future, users of cultural resources will be

able to enjoy new interactive cultural heritage services and products that relate to their personal lives. They will be able to manipulate digital artefacts online and participate in communities of interest" (DigiCULT Report 2002: 8). This transformation is deeply related to the possibilities and challenges that are tied to the processes of digitalization of cultural heritage. The visionary claim above is closely bound to the fact that cultural heritage material in archives and museum collections now can be publicly accessible because it is represented in digitalized forms. In this way, in principle, archives and databases can be connected to each other by way of existing technical infrastructures, and at the same time be publicly accessed by the Internet.

In Norway the idea of convergence was put to reality in the cultural heritage sector on a policy level in 2003 when the Norwegian Archive, Library and Museum Authority (ABM) was established. This involved the merger of the Norwegian Directorate for Public Libraries, the Norwegian Museum Authority, and the National Office for Research Documentation, Academic and Special Libraries. ABM is expected to focus on cross-sectorial challenges and cooperation between museums, libraries and archives. One of the main challenges is to strive for better collaboration in developing programmes and standards that make it possible to use sources across traditional borders, and to take care of material that is created in digital form (Østby 2006). Such fusions between sectors of libraries, archives and cultural heritage institutions are currently happening in other countries, and is especially emphasized on a European level.

As part of institutional changes in the museums sector, convergence involves a wider change that also concerns theoretical and practical levels. The role of the museum professional is becoming redefined as an interpreter rather than a legislator of culture (Ross 2004). This growing understanding of museums as reflexive institutions is an important part of what has been called new museology (Vergo 1989).

More and more of these institutions have made collections partly or wholly available on the web. It seems, though, that convergence on the level of practice in the institutions is problematic and filled with difficulties (Milekic 2001). The claim has been for more multidisciplinary approaches to the public relations of these institutions. But this also causes one of the main challenges related to the inability to meaningfully work across collections placed in multiple institutions (Goldman 2005).

Trying to overcome these shortcomings of standards and divergence of database systems means that we need to face the challenges (Wilson 2005) that museum communication meets when digital media is involved. The crossing of institutional and national borders between different cultural heritage institutions will be part of the demands of 'translation' when future museums audiences are engaging with, and making sense of, these new forms of museum content in multiple ways. This is why museums are interesting cases for understanding convergence and divergence in relation to digitalization and cultural heritage communication. This chapter focuses upon the

practice of digital collecting and communication in museums. Experiences from digital documentation and mediation of cultural heritage research is discussed through two projects situated at the university of Oslo, "The third Gokstadboat" (Planke 2005) and "Open Archaeologi" (Andreassen 2006 a, b). It is in documentation and mediation that we see that technical convergence collides with divergence of professional practices and routines, as well as diverse standards and taxonomies of museum collections and repositories.

Background

The vision of publicly accessible museums, where collections and research documents are acquired and accessed by teachers, students and communities of interest, and manipulated as issues of collective communication, is supported by the argument that this will increase interest in the original collections (DigiCULT 2002). Public access to digital cultural heritage, both national and international, is understood as a desired situation for the user because it raises their cultural and historical awareness as well as raising literacy in the information society. The ideal is a searchable cultural heritage information repository that crosses institutions and databases, as well as borders of departments and disciplinary fields related to archives, libraries and museums (ALM). Much work has already been done to digitise collection catalogues and make resources available in digital format in conventional databases on a European level. While Norway is not part of the European Union, the activities in the field of cultural heritage definition, collection, documentation and communication is of major relevance for management and development of Norwegian cultural heritage institutions. This is both to meet with international requirements and expectations in tourism, and to place museums as central knowledge institutions in future Norwegian society. However, there are still obvious challenges, for example in the lack of sufficient appreciation of the implications of cultural diversity for ICT systems, the lack of multi lingual and multi cultural thesauri and taxonomies being an example (EPOCH, 2007, D2.11).

Convergence in museums is thus where old and new media meet, where documents on papyrus are represented in digital mediational platforms and where wooden fragments from Viking times, for example, meet with current public expectations about availability and interaction. Such expectation has to be met with a focus not only upon digitisation of collections and accessibility to databases, it has also to be met with an emphasis on the role of mediation – this distinguishes the goal of museums from the goal of libraries and archives. A virtual museum is a digital library that, in addition, is charged with the mission to interpret and proactively communicate cultural heritage, rather than just provide access (EPOCH, 2007, D2.11).

New relationships with users and museum visitors are built in these interactive situations. These fresh relationships are based on a convergence of various disciplinary activities inside museums as exhibitions designers, collection managers, public and educational professionals and information departments at the museums will collaborate in new ways. In addition to the convergence of different user situations, the onsite museums may be connected with a learning situation where information is researched and communicated collaboratively. We also see that the introduction of social software and social media, such as blogs and wikis, builds relations between communities outside the museum walls and museum professionals in ways that are totally new. Social media like wikis and blogs help to create a museum that is based on a many-to-many communication model that integrates museum visitors with museum websites, with the museums' presentation of knowledge (Russo et al. 2006).

Historically, museums build their authority by defining legitimate cultural knowledge based on their authentic collections of objects. From this standpoint, interpretations of the past are mediated with authority based mostly on the primacy of the museum's collection. The question of what authority museums will have in a future society characterized by convergent and participatory media is therefore a highly important one. To illustrate some of the consequences of the introduction of social media, we could look to Australia, where the Sydney Observatory blog site on the website of the Power House Museum is used as communicational tool between a senior museum curator, the museum's site-visitors as well as amateur astronomers. In effect, the blog site functions as a platform for stimulating communication that crosses national and international borders. The experiment has been reported as representing an extension of museum authority rather than questioning it, as the user-generated content of the museum-website functioned as a catalyst for bringing to the forefront the expertise of the museum (Russo et al. 2006).

This example reveals interesting issues related to notions of authority and authenticity in museums as well as to the semantic level of museum communication. This is especially the case in relation to convergence and divergence processes of collection management, digital communication tools and user-created content in museum institutions. It seems that, currently, museum institutions do experience convergence between practices inside the institution, as, for example, when the curator is given a role as communicator in direct contact with museum visitors. This convergence brings the differences of knowledges related to the museum's objects to the forefront. Learning from the experiences at the Power House Museum, communicating multiple perspectives and issues, does seem to strengthen the museum as a knowledge institution.

Standards in museums

Digital media in museums fill several functions: to document, to restore, to save, to catalogue, to communicate, and to invite visitors to interact with objects and the exhibition. From one point of view, converging different technologies and functions can enhance the mediation of digital cultural information for users. The alliances with scientific communities, the web-accessibility to databases, the GIS techniques provided etc. can in future converge with publishing, as well as broadcasting activities (Jäschke, Hemmje & Neuhold 2000). The process towards the open access to museum collections, as well as the digitisation of collection in multimedia formats, presents a change for the institution and its practices because the museum visitor or user of the library may take a more central and active role.

The conversion of different types and versions of software and documents in order to make databases and systems accessible is not an easy task. An even harder issue is that of divergence because of the heterogeneous standards, ontologies and semantics that are at work in the different institutions. The opening of archives for public search interests needs to find intermediaries that can combine many different search categories – and at the same time point to the needed object in the archive. This is a challenge not only for ontologies used in categorizing, identifying and making typologies, but also for building reflexivity into the knowledge systems that libraries, museums and archives offer.

The convergence of digital tools and systems does bring to the front other and more serious divergence processes that are also related to museum practices and the communication of cultural heritage interpretations. One of these is related to standards of taxonomies and typologies that are used to make digital museum objects and documents searchable and accessible for the public. Agreed standards are understood as an essential part of reaching the vision of an integrated world of cultural heritage knowledge: “A huge amount of effort is needed to achieve agreement between a representative international group of experts on the specification of any standard” (EPOCH, 2007, D2.11: 109).

For a richer set of codings, several projects and institutions currently use a new standard for a conceptual referencing. Called CIDOC CRM, this standard is based on the requirements of the Dublin Core, but focuses on a metadata level, suitable to encode information about cultural artefacts and their history. Metadata is data about data, and is used as finding aids for vast amounts of resources. Metadata gives contextual information about objects/content as well as content summaries. To be effective, metadata has to be uniform, appropriate and has to economise content (Crofts, Doerr & Theodoridou 2000).

The CIDOC CRM emerged out of an object-oriented approach in order to deal with the necessary diversity and complexity of data in the domain of cultural heritage, in contrast to data in libraries and archives. The standard is therefore based on a large group of categories describing the item in rela-

tion to events, contextualising it both in its different times, and in relation to other resources.

The CIDOC CRM is in this way intended to promote a common and extensible semantic framework with which any cultural heritage information can be aligned. It is intended to be a common language for domain experts in museums, libraries and archives, as well as for designers and implementers, to inform information systems design, and to serve as a guide for good practice of conceptual modelling. Digitalization projects on museum collections has shown that digital categorizing systems create possibilities for a broader presentation of the museum objects, both visually and in text. This challenges the existing categorizing system used by museums. Experiences with the implementation of CIDOC CRM in a project related to a university museum collection in Norway show that the rewriting of material into CIDOC CRM does question former categorisations (Ore 2001).

Still, there exists an ambivalence related to standards, as standardised content prescriptions and structures do conflict with diversities (Croft, Duerr and Theodorou 2000). The multiplicity of metadata approaches from different institutions in ALM-sectors, shape a "landscape of well-justified diversifications" (Croft et al. 2000). The need for systems that can identify the same contents in heterogeneous structures, and in varying levels of detail, meanwhile, is common. CIDOC CRM provides a metaschema of fundamental categories that focuses on the ontology that underlies relevant conceptualisations of material cultural heritage (Croft et al., 2000).

The two cases that will be described in this article, illustrate the need for a common and shared ontology to archive and make cultural heritage material searchable and accessible in databases. This need for shared taxonomies is well known in the ALM sector and in research documentation archiving as such. The challenge is to find archiving standards that suit digital recordings that are common today. It is also a challenge to find standards that become boundary objects between different groups of users, both in current and future contexts.

Boundary objects and standards

The concept boundary object was introduced by Susan Leigh Star and James R. Griesemer in the 1980s in a study of the development of the Museum of Vertebrate Zoology (MVZ) at the University of California, Berkeley at the beginning of 20th century. Unlike most other natural history museums of its time, based on private collections and curiosity chambers, MVZ was a museum devoted to scientific research. Star and Griesemer's study followed the first director of the museum and his work in building the research-centred natural history museum. This development involved a changing relationship between amateurs and professionals, between academic and lay worlds,

which had built an intersection in the field of natural history. The study showed that the development of the museum and the professionalisation of biology in America was dependent on the alliance between an amateur naturalist/patron and an early professional scientist, as well as on pragmatic tools for solving the problems between the heterogeneous groups that were involved in shaping the museum (Star & Griesemer 1989). Star and Griesemer established the concept boundary object as one of these tools:

Boundary objects are objects which are plastic enough to adapt to local needs and the constraints of the several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual use. These objects may be abstract or concrete. They have different meanings in different social worlds but their structure is common enough to more than one world to make them recognizable, as means of translation (Star & Griesemer 1989: 393).

The challenges for standards to become boundary objects for collectives of researchers, amateurs and communities of interest is interesting. It seems that the ability to adapt to heterogeneous practices, while still being specific enough to meet with individual needs, is the main challenge. In many ways, the problems that Joseph Grinnell met in his building of a scientific museum at the beginning of 20th century reminds us of the challenges that the CIDOC CRM conceptual model for digital cultural heritage material and information meets today: it is about building alliances and ensuring trade across borders, while at the same time ensuring autonomy of work in intersecting communities.

In the following section, two cases will be used to discuss the flexibility and ability of the CIDOC CRM standard to intersect heterogeneous individual practices in archives, libraries and museums. CIDOC CRM will be examined as a boundary object that is necessary for the convergence process of ICT and institutional practices of open access to public knowledge. Looking at CIDOC CRM as a boundary object makes visible the negotiations that are needed to fit the standards with the practices in museums concerning communication of this material. The two cases are both related to cultural heritage research processes: the first case is the mediation of a reconstruction project and the second is the mediation of an archaeological excavation.

Reconstructing the third Gokstadboat: Dealing with standards

In order to demonstrate the challenges of converging technologies and standards, a research project related to the digital communication of a current cultural historical reconstruction project will be discussed. The project is focused on mediating the process of reconstruction of a Viking boat. The Gokstadboat was originally found in 1880, in one of the largest archeologi-

cal findings of Viking times in Norway. Three boats and remnants of the Gokstadship were found in what is supposed to have been a king's grave at Gokstad near Sandefjord, south of Oslo. The Gokstadship and the three boats were found cut into pieces and packed flat in the grave. The ship and two of the boats were reconstructed in 1945 and displayed in the Vikingship Museum in Oslo. In the museum the reconstructed boats and ships is presented as complete and true, as if there were no doubt about the form and shape of the nine hundred year-old Viking ship. The Vikingship Museum is the most visited museum in Norway; it narrates the official version of Norwegian Viking history.

In the museum storeroom, the third boat from the Gokstad excavation has been stored in approximately two hundred pieces and fragments, as they were found in 1880. This boat was not reconstructed with the others because too many fragments were missing. A further problem facing its reconstruction was that the boat had fragmented into too many pieces (see Fig. 1 below).

Figure 1. The fragments from the third Gokstad boat in storage at the Vikingship Museum, Oslo



The reconstruction of this third boat was done by firstly translating the fragments into cardboard and then building a cardboard model. This was then followed by the construction of a full-scale model in wood. A reflexive approach is integrated in the design of the reconstruction project. This is

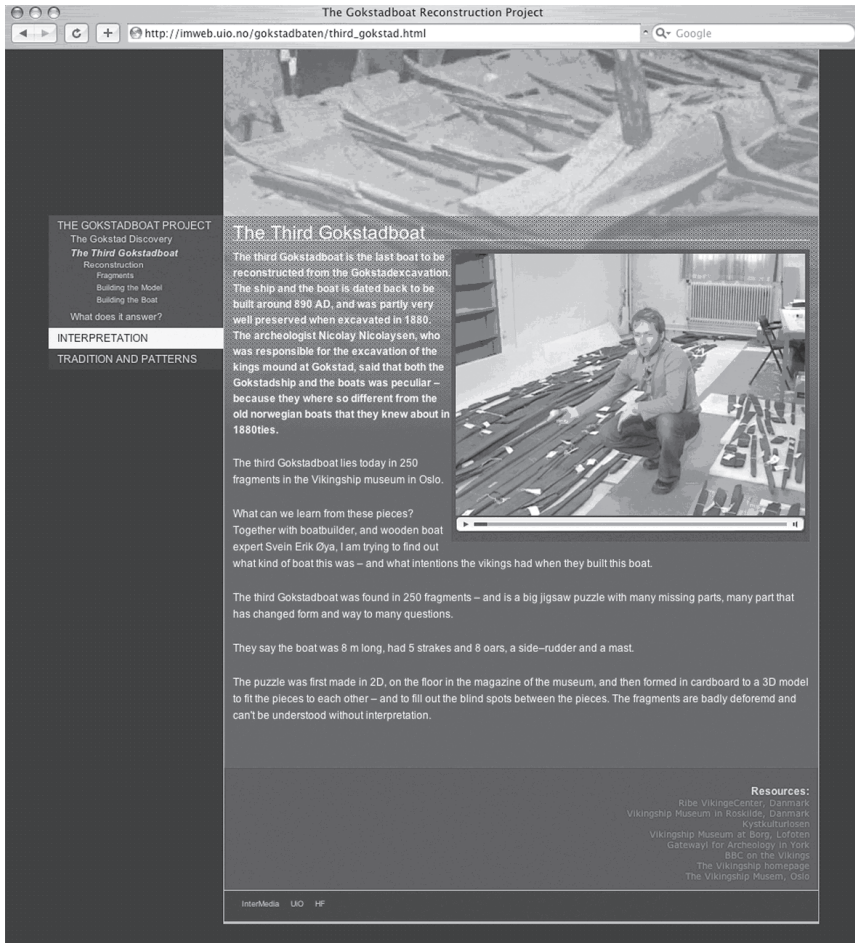
achieved by the way the researcher involved in the project reconstructed several versions – or interpretations – of the boat. He further documented the reconstruction process underway, over time, in order to make his interpretive process transparent. However, what was also important was that Norwegian craftsmen's knowledge of traditions of boatbuilding were actively included.

The reconstruction, carried out by an ethnologist and a craftsman of wooden boats, is documented by way of digital video, audio and photo. The choices, knowledge, and understanding that are embodied in the reconstructed boat are documented in over 50 hours of recordings. This is in addition to the researcher's research diary and photo material made for documenting the process as well as for producing material for analysis. The video recordings document the reconstruction as a process of interpretations and negotiations. They reveal all of the chaotic phases, disagreements, and uncertainties of the research, and of the ultimate reconstruction. This material is used in a research project focusing on digital communication of the project on a web-based site – as well as with mobile devices in exhibitions.

The claim of the digital mediation project is that digital research material can give a valuable insight into cultural-historical research and knowledge-building. With the help of digital media, digital documentation in archives, as well as a digital publication system, mediation of research can make use of the empirical material. Digital media make it easy to build a rich documentation. This makes it possible to show how interpretations of a historical object developed during an excavation or a reconstruction. As a result, it is easier to show how the research process is part of a larger scientific discussion on an institutional and an academic level, to compare findings from other research projects, and, by way of the mediation, define the context of the individual research findings.

The ideas of the mediation project built on the assumption that convergence of media and standards would be a helpful tool for developing new ways of conveying and mediating research. However, the idea to use digital research material, archived in databases for building a more lively mediation was not easy to realise.

In the research project, principles of annotation and archiving have been studied, with the goal of making the content accessible in databases for narrative-based mediation. The aim has been to make a system that allows for multiple narratives based on the same digital content in the databases. In the process, the digital video material was tagged with a description of the sequences. In this case, the CIDOC CRM standard for metadata was used for both systematising the material and for connecting specific material to the complex systems of categories and concepts in the public archives established by the Museum project at University of Oslo. This systematising is not directly bound to digital technology, but to the categories and semantics in CIDOC CRM. It is therefore the standardised and converged categories, rather than the technology, that play an increasing role. In this way they

Figure 2. The Website mediating the reconstruction of the Gokstadboat

influenced the researcher's meaning-making processs in his analysis of the research material.

The CIDOC CRM ontology focuses on objects and events – this has its background in the standard normally used to categorise documentation and representations of tangible objects. The task of the researcher to translate the CIDOC CRM object-oriented ontology to intangible processes seemed overwhelming. Also the claim of the CIDOC CRM standard to provide a broader presentation of the object caused our researcher trouble during the categorization of his empirical video material of intangible processes, where the objects had a less central role in relation to the understanding that was evolving. The CIDOC focus on objects and events as a departure point for categorising in a broad spectrum of classes was additionally difficult to manage

with the 50 hours of video material that documented the reconstruction process. The video recordings were documenting developments and processes rather than objects that can be related to defined events and times. It was nearly impossible to define the objects in the recordings, as they were changing all the time. It was also difficult to identify the points in the process that could be called events. Reconstruction processes evolve over time; one encounters a rather invisible and intangible process that can be documented on sequences of video recordings. Yet these recordings need additional explanation and contextualisation to make the development visible.

The desire to categorise the video material was first of all caused by the aim that the research material from this reconstruction process should be accessible by the public. Establishing a contrast to documentation from former reconstruction-projects of the Gokstad-excavation, the idea was that access to the research process would demonstrate how cultural historical research is a reflexive, interpretative process that is related to its context. Because of the overwhelming amount of work, the researcher decided to concentrate on action-based mediation of the reconstruction-project, in workshops and seminars based on physical participation.

The project shows how the convergence of technologies poses interesting questions and brings to the forefront the divergence of knowledge, categories and ontologies that lie behind the systems that are converging. Not all convergence of technical systems leads to successful convergence on the knowledge level. The case demonstrates how convergence of digital media challenges knowledge structures as concepts, categories and semantics. The next case illustrates how convergence of the CIDOC CRM standard to design a website for mediation of archeological excavation processes meets some of the same challenges.

Open archaeology: Local negotiations with standards

The project named Open Archeology was established by the Cultural Historical Museum, University of Oslo, in 2004. It started as a pilot project for developing digital practices to mediate the archeological excavation process at the museum, as well as to mediate archaeology in new ways (Andreassen 2006a, 2006b). Traditionally, excavations are mediated after they have been physically completed, and by way of the findings and objects that were the result. Open Archeology has the goal of mediating the unfolding of archaeological excavation processes, from the very planning and governmental and communal negotiation to the practicalities of excavating practices. The pilot has developed into being a pilot project not only for the antiquities section at the museum, but for the communication department of the museum as a whole. Open Archeology has as its main focus to build web mediation of digital registration, conservation and publication methods

that are at work in excavations. The archaeological excavation process is illustrated by two current, ongoing, archeological projects: the Odberg Project and the Sande Project. But the structure and concept of the web-based mediation is thought to be a model for the mediation of future excavation projects as well.

Figure 3. The Website of Open Archaeology



One of the main motivations behind the project is to publish the excavation process for masters-level students in archaeology. The idea is that the website mediates the excavation as a process of interpretation. This involves mediating how different perspectives from the disciplinary history of archaeology, as well as different disciplinary archaeological schools, will analyse the objects that are found in the excavation. The goal is to combine the material from excavation processes with information stored in several information sources: in the cultural historical databases of the University of Oslo and the geographical information stored in available geo- databases in Norway, as well as existing 3D-visualisations that are stored in other departments of the museum. By making such connections, it is intended that information and material and its making are available for the creation of heterogeneous narratives of diverging user groups (Andreassen 2006).

The excavation is mediated by digital photos and texts, but also by some digital video recordings that have been made especially for publication on the website. The mediation on the Open Archaeology website, therefore, is mainly based on texts. These describe several types of activities during the

digs and the different information types that are used: the soil, the layer, the position of the object in relation to other objects, etc. The excavation practices, the conservation practices, as well as the archaeological categories and perspectives that are used to analyse the objects, are important in the mediation because they illustrate how archaeology is based on interpretations. They also help reveal how interpretations are situated in a context and in a locality.

The project began through a collaboration between an archaeologist at the museum starting to document an excavation project, and the person responsible for the databases connected to the museum. At the museum itself, and for other archaeologists related to the museum, the project was radical in that it was based on mediating the excavation before the analysis and categorization of the findings was finished. The convention was that archaeological material from digs was not published until five years after the excavation in order to ensure analysis and scientific publishing. It is therefore understandable that the goal of Open Archaeology to mediate the process did indeed confront several conventions in archaeology. The project started with the individual material from the archaeologist's own digs. Later she was allowed to use the empirical material, such as field notes and photos, from a colleague from another dig at the museum department. The project also grew to be integrated with a multimedia research lab that supported the project with software, competencies in databases, social software and webdesign. This directed the project towards a more generalizable development process, as well as to the integration of experiments with social media, such as wiki technologies, as a platform for integrating any visitor to the museum's website in their web mediation.

The web categories and searchable tags for mediation of the archaeological material established in the project, therefore, had to be general enough to be used on several excavation projects in the Open Archeology project in the future, and also had to be specific enough to be able to mediate the excavation in question. The Open Archeology project had as a goal the mediation of the dynamics between excavation practices, the archaeological discipline and archaeological interpretation. The design of the website was built on categories from the CIDOC CRM conceptual model. As conceptual entrances into the material, it was decided to concentrate on the historical time of the site, the time of the excavation and the archeological time. It quickly became clear that these times alone did not make clear how different perspectives on the objects in question lead to different understandings. A goal was to show how, for example, a processual approach, or a post- processual, cognitive or contextual archeology approach, would allow for the analysis of the same object in different ways – and of course with different understandings of the object. To make this happen, the same object had to be categorized and made searchable in relation to multiple categories in the CIDOC standard, such as historical time, the archaeological time as well as the time of the excavation. The problem though was that,

despite the CIDOC standard opening of categorizing in multiple times – it did not support categorizing in relation to multiple interpretations.

As a solution to this, it was suggested that scientific perspectives, or interpretative perspectives, could be conceptualised as time. This would make it possible to design searchable crossings between the conceptual categories and the perspectives implemented in the specific excavation.

Because the Open Archaeology project mainly focused on telling the story of archaeological processes by way of texts and photos, it was easier to use the CIDOC CRM conceptual model. Making connections between well-structured times is not an unknown task for archaeologists, which could also be a reason why Open Archaeology had more success in using the CIDOC CRM conceptual model. Also practical issues, such as the fact that the project had a team that could discuss the search possibilities and the categories needed for multiple understandings, were an important part of the more interesting position that CIDOC created.

Discussion

This chapter has shown how convergence between technologies such as databases and archives builds a basis for the claim for “seamlessness” and “public access” of digital cultural heritage. It also demonstrates how this has been based on the development of connections between the database systems, conceptual standards and social practices. With references to applied case material, the chapter reveals that these ideas of converging developments do, however, highlight the opposite: they show divergence on the level of multiple knowledge constructions, diverging concepts and categories that are involved in the social practices, ones that, in turn, relate to the standards.

The chapter uses the concept of the boundary object to examine the way the tools, that are part of converging technical processes, are becoming part of new social practices in museums. The CIDOC CRM standard is examined as a boundary object for different professionals working within the field of cultural heritage. The two projects referred to have the same goal: to mediate cultural history knowledge as based on interpretations of objects and findings. However, in contrast, the project also shows that the CIDOC CRM standard has a different position as a boundary object in a reconstruction project compared to projects concerned with mediation and communication.

The two cases offer different reactions to the CIDOC CRM standard and its attempts to converge different categorisation systems. The cases show that using CIDOC CRM for communication and for empirical analysis are related to very different levels of granularity and meaning-making in relation to the material in question. In the example of the mediation of the reconstruction process, it became necessary for the individual researcher to negotiate very

closely with the standard when using it to categorize intangible and processual material. This confirms the findings from other studies on use of metadata for categorizing cultural material, which concluded that “metadata determine the virtue of the limits and possibilities of the object” (Verran et al. 2006). The processual approach to analysing reconstruction came into conflict with the event-based and object-oriented ontology of CIDOC CRM because it was too time-consuming to adapt to (Stuedahl & Smørðal 2007). The metadata ontology forced a determination of a beginning and an end of the event, and, therefore never did become a boundary object for the work of the individual researcher.

This was less the case where CIDOC CRM was used as a categorizing system for the website in the Open Archaeology project. Here CIDOC CRM functions directionally in sorting out the information on the website, and making searchable categories for web users. Open Archaeology was a project focused more on the mediation of the archeological process on a metalevel, that is showing the practices and influences of the analytical work, than on using the CIDOC CRM as a tool for the empirical analysis involved in the process.

This chapter argues, from the two cases, how the consequences of converging standards does make a difference – but have different implications for different individual uses inside the same social practices. To obtain a boundary object for the practices for cultural heritage work inside museums, the CIDOC CRM model has to relate to the granularity of categorizing empirical material, as well as to the need to maintain limits and possibilities of fluent objects, such as processes, and keep them open and undetermined.

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Mediation Between Competence and Convergence

Knut Lundby¹

At the turn of the new millennium, the vision about technological progress with converging networks, terminals and services were about to be tested. In Norway, a green paper on convergence presented in 1999 identified exactly the convergence of services, networks and terminals – and of markets – as the key aspects of the overall merge of telecommunications, the computing and media sectors (NOU 1999: 26). The times were regarded as ripe. The Internet was established and mobile networks beyond the GSM cell phone standard were about to be launched, although 3G technologies were still in the advent. Terminals had become handheld but not as handy and multifunctional as later generations of mobile phones. Future uses were considered. How could individuals, segments and institutions in society benefit from the technical convergence of networks and terminals? There were many big market dreams and simple techno forecasts. Expectations were also invested into specific studies. Several national² and Nordic research and development projects were initiated to explore possible new services and uses. Applications in the field of learning and education received a lot of attention due to transformations in schools and universities. KNOWMOBILE is an instructive case of such research from a period when expectations about technological convergence were high. KNOWMOBILE related to ideas on just-in-time learning. The project resounded with hope that technology would make learning easier and provide ‘just-in-time’ solutions, i.e. on-the-spot, when they are needed.

A Nordic project

The KNOWMOBILE project researched “Knowledge access in distributed training: mobile opportunities for medical students” (Lundby 2002). It was a Nordic project, part of Nordunet2, a research and development programme initiated and funded by the Nordic Council of Ministers. Nordunet2 aimed

to achieve first-rate competence in advanced use of networking for research and education. The focus was on innovative network applications that could fulfil end-user needs. Nordunet2 looked for state-of-the-art projects.

The KNOWMOBILE project was an early step into convergence of wireless mobility for competence in new work practices. The field was that of medicine; the work arenas were hospitals and offices of general practitioners (GPs), during assignments in the medical school.

KNOWMOBILE was based and coordinated at the University of Oslo, with Telenor, Ericsson, Hewlett-Packard and Umeå University as partners.³ To evaluate the relevance and applicability of the Norwegian case for medical education in other Nordic countries, MEDCAL (under The Council for the Renewal of Higher Education in Sweden) prepared a Nordic reference process (Petersson 2002).

Within the host university, the Faculty of Medicine and the Department of Informatics took part in KNOWMOBILE as well as the coordinating body InterMedia, University of Oslo. InterMedia is an interdisciplinary research centre focusing on design, communication and learning in digital environments. As the owner of the education programme, the Faculty of Medicine had the key role in the implementation of the KNOWMOBILE trials (Roald 2002).

Learning with technology

KNOWMOBILE related to students entering the 10th semester of the medical school, autumn 2001. In this semester the curriculum focuses on 'Patient and society'. In the autumn of 2001 the students were on assignments at local hospitals and with general practitioners at eight different locations in Southern Norway. The present chapter explores the consequences that convergences of networks, terminals and services may have for learning and competence-building in this context.

The Faculty of Medicine at the University of Oslo has a problem-based learning (PBL) curriculum for all the basic medical training. The 10th semester students of the preceding class, the Spring 2001 group, had been followed by researchers studying the problem-based learning in face-to-face groups compared to PBL-activities online in distributed groups (Lycke, Strømsø and Grøttum 2002). They concluded that perhaps the most important outcome of the innovation for the Medical Faculty was the way PBLonline connected experiences during the clinical assignments to the campus-based curriculum. It also gave the students and their tutors a means to discuss subject matter and social concerns even if they were dispersed all over Southern Norway (Lycke, Strømsø and Grøttum 2006: 59). A converging sociocultural network for online learning had been developed. However, Strømsø, Grøttum and Lycke (2004, 2007) found that, compared with face-to-face communication, computer-mediated-communication may be a poorer medium in coordina-

tion of the PBL activity. The role of the tutor to mediate discussions became even more important in the online PBL groups.

Bård Ketil Engen (2005) studied how this introduction of online, distributed, PBL in the medical school at the University of Oslo depended on relations of trust. He pointed out how the different forms of mediation distinguish ICT-mediated education from teaching and learning in face-to-face situations. ICT-based education depends on social aspects beyond a technical infrastructure. Network convergence has to be met with what Engen terms network trust. The technically oriented convergence of services that the distributed PBL groups represent, depend on a wider or deeper convergence of online and offline social practices within the Faculty of Medicine that requires trust in the medical school as a system.

KNOWMOBILE studied just-in-time functionality with Internet-based educational resources on mobile, handheld equipment. In 2001 this was front technology and pioneer research. KNOWMOBILE aimed to develop and evaluate net-based solutions for knowledge access in distributed training of medical students, leading up to their lifelong learning. The focus was on the students' needs for just-in-time knowledge in training situations as future mobile health workers, and on the learning processes in such distributed, net-supported training.

The project looked into how dispersed learners, in a variety of local contexts, could use the net to access and apply relevant knowledge and information for their training practice with patients. It also focused on how students in face-to-face situations, as well as in distributed communities of learners, could access and apply relevant knowledge sources from the net to build collaborative support structures for their training practice while away from campus.

The students had just received their preliminary licences when they embarked on this practical part of their medical education. This might be one reason why they wanted to apply the PDA for clinical as well as for learning purposes. The intention was to concentrate on possible uses related to the assignments with the general practitioners. However, the students clearly showed an interest in testing the PDAs in a hospital setting as well.

The networks and terminals that were employed by the medical students mediated their on-site access to knowledge resources for the services they were in training for future work practices.

Mediation inbetween

Processes of mediation stand between the competence that is sought for the medical students and the technological convergence that allows for mobility and flexibility in their work assignments. In this sense, KNOWMOBILE came to be a building block for the programme on 'Competence and Media Convergence' (CMC) at the University of Oslo from 2003.

Networked computers facilitate distributed learning. This includes the mediation of learning activities with appropriate pedagogical approaches to collaboration and social interaction. Such mediation, in general, may occur in Internet services, web-based groupware, multimedia shared spaces, videoconferencing technology, interactive 3D-applications on the one hand, and text processing programmes, drawing and painting programs, spreadsheet applications on the other. Such technologies shape and mediate the goals and courses of actions that increasingly take place in collaboratively based learning environments (Fjuk and Smørðal 2001).

KNOWMOBILE followed a project that intended to put such technologies in motion to build competence. That bridge between convergence and competence could only be built if mediation processes were operating. What are the relevant aspects of that mediation? How could various concepts of 'mediation' help explain the link between competence and convergence in the case of KNOWMOBILE?

Concepts of mediation

If convergence is observed in networks, terminals and services, competence in this case is related to the ability to apply such equipment for the services or work practices for which the medical students are training. The mediation inbetween convergence and competence include the technical tools – the networks and the terminals; and the communication uses of them among the involved agents. However, mediation involves not only the specific artefacts and agency, but also takes place through the given structure. The whole setting of the distributed medical training mediates.

This triad of tools, communicating agents, and structural context comes close to the triad of subject, object, and mediating artefact, that Yrjö Engeström (2001) advocates in his interpretation of Vygotsky's idea of cultural mediation. Lev Vygotsky (1978: 40) introduced 'a complex, mediated act' between stimulus and response in sociocultural interaction.

In the sociocultural perspective, mediated action (Wertsch 1991) creates a focus on how people use 'tools', as well as language and other 'signs' as cultural artefacts (Wertsch 1985). This approach stands on the shoulders of Vygotsky (1978: 52-5), who identified 'signs' and 'tools' as the intermediates in 'mediating activity'.

Vygotsky observed the importance of mediation during the 1930s, the same period that media scholars abandoned the stimulus-response theories of 'mass' communication. Theoretical understandings of mediation in media studies and in research on mediation in social psychology and education (inspired by Vygotsky and his followers) may inform and complement each other.

While Vygotsky focused on relations between individuals, his fellow Russian scholar Alexei Leont'ev (1981: 210-3) explicated the difference

between individual action and collective activity. Leont'ev became the father of 'activity theory' (Kaptelinin and Nardi 2006). Later, it was recognized that mediation also takes place by other humans and through social relations. The idea of mediation is the 'germ cell' of the activity approach (Engeström and Miettinen 1999: 4, 13).

Contemporary activity theory needs to develop conceptual tools to understand networks of interacting activity systems, Engeström (2001: 135-7) maintains. Interacting 'activity systems' should be interpreted through mediation by artefacts and their object orientation. Further, interacting activity systems should be understood through their history, and by how contradictions and structural tensions foster change and development within and between activity systems. An activity system is always a meeting place for multiple points of view, traditions and interests. Cultivation of shared objects takes place in the mediation processes of the activity systems. The key dimensions of activity systems are gathered in the idea of mediation.

In media studies Martín-Barbero (1993) proposed the conceptual move from the 'media' to processes of 'mediation'. This move makes clear that media technology is always entangled in matrices of communication, culture and hegemony. As put by Philip Schlesinger (1993) in the introduction to Martín-Barbero's book: 'The concept of mediation entails looking at how culture is negotiated and becomes an object of transactions in a variety of contexts'. John B. Thompson (1995) focused on symbolic forms in modernity and their modes of production and circulation, as they are transformed in mediation processes. Roger Silverstone (2005) summarizes the social aspect of 'mediation' in media and communication studies:

Mediation is a fundamentally dialectical notion which requires us to address the processes of communication as both institutionally and technologically driven and embedded. Mediation, as a result, requires us to understand how processes of communication change the social and cultural environments that support them as well as the relationships that the participants, both individual and institutional, have to that environment and to each other. At the same time it requires a consideration of the social as in turn a mediator: institutions and technologies as well as the meanings that are delivered by them are mediated in the social processes of reception and consumption (Silverstone 2005: 189).

Mediation as the linking processes between convergence and competence in the case is inherently social and cultural, not 'just' technological. This is confirmed in all conceptualisations of mediation in the above discussion. Competences are built in such sociocultural processes. On the convergence side, a pure technological understanding of network and terminal convergence is untenable. Further, service convergence should be understood as social practice within institutional settings.

The field study

The KNOWMOBILE field study took place in autumn, 2001. 18 medical students participated in the various test situations with handheld equipment and showed up for several interviews with the KNOWMOBILE researchers. In addition, all 71 students in the class were asked to fill in questionnaires before and after the assignment periods, and almost all of them did.

Many actors were involved in setting up the assignment environment of the 10th semester and the specific KNOWMOBILE field study, thus performing several interacting social practices:

24 physicians/medical practitioners in hospitals and GP offices throughout Southern Norway, all working as part-time lecturers with the Faculty of Medicine, were involved in KNOWMOBILE autumn, 2001. The eight tutors of the PBL groups of the 10th semester were involved to a certain extent as well.

The researchers following the case came from InterMedia and the Department of Informatics at the University of Oslo, from Telenor R&D, Ericsson Norway, and the Centre for Educational Technology at Umeå University.

There were about as many technical support personnel as medical students in the project. They were the 'super-users' from the medical school and master students from the Department of Informatics, whose thesis research and writing are based on the KNOWMOBILE field studies (Ellingsen 2002; Finkenhagen and Haga 2002; Gallis and Kasbo 2002; Hsu 2002).

KNOWMOBILE was an exploratory research project. The researchers worked closely with the participating medical students to observe and ask how they were able to use personal digital assistants (PDAs) in their training situations at local hospitals and at GP offices. Could the PDAs be used to access knowledge when the students needed information? Could they be used for communication between the dispersed learners away from campus?

The user settings

The students practised for six weeks in the local hospital of their assigned area, and at a general practitioners office in the same area for another six weeks. In some places the students stayed together, sometimes they even shared an apartment. In other areas, the students commuted to their homes in Oslo. All students in an area met three times during the three months of assignments.

The 18 medical students who took part in the KNOWMOBILE trials were assigned to areas of Southern Norway upon decisions made by the medical school. Each area was organized around a local hospital where the local coordinator of the practice period was based. In each distributed PBL-group there were two students from each area, one on assignment in the local hospital and one at a GP's office, using individual PCs.

The 18 medical students focused in KNOWMOBILE made up several 'communities of practice' (Wenger 1998) through various combinations of face-to-face and net-based solutions. Their 'communities of practice' were actually constructed for the KNOWMOBILE field study. They were shaped and established from what was possible to fit into the social organization of the 10th semester, and in order to create different, comparable settings. KNOWMOBILE tried to understand interaction and cooperation patterns with the networked PDAs as part of collaborative learning activities within each constructed community of practice.

Three such selected KNOWMOBILE settings were established, each with a specific blend of social context and available technology. Several ICT-solutions were tested in order to give the students a larger degree of flexibility, particularly in relation to 1) how and in what form information is distributed and shared, 2) the choice of learning and interaction patterns, and 3) the kinds of ICT-solutions, infrastructure and network access that are available to, or wanted by, the student for actions in the learning activity.

Setting A was a distributed PBL-group with students in four different locations that had PDAs they could synchronize to the net. PBL-groups at the Oslo medical school normally meet face-to-face. During the 10th semester in 2001, all PBL groups solved two PBL assignments using a web-based learning management system (Classfronter). One of the PBL-groups was selected to participate in the KNOWMOBILE project, and was offered the use of PDAs during that semester.

In *setting B* five co-located students in Tønsberg shared an apartment for the period of their tenth semester assignments, close to their assignment locations. They were offered PDAs and had online access in local IP-zones from their terminals.

In *setting C* five students commuted between their homes in Oslo and their assignment at the hospital or with general practitioners in the Drammen area. They had PDAs with high-speed GSM connection to the Internet.

Media or mediating artefacts

The PDAs as well as the PCs are computers. As such, they are converging 'information and communication technologies' (ICTs). Used in communication, they become 'media'. In sociocultural theory they are 'tools' or 'mediating artefacts' (Vygotsky 1978; Engeström 2001) or 'mediational means' (Wertsch 1991).

For settings A and B, the PDA had a small-form factor, suitable for carrying around in the pocket of a doctor's white coat. The PDA had no keyboard, and was operated with a stylus pen on a touch screen. It was equipped with standard applications, such as a note-taker, offline email, offline web browser, and a voice recorder. The commuters (setting C) had a larger model, with a keyboard and a larger screen.

In the PBL-group (setting A), the PDA did not have any direct connection to the Internet, but content from the Internet could be downloaded during synchronization with the desktop PCs to which the students had access.

For the group of five medical students living together in the same apartment (setting B), the project operated a wireless network with Internet connection at four locations: at two general practitioner's offices, at the apartment, and in the teaching facilities in the local hospital. The PDAs could access this network by means of a small wireless network card that fitted into the PDA. The PDAs would always be connected within range of one of the access points.

For the medical students commuting from Oslo to Drammen (setting C), KNOWMOBILE provided GSM cellular phone cards that fitted into the PDAs. Hence, the students had access to the Internet at home, during commuting, and in the general practitioner's office. Hospital regulations prohibited use of the PDAs for Internet access or mobile communication within the local hospital.

There were two categories of information available on the PDA: 1) information downloaded to the PDA memory, hence available regardless of network connection, and 2) information sources accessed on the Internet.

In the first category, KNOWMOBILE provided the students with an electronic version of a medical methods handbook (in Norwegian: *Metodehåndbok for turnusleger*) as an 'e-book'. The paper version of the handbook was developed by the school of medicine and students often referred to it as an important and familiar information resource that is usually readily at hand. This e-book was always available in the PDAs, regardless of network connectivity.

In the second category, the project provided a web portal with a collection of pointers to medical information on the net. The portal formatted the web pages according to the PDA screen size. This pointer collection was retrieved from the medical school database of medical resources on the net.

In the KNOWMOBILE field study we were interested in how the PDAs were used compared to other artefacts, such as reference books, and stationary ICT-solutions, and the relationships that are created between the PDA and other artefacts, e.g. to identify different roles the PDA may have in a learning activity.

KNOWMOBILE research questions

'Knowledge access in distributed training. Mobile opportunities for medical students'. The key terms in this full title of the project was explained as follows: *knowledge* means information and material made meaningful to the learner in relation to the given problem or task. The focus was on *access* to net-based sources of knowledge via computer networks exploited by the medical students while dispersed in a number of geographically *distributed* situations, on assignment *training*, face-to-face with patients. They had *mobile*

opportunities in two senses: first, by using the net with mobile equipment to a certain degree, and second, by preparing themselves for their continued learning with net-based tools through the experiences during their basic training as *medical students*.

The main focus of the KNOWMOBILE project lead to the following questions: How could just-in-time knowledge access to net-based educational resources be performed and utilised in practical problem-solving by learners with mobile terminal equipment in a distributed work-like training situation? What is the learning outcome, and what were the technological and sociological conditions during the project?

The research questions, then, were related to the function of just-in-time *access* to knowledge. What kind of knowledge was of subordinate interest? The focus was on the applications and communication *solutions* necessary for just-in-time access. There was also a focus on just-in-time *learning*, i.e. learning related to the just-in-time access with the tested just-in-time solutions. The sociological framework and the changes in the patterns of social interaction by just-in-time, here termed the just-in-time *context*, were part of the KNOWMOBILE research as well.

The just-in-time solutions were the key to KNOWMOBILE. They made up conditions for just-in-time access as well as for just-in-time learning, within the just-in-time context. We looked at just-in-time *solutions* as standardised and available services on a mobile platform, in experiments with bandwidth, and in the development of net-based environments for 'learning communities'

Just-in-time or ahead of time?

KNOWMOBILE ran from August 2000 to May 2002. In many ways the project was ahead of time. The research on these questions, e.g. in European programmes, did not take off until a few years later. The research questions on just-in-time functionality were ahead of the available technology. The project design had to be adjusted accordingly.

For one of the test situations (setting C) we had expected the handheld terminals for the new GPRS network to be out on the market. This was not the case when the field study started. Accordingly, we had to change to GSM and use a card with 3xGSM mobile phone connectivity. At the test site where we wanted to test online connection from local WLAN base stations, we relied on a card arriving on the market in the United States just before the students went on their assignments. We got this card to the KNOWMOBILE students one week after its arrival on the market, which was four weeks after the announced date of the introduction course with the students. This, of course, subdued their enthusiasm for the project to a certain degree.

KNOWMOBILE worked with technology for mobile online connection to the Internet, which, at the time of the study, was in the process of being

introduced to the market. We had to realise that in order to study 'effects' of such cutting-edge technology on learning habits, we had to stay close to the student participants to provide user support and data collection on their just-in-time uses. This led to a limitation of test sites or situations where we were able to provide this participatory (and time consuming) kind of research.

KNOWMOBILE was early in terms of available technology under study. However, the applications and implications of converging technologies for social practices had already been drawn up in the Norwegian green paper on convergence that was presented just before the end of the last century (NOU 1999: 26), focusing convergence of services, networks, terminals and of markets.

Explicit on Competence – implicit on Convergence

The word 'convergence' was not applied in the KNOWMOBILE report (Lundby 2002), a search document. Nevertheless, there is an implied understanding of convergence in the project account. The handheld terminals (PDAs) that were applied represented various degrees of terminal convergence (just a PDA, a PDA and at the same time a cell phone, etc). For the company that supplied the terminals, as well as for the telecom partners of KNOWMOBILE, the social trials with the converging terminals were part of a prospective market convergence.

However, convergence of services was the spelt-out aim of the trials. The participating medical students were to find out if the converging terminals could help them access knowledge sources in their work practices in hospitals and at GP offices. Their medical school had a further intention of integrating the student on-site practices into the electronic and social networks that make up a distributed learning situation. The Faculty of Medicine, then, was actually trying out forms of network convergence through the KNOWMOBILE project. These were networks of social practice, relying on the technical networks of Internet connections and mobile telephony that are usually contained in concepts of network convergence.

While a search did not bring up the word 'convergence', the word 'competence' appears several times in the KNOWMOBILE report. The Dean of Studies at the medical school put forward the expectation that the project-based learning curriculum should give the students "competence in knowledge access and responsibility for one's own learning" (Roald 2002: 30). The aim of the Nordunet2 programme was "to achieve first-rate competence in advanced use of networking for research and education" (Lundby 2002: 1).

Throughout the report the word 'competence' is basically used about skills in the use of information- and communication technology (ICT), although mostly about more advanced skills, like when with the 'super users' were hired by the school of medicine to support their fellow students (Lundby 2002: 1; Hanseth 2002: 133), or about advanced skills among the participat-

ing KNOWMOBILE students (Engen 2002: 41-42, 45). Competence was related to context: "The technologically most advanced test setting did attract students with high user competence" (Lundby and Engen 2002: 141).

The project researcher that looked into 'engagement modes and flow' in using the PDAs focused ICT-competence as 'the capability of accumulating enough knowledge and competence in order to adjust to the new modes of working' with ICT (Hedman 2002: 195). He asked if there were any significant changes in participants' IT-competence before and after the test-period. He compared students using a mobile PDA in their information searches for medical knowledge with those applying stationary PCs. He found a significant effect of time for ICT-competence. Both PDA users and PC users scored higher on ICT-competence from Time 1 to Time 2 of the quasi-experiments. However, the differences were the same for both user groups. The difference between PDA users and PC users' ICT-competence was not significant (Hedman 2002: 199-200, 208). The use of more converging and mobile equipment, the PDAs, did not encourage more ICT competence than the use of stationary PCs.

The convergences implied in the practices studied in KNOWMOBILE were not made explicit. In hindsight it is easy to trace the relations between competence and convergence. Competence is in itself a convergence of learning and experiences. In KNOWMOBILE the new social practices that are intended to build just-in-time competences rely on converging technologies. Convergence and competence are linked through processes of mediation.

Ambiguities of convergence

The research showed that most of the students were fairly satisfied with the medical information made available to them on the PDAs. However, their expectations of the KNOWMOBILE experiment were not really met. This was the case both in terms of the technical arrangements and in relation to the communication with their fellow students. Still, most of the participants found that PDAs could function as useful tools for themselves and others as physicians in the future.

This fact that the KNOWMOBILE technologies were at a very early stage demonstrated in itself some of the ambiguities of convergence that appeared in the project. These ambiguities could be identified under the following nine subheadings:

Barriers and non-use

The KNOWMOBILE report tells more about non-use than about use of the hand held terminals. This did not imply that PDAs were of limited interest for future use. It might simply have been too early for smooth use of such equipment. The barriers are organisational and social as well as technological. For

the learning purpose of this study, the technological design was not adjusted to the pedagogical design. The students did not find the handheld devices useful because the pedagogical design did not require such technology. The KNOWMOBILE technology itself was complex – more so in a use situation. Even minor user problems could force the users to give up. Reality did not match the advertisements. This is noticeable in regard to use in complex systems and situations, as in the settings entered by KNOWMOBILE.

Net and bandwidth

The Nordunet2 programme, which funded this project, looked for new services and applications in future broadband networks. KNOWMOBILE, however, was operating on low bandwidth. We were intending to explore the new GPRS network, which offers an always-on service for mobile computing. The network was there as a commercial service when the project started, but the advertised terminals were not on the market. Hence, we had to improvise GSM mobile phone technology on a card that was to be installed in the PDAs at our disposal. But when the commuting students used the terminals they found that the GSM coverage was bad over part of their travel route. Similarly, in the setting where we applied wireless technology in local IP zones for 'always-on' to the Internet, the speed could not exceed the ISDN connection we had to use as the gateway from the IP zones into the wider network. The response time could be delayed. The KNOWMOBILE project, then, has been carried out too early in respect to network capacity, as well as to terminals for broadband networks. One should be able to solve some of the user problems with higher bandwidth capacity, with handheld devices fitted for broadband services. However, the KNOWMOBILE experiences remind us that user reality never fits the ideal picture of the future.

A change perspective

Research on the use of mobile technology must be performed with a very close observation of changes over time. Network and terminal products are under constant and rapid development. Appropriation and patterns of technology use do not change fast. Still, one needs to be aware of which points of time the various observations relate to. In general, the KNOWMOBILE project entered a fairly early phase of the development of 'mobile opportunities', and for 'medical students' especially. A change perspective is needed on the general as well as on the specific level. Regarding the latter, a change perspective can contribute to a deeper understanding of the students' relatively limited use of the PDAs. There is also a third aspect of change to be taken into consideration. Students of medicine will become medical doctors. Assignment at local hospitals and general practitioner's offices will be fol-

lowed by work practice. Basic training leads to lifelong learning. Experiences at an early stage – good or bad – might influence and shape habits.

Conventions

Our lives and work practice are framed by conventions and habits. This is one reason why the KNOWMOBILE experiments demonstrated so much non-use. Conventions in terms of, for example, text fit to screen size might be one problem. It takes time for developers to create solutions and content which fit the hand held devices. In addition, it takes time for people to get accustomed to information presented in new formats. The same can be said for software adjusted to fit the mobile devices. If there was a PC available, students usually preferred this to their PDA for information retrieval, due to known conventions with the larger screens and their familiarity with the PC programmes. Such conventions are linked to social practices that support or change social habits. Lack of stable conventions and set habits related to the PDAs in the given settings might explain the great need of user support for the KNOWMOBILE students as much as the technological problems. However, the equipment was not yet stable and mature enough to help set conventions and habits.

Context and infrastructure

Habits and conventions are developed in interplay with the infrastructure. The KNOWMOBILE field study shows that infrastructure plays a strong role. This deserves more attention in research regarding wireless and mobile technologies. The functionality of handheld equipment depends on the contexts of their use. Trust in the device – or lack of trust – affected the students' use of it: the PDA would be left unused most of the time. However, there were several situations where a PDA may have had a functional role in a medical student's assignment work if it had been better adapted to the context. A PDA needs to support the entire situation where it is supposed to be functional to the user.

Gateways

A proposal following the KNOWMOBILE research is to regard the PDAs as potential gateways rather than as personal digital assistants for individuals (Ellingsen and Smørdal 2002). This has implications for the design of PDAs. Design both depends on and re-shapes conventions and social habits of use (Smørdal, Gregory and Langseth 2002). In the case of the medical students, a PDA might work as a gateway between different actors in an assignment situation. It could have worked better with more functions added, and more

users in the system. If it were to work as a gateway, it cannot only be considered a *personal* digital assistant, but also a digital assistant for a larger *group* of people (Ellingsen and Smørdal 2002). Hence, it is confirmed that the use of mobile equipment should be understood within ‘communities of practice’.

Conceptualisation

The use of PDAs in the KNOWMOBILE settings challenges our understanding. The PDAs are not just devices, but part of uses, potential habits and new conventions. That PDAs should be regarded as potential gateways rather than personal digital assistants for individuals reminds us that we should be aware of our conceptualisation of new technology in its social context. Our practice and understanding of the technology in use depends to a large extent on the conceptualisation. As pointed out by Smørdal, Gregory and Langseth (2002), there is a theoretical challenge, a need for a social historical conceptualisation of infrastructure in relation to social and technical networks in order to gain further insights for the design and development of potential uses of mobile and wireless technologies.

Means of knowledge construction

PDAs as artefacts can be both ‘means for knowledge construction’ and ‘tools’. The handheld terminals were not much used for the just-in-time knowledge access in the KNOWMOBILE settings. The findings indicate that the PDAs to a small extent only functioned as means for knowledge construction and also as a tool. The students did not see the benefit of the PDA related to what they understood to be the practical learning objectives of the use situation (Furberg and Berge 2002). However, there is potential. One needs to focus on the social relations in the learning situations with PDA. As pointed out, ‘development, deployment and accomplishment of net-based learning activities imply that pedagogical, technological and organizational aspects must be regarded as a *systematic whole* where each of the aspects has significance for creating an overall depiction of the learners use of ICT-systems’ (Furberg and Berge 2002: 164).

Interdisciplinary research

As the field study progressed it became clear that many of our assumptions and beliefs were challenged. The KNOWMOBILE project has been a challenge to interdisciplinary research as the participants came from many different disciplines. At the beginning of the project there were discussions about what should be regarded valid perspectives, concepts and methodologies.

The mainly qualitative, 'soft' approach became predominant, as it was the method best fitted to conceptualise the uses of PDAs in the early stage of adoption. The type of generalization that can be made from such studies are not statistic, but analytic or systemic (Furberg and Berge 2002). Analytic generalization is based on the concept that what happens in one situation can be a basis for making assumptions on what can happen in a similar situation. This type of generalization presupposes analysis of differences and similarity between situations. This is what we have tried to do with our analysis in the three KNOWMOBILE settings.

Conclusion

When read in explicit convergence terms, the above ambiguities identified in the KNOWMOBILE project imply: Convergence of networks and terminals could not be treated as a technical matter only. Technical networks like the Internet and mobile telephone systems must be understood through conventions and habits of individual use as well as through institutional practices and structures. With the available technical networks the medical school could build a social network organization for their educational purposes. The actual terminal convergence depends upon the technology, but also upon barriers for non-use and perceptions of the device. If the handheld machine is considered a gateway to the world rather than a personal digital assistant for individuals, the potential uses change. Terminal convergence is in this sense also a convergence of imaginations, of cultural and social conceptions of possible uses.

With converging networks and converging terminals, the KNOWMOBILE project should test future convergence of services for medical students in a clinical learning situation and their future work contexts. The discussion throughout this paper has shown that 'convergence of services' should not be considered in a narrow, instrumental way. Such 'services' are deeply embedded in the institutional setting. They depend on conventions and culture. In short, they are deeply social. Below the instrumental surface, converging services should be considered as converging social practices. They converge within 'communities of practice' and should be studied within such settings. 'Communities of practice' are basically social; they develop distinct social practices. Such practices involve competences for social interaction and participation on the level of the actual 'community' or context.

For medical students training for their future roles as physicians, the social practices and the competences they develop are their professional practices. The political and institutional vision behind the KNOWMOBILE project of technology-supported learning and just-in-time knowledge solutions does not easily materialize.

To what extent competence and convergence merge depend on the mediation processes that are activated. All social practices have a communicative aspect, i.e. they depend on mediation.

Notes

1. Some of my text is based on collaborative work with other KNOWMOBILE researchers, especially Bård Ketil Engen and Ole Smørdal. The latter also was the key person behind the technical trial arrangements. I want to acknowledge these colleagues and all the other co-authors of the KNOWMOBILE report (Lundby 2002) as my chapter to a great extent relies on their work.
2. One of the projects supported by the Research Council of Norway was the NEMLIG project, referring to net- and multimedia-based learning in graphic industry (Nett- og multimediasert læring i grafisk bransje). This project was critically examined in a doctoral dissertation by Dagny Stuedahl (2004) in a similar perspective as the one applied on the Nordic KNOWMOBILE project in this chapter.
3. Nordunet2 funded half of the project costs with a grant of 2 000 000 NOK. The other half was paid by the partners. Hewlett-Packard contributed to the project with the handheld terminals that were to be used in the field study

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Part Four
Genre and Social Practices

The Dynamics of Convergence & Divergence in Digital Domains

Gunnar Liestøl

Buzzwords emerge and fade frequently in trendy discourses on digital media. Usually such words are not highly regarded in research communities. Far from the acclaimed clear concepts of academia, they are seen as vague and hyped expressions of vulgar commercialism. It is, however, naive to believe that buzzwords and similar transient terms are limited to pecuniary perspectives. The phenomenon of hyped terminology is widespread and appears in academic discourse as well. Buzzwords – popular or academic – are facts of life. In the language of techno-cultural change, buzzwords are central to emerging discourses of development, invention and innovation. In settings of rapid change, language also evolve, becomes whimsical and ambiguous. Such a disarranged situation is not necessarily negative. Maybe then – once in a while – we should stop and listen to the buzz, and detect whether the language game of the specific word has something of significance to convey us. Are there perhaps aspects of academic fashion words that could be of interest, beyond the hype, beyond the intention to create impressions of knowledge and wanting to be identified with some kind of updated techno-futuristic elite? In this chapter I tentatively suggest that this is a possible and productive perspective.

Digital media have been characterized by, if not revolutionary, at least rapid changes. As a consequence the cross-disciplinary discourses in this composite field are in transition and have not yet reached a relatively stable state. Academic buzzwords may be seen as symptoms of this situation, and as such they might have some stories to tell. Could they serve as topoi, places where we can search and find answers and solutions to the conceptual vagueness, overdetermination and ambiguity that characterizes so much of academic discourse on digital media? The buzzword in question is *convergence*.

“Convergence is a dangerous word” claims the late Roger Silverstone, in the first issue of the Journal *Convergence* (1995), on the grounds that it encompasses so many different meanings and uses. For decades now, convergence has been one of the central ‘concepts’ in describing and understanding a variety of aspects in digital media developments. Increasingly, conver-

gence has also been conceived as inseparable from its conceptual opposite: divergence (Cuilenburg & Slaa 1993; Jenkins 2006).

In this chapter I intend to explore and exploit the metaphoric value of the convergence-divergence dichotomy. The intention is to show that such terms, however ambiguous and misused, could serve as a gateway to understand the dynamics of development and change in digital domains. The applicability and relevance of this approach will be explored and demonstrated through a series of examples where various types and levels of the convergence-divergence dynamic are displayed and discussed. By comparing these cases, their differences and resemblances, I aim to reveal and exhibit some of the patterns that connect them (Bateson 1987; Stafford 1999).

Elsewhere I have reported how this approach can be applied to invent new prototyped digital genres for learning (Liestøl 2006). In this chapter I intend to both describe the basic model of convergence-divergence in more detail and further indicate its various applications.¹

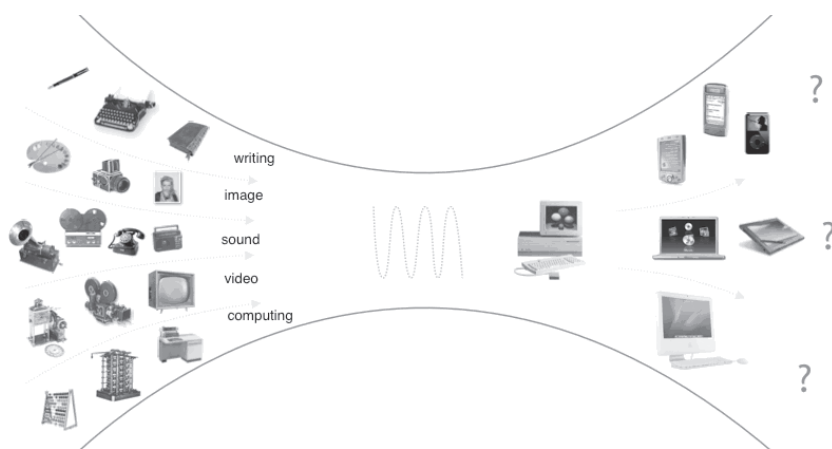
The strait of convergence & divergence

Convergence appeared in its modern form and usage in the early eighteenth century and has been employed in a variety of settings and disciplines, from mathematics and meteorology to geography and literature. Etymologically it is derived from a combination of the Latin *com* meaning 'towards' and *vergere* the word for to 'bend' or 'incline'. Divergence on the other hand designates the opposite process. Thus, the two movements can be seen as a symmetric shape where entities of some kind or another on the one side are forced towards or attracted to each other, while on the other side they disperse. This process of convergence and divergence could then be viewed as a narrowing passage constituted by solid bodies constraining an area of flux, movement and blending: that is, it could in analogy be seen as a strait.

Following the metaphor of the strait, the general history of media digitalization can be displayed in a simple illustration (see Figure 1). On the one side we find various technologies and tools for creation, storage, distribution and presentation of documents transporting traditional text types (writing, image, audio, video and numbers/computing); each contextualized by socio-economic, institutional and cultural constraints and related to the dominant text type and its modes of behaviour and use. In the middle of our metaphorical strait is the general process of digitalization.

On the other side, first we see the multimedia desktop computer of the early 1990s, the machine that some believed would evolve into the one convergent, all encompassing super- or multimedum, as one piece of hardware mediating and sharing all the features and functions of other media (Brand 1978).

Figure 1. Digitalization of text types seen as a process of convergence and divergence of their respective hardware devices



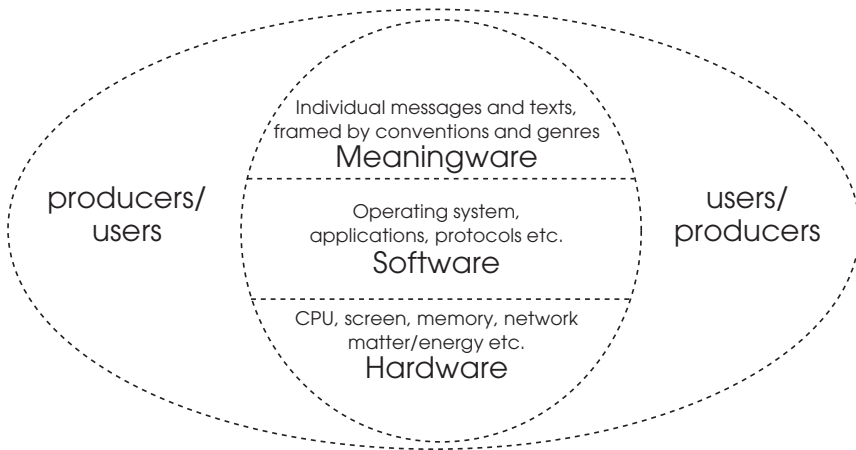
However, convergence is not the only figure of movement in this historical development (Fagerjord 2003). Divergence is also in operation. In the post-digitized period of the last decade, we have seen the growth of both portable and mobile multimedia computers and an increased diversity of computer devices with extended functionality, but organized in different constellations depending on tradition, domain and use. This illustration (Figure 1.) of devices and change obviously ignores a multitude of aspects concerning the evolution and transitions of digital media, its multiple layers and contexts, but it visualizes some dominant tendencies in the development of digital media.

What is digital media? Obviously, there is no simple answer to this question. Digital media is often described as a three level compound: 'physical – code/logical – content' (Benkler 2000, 2006: 395; Lessig 2001: 23), or 'channel – application – discourse' (Aarseth 2003: 419). I will stick with this triad and, in accordance with and as an extension of the tradition in computer science, name them *hardware*, *software* and *meaningware*. The *hardware layer* refers to the material and physical infrastructure of computers and network. The *software layer* designates the coded instructions that make the computer hardware operational, including the protocols that define the Internet and the World Wide Web, the operating systems and applications. On top sits the level of messages and meanings, constructed and composed using combinations of the various text types: writing, images, audio and video. This is a layer that cannot be accounted for in terms of the underlying strata of software applications. There is a principle distinction between the word processing application as such and the text that is produced using one: be it a novel, a report or a chapter in a book (like the one you are now reading).

Being an opponent of the term ‘content’ – at least when it is used in isolation from and without ‘form’, its necessary second half – I have named this top level the *meaningware layer* (Liestøl 1996, 2003, Rasmussen 2004). Meaningware replaces the empty term ‘content’ and draws attention to this domain as a distinct level of expressive forms, textuality and meaning making. It is at the level of meaningware that the real diversity and differentiation of digital texts, conventions and genres will evolve.

The layers of hardware, software and meaningware form a dependent hierarchy (Wilden 1987). That is, the higher levels, as systems, depend on the underlying levels as environments, for their existence (see Figure 2). The software level is dependent and constrained (but not conditioned) by the hardware level, and the meaningware level is again constrained by the software level. On my Macintosh computer (hardware) I use the MacOSX and the application Word (software) to write the text of this chapter within the norms of an academic genre (meaningware). Each level constitutes an order of complexity and has its own context, while at the same time these are intricately related.

Figure 2. Digital media as a dependent hierarchy of hardware, software and meaningware surrounded by the general context and constraints of producers, users and their environments



As users/producers we operate and intervene at all three levels. The borders between the layers are also fuzzy; they can be moved or manipulated according to our choices. In the case of video compression/decompression we may choose whether the code should run in hardware or software, or, on my Mac I may install an application that emulates the necessary hardware required to run Windows XP. In the case of making ‘PowerPoint presentations’ I may choose to use the ready-made templates that came as part of the software application package for providing structure, certain designs

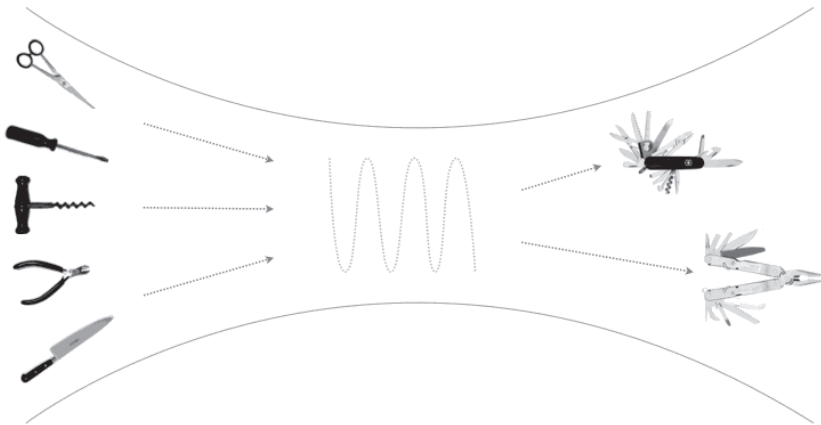
and genre elements to my presentation, or I could create the structure and design myself as I compose the message.

I claim that improved understanding of the complex relationships between the levels of digital media in the context of convergence and divergence is of importance for the ability to critically conceive, develop and improve our employment of digital functionality and textuality. Let us return to our convergence-divergence figure (or model) and use an elementary, but illuminating example from the hardware level only.

A simple case of hardware convergence can be found in the development of everyday tools. Scissors, the screw driver, bottle opener, wire cutter, and knife exist as independent implements with limited or only singular functions. Well-known inventions have exploited the potential convergence of these utensils into new multi-functional tools, like the Swiss army knife, invented by Theo Wenger in 1901. This composite multi-tool uses the single handle as its basic component and attaches the specific shapes and features of other compatible tools to this base, so they all share the same handle.

By analogy, the Swiss army knife can be compared to the proposed super-medium, the digital machine, which could do all things digital and substitute its simpler precedents. We know today that digital development has not yet produced such a machine, and most probably never will. Instead we experience a multitude of digital devices featuring different constellations of functions and applications. The same is actually the case with handheld tools. When the Leatherman tool appeared in 1983 we experienced divergence in the supply of multifunctional tools. Its inventor, Tim Leatherman, selected a double rather than single handle as its basic part and then attached the other compatible tool elements to this base (see Figure 3).

Figure 3. The convergence and divergence of common handheld tools



As shown in Figure 3, these individual devices do not converge into one multi-device. Instead we experience the divergence of converged multi-tools. To further understand this process we need to ask what actually is taking place as the objects 'move' through the strait of convergence and divergence. What are the dynamics of these reconfigurations? I have already elaborated on the metaphoric potential of convergence and divergence. In the next section, I maintain and expand this metaphor in relation to a fictional narrative.

An allegory

In Edgar Allan Poe's short story 'A Descent into the Maelström' from 1841 we encounter a narrative which serves as an illustrative allegory for what goes on in the narrow passage between convergence and divergence. In Poe's text we are presented with the story of a Norwegian fisherman and his brother who, on their way to rich fishing fields, have to pass the Moskoe Strait in Lofoten.

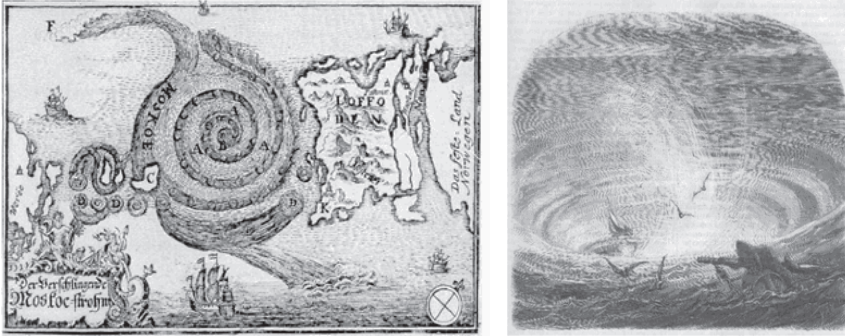
In the regular oscillation between ebb and flow the narrow passage of the Moskoe Strait produces a strong and treacherous current. In Poe's story the current is described as a frantic vortex which lasts for several hours and is extremely dangerous to be sucked into. One day the two brothers go off-course and unfortunately their boat is taken by the current and drawn into the whirlpool. They are helplessly hauled into the spiral movement, one which most probably will end with shipwreck and death.

While awaiting the seemingly inevitable and destructive plight, the two brothers react very differently to the situation. One brother desperately clings to an iron ring on the deck in total shock and fear. In contrast, the other brother – the narrator – remains surprisingly calm, rationally observing their terrifying surroundings. On the surface of the vortex he can discern different objects of various sizes and shapes: trees, barrels and pieces of wreckage. These entities are all moving towards the deep centre. After some observation and reflection he notices, however, that smaller objects move more slowly than larger ones.

This discovery gives the narrator an idea. He suggests to his panicking sibling that if they leave the boat and attach themselves to a floating object smaller than the boat they might delay the pull to the centre long enough to survive the vortex. His brother, still terrified beyond rational thought, refuses to depart from the immediate safety of the boat. Reluctantly, the narrator attaches himself to a barrel and leaves his brother and the vessel.

A few hours later the hypothesis proves to be true. While his brother on board the boat moved steadily towards the centre and disappeared, the narrator and the barrel fell behind enough for the vortex to lose its power and for the sea to return to normal. As a result, along with other floating objects, the narrator and his rescuing vehicle continued the drift out to the opposite side of the widening strait and into safety.

Figure 4. The Moskoe stream based on an old map (left) and an illustration in Poe's story of the narrator after his important move from one object to another (right)



The narrator survives the vortex because he moves from one object to another, an object, or set of qualities, more fitted for endurance, given the particular circumstances in which they are situated. The fishing boat with its crew of two could formally be described as an aggregate composed of certain attributes. Being one of these attributes, the narrator detaches himself from the original object and moves to unite with another, different, entity. With this recombinatorial and differentiating movement in mind, we may now return to the dynamics of convergence and divergence in digital media.

Convergence & divergence as exchange & recombination of features & qualities

The events that take place in Poe's narrative are in analogy comparable to what happens in the convergence and divergence of tools described earlier. Aggregates (conceptually) disintegrate; attributes or constellations of features are detached before they recombine in new constellations constituting new composite objects (see Figure 5 for a schematic).

If this is a plausible representation of what takes place in innovation and change, conceived as convergence and divergence, the model of description should be relevant and applicable to all the three levels of digital media: hardware, software and meaningware.

Let us see if this representation makes sense at the level of hardware (and software) in relation to the convergence and divergence of mobile, handheld devices. In the early 1990s the cellular (mobile phone), portable CD-player (Walkman) and the PDA (Personal Digital Assistant) all existed as separate devices with largely singular use, applying one (or only a few kinds) of software applications (see Figure 6).

Figure 5. Convergence and divergence as a formal detachment and recombination (exchange) of qualities

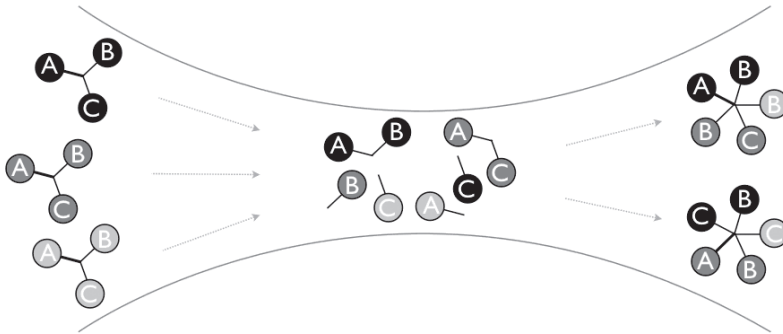
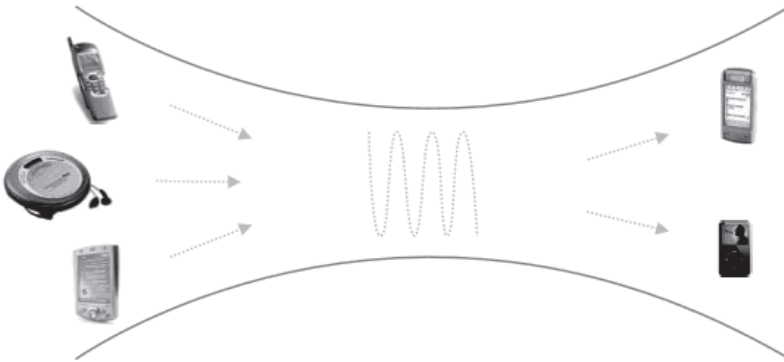


Figure 6. Hardware (and software) convergence and divergence in mobile devices



As a result of convergence, new devices have appeared mixing the several functions, that is, running several kinds of software on the same composite entity of hardware: the iPod combines music and PDA functionality, while the smart phone is both a phone and a PDA. In the transition from left to right, over time, hardware elements have converged. This again makes it possible to run multiple kinds of applications on the new multi-functional devices. The case of digital mobile devices is of particular interest to us due to the rapid iterations. New constellations of hardware, software and meaningware are launched with relatively short intervals.

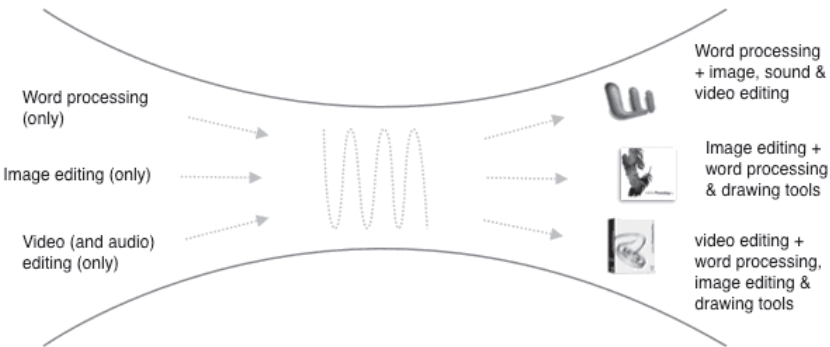
The improved feature set and processing power has also turned the second-generation devices into miniature multimedia computers. This tendency is also present in other handheld devices. For example, the handheld GPS navigator has turned into a multi-functional tool featuring games and calendar functions in addition to basic navigation (the same goes for still image and video cameras). Both the iPod and the advanced models of 'smart phones' are

capable of downloading/recording and playing video due to hardware (high resolution color screen, graphic processing unit) and software support (for encoding/decoding compressed video). The iPod as music device and the multi-functional 'phone' are also capable of conveying various genres of documents and messages, that is different kinds of meaningware, both old and new: music videos, TV-shows, featured films, mail messages, podcasts and blogs.

Software convergence & divergence

As we see, software is an integral part of convergence-divergence dynamics. The evolution of software applications central to the workflow of everyday life seems to follow a similar pattern. The text editor or word processor was originally a simple computer program for producing, editing and formatting (verbal) text, which is writing. Microsoft *Word* in its most current version, however, has turned into a multimedia-editing tool, supporting images, audio and video in addition to advanced word and document formatting (see Figure 7). Likewise with graphics editors: Adobe *Photoshop* was originally made to edit and manipulate scanned images, but is now augmented to include text editing and drawing tools. The same tendency can be identified in video editing software. Originally an editor for digitized sequences of video (and audio), Adobe *Premiere* has evolved into two applications (consumer and professional), both also capable of word processing, image editing and drawing.

Figure 7. Convergence and divergence of software applications



As we can see, the same pattern of convergence/divergence – as the movement from mono to multi – repeats itself at the level of software applications. We could also add multimedia presentation and authoring tools such as *PowerPoint* and *Flash*. They both surface as multi-functional software applications at the divergence side of the strait. Applications like PowerPoint,

however, are radically different from the others shown above (in Figure 7). While *Word*, *PhotoShop* and *Premiere* have one key feature as its dominant functionality (the one that originally existed on the left side) *PowerPoint* and *Flash* have a mixture of all three with no one dominant editor. In *PowerPoint* the text types and their respective applications/editors are equally valuable. The application is just as much a word processor as an image editor.

Generations of Convergence-Divergence (ConDi)

What are the patterns that connect the examples presented above? In what we may call the first generation of convergence-divergence (1G ConDi) there are two prominent tendencies. First, there is a shift from mono to multi. The devices that converge were originally single-featured devices that end up as composite multi-functional devices. This is trivial, but nevertheless important. Second, there is the characteristic of single-feature domination, that is, one of the qualities (elements) that has converged tends to dominate the others.

We might talk, therefore, about primary and secondary features. The master (or primary) feature of first generation ConDi devices are predominantly those that originally existed as single feature devices pre-convergence. This means that somewhere in the strait there is a filtering process, a Scylla-Charybdis mechanism that enfeebles some qualities and leaves other unharmed. Real-time speech has been the defining features of the original cell phone, and remains the dominant feature of the composite multiple function 'smart phone', even when it includes an mp3-player, text messaging/editing, e-mail, web-browsing, and camera for audio/video recording and display. Real-time speech communication is the primary quality (the killer application), the others are secondary. The same holds for the iPod. Its primary feature is still to function as a music player in addition to allowing photo and video display, calendar and games. The handheld game players, such as the PSP (Playstation Portable), show a similar tendency; it is primarily a portable game console, but also functions as a vehicle for feature films as well as a communication device.

At the level of software applications (text type editors), we experience the same pattern: the ascendant quality of the converged first generation multifunctional editors can be traced back to a singular pre-converged version.

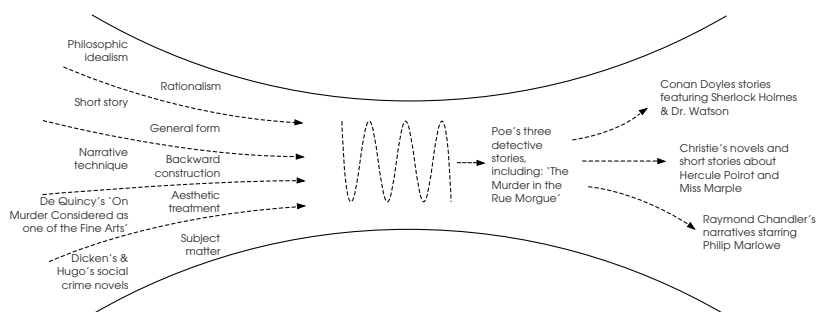
Genre convergence & divergence

We have seen that this dynamic of convergence and divergence takes place at both the levels of hardware and software. What then about meaningware? A classic example of genre convergence and divergence is in the traditional

print medium of fiction. In book-based literature there is no software level; there is no electronic or digital code execution necessary to display the written information. All that we have is hardware and meaningware, the physical book with ink on paper and the textual messages themselves constrained by the genres and contexts they belong to.

Let us return to the innovative author of tales, Edgar Allan Poe. In 1841 he also created the short story 'The Murders in the Rue Morgue' (Poe 1982). In this tale the anonymous narrator tells the story of his friend C. August Dupin (in retrospect to be characterised as a master detective) who elegantly, by means of extreme ratiocination and analytical power, solves the enigma of a brutish double murder committed in Paris (see Figure 8).

Figure 8. Genre convergence and divergence in fictional literature: evolution of the detective story and examples from its sub-genres as realised in 'The Murders in the Rue Morgue' by Poe



In his tales of ratiocination Poe borrows traits from various genre elements in his contemporary literary context: the general shape of the short story, the topic of crime as exemplified in Dickens' and Hugo's social novels, and the theme of rationalism and analysis from the Philosophical Idealism of Romanticism, together with influences from De Quincey aesthetics, and the narrative technique of backward construction as later described in his analytical essay 'The Philosophy of Composition' (Morrison 2001). Poe converged these multifarious elements into the innovative story 'The Murders in the Rue Morgue' and its sequels 'The Mystery of Marie Rogêt' (1842) and 'The Purloined Letter' (1844). Later we regard these inventions as prototypes that constitutes the origin of the future genre(s) of detective fiction. As the genre of the detective story has evolved it has also diverged into several sub-genres, from the stories portraying the Dupin-copy Sherlock Holmes and the eccentric Belgian detective Hercule Poirot to the hardboiled narratives of Hammet and Chandler, and further.

The meaningware level of textuality and meaning-making, even traditional kinds such as literary fiction based in 'simple' book technology, conveys a much more complex and diverse subject matter than the more constrained,

ordered and logical levels of hardware and software, where the various elements or aspects are easier to detect, isolate and categorize. Even in the relatively homogeneous example of Poe's innovative formula the (abstracted) attributes of pre-convergence are of widely different materials and matters, making selection and combination difficult, probably even accidental.

In the dependent hierarchy of digital media complexity, emergent qualities and semiotic freedom increase drastically as we move upwards in levels (Wilden 1987: 182). Hence, the patterns that connect the convergence and divergence of hardware and software are too simple to account for the convergence-divergence dynamics at the meaningware level of digital textuality; still the higher level is influenced and constrained by the lower levels through vertical integration and contexts of use.

Due to multimodal textuality, user participation and manipulation (interaction), random access and global accessibility, digital media expressions have the potential to be the richest of all discourses. However, the digital domain is not characterized by the degree of genre innovations one might expect. According to Miller there is a good chance that a genre has emerged when a type of discourse or communicative action acquires a common name within a given context of community (Miller 1984). The weblog or blog may according to this perspective be named a genre (Miller & Shepard 2004). As a lingocentric form of digital expression the weblog is a digital but literary genre with ancestral forms in the journal, log, diary, pamphlet, political journalism etc. combined with a certain features set of electronic publication systems and elements of constructive hypertext (Joyce et al. 1993). Despite the literary dominance and lack of multimodal text types the blog and its continued evolution demonstrate the importance of the lower levels in the dependent hierarchy of digital media. What is the dominant constraining level of the blog? Given the many literary genres and sub-genres based in this publication platform (software), and the fact that the typical blog posting is also conducted (included) in other more composite types of social software (MySpace, Facebook among others, but then not necessarily defined as 'blog') one may suggest that the blog as such have not yet established itself as a stable genre at the level of meaningware, rather it is a genre primarily defined by its software constraints.

Games in the MMORPG-genre (Massive Multiplayer Online Role Playing Game) such as *World of Warcraft* on the other hand are examples of the textual complexity in digital media. In the game *World of Warcraft*, elements from previous analogue and digital artifacts such as individual quests, online collaboration/groupware, Massive Multiplayer Online Games, LMS-functionality, Player vs. player mode, Role playing games, 'Point, click & wait'-functionality, Tolkien's mytic-narrative universe etc. converge in the complex universe of the game world, its gameplay and user interface. 3D online games of this kind become containers for the convergence of all kinds of elements, drawing from a variety of sources and levels of reality, both analogue and digital. As a potential genre they are characterized by the ability to include

other 'smaller' less complex genres, such as the action-adventure, 'Beat 'em up' and more. A game like *World of Warcraft*, however, primarily remains a Massive Multiplayer Online Game (MMOG), despite the fact that a multitude of attributes and modes have been added to the game. In this respect the dynamics of convergence and divergence display a pattern similar to that of first generation ConDi at the levels of hardware and software described above.

The computer game tradition is unique in its exploitation of digital functionality. Other innovative 'genres' or kinds of digital expression are not that rich. Emerging digital genres such as the 'powerpoint presentation', 'podcasts' and 'blogs' are so far of lower complexity compared to its possible potential. In the convergence-divergence perspective they are currently more dominated by remediation and adaptation of existing analogue genres than the development is own unique potential

Closing remarks

For analytical purposes, other aspects of digital media, other combinations of hardware, software and meaningware framed by political, economical, institutional and other contexts, can be viewed in the same perspective. By means of this perspective one may identify which, and what kind of, qualities detach and recombine in the various processes and levels of convergence and divergence that surround different genres and media – past, present and future.

The general purpose and applicability of the model is thus threefold: 1) to understand the dynamics of convergence and divergence in concrete historical cases; 2) to apply it to current situations of development; and, last but not least, 3) to comprehend how the future of digital media may develop, be influenced and even created. In the latter application the researcher-developer would perform as designer, that is, exercise a rationality analogue to the reflections and decisions practised by Poe's narrator as he is caught in the spiral movement of the vortex. The Convergence-Divergence model is then used as a schemata for the purpose of both interpretation and construction. And it is by means of the close and intimate relationship between the two that we may really exploit the vast potential of new media and future digital genres.

Note

1. A shorter, different version of this text was presented as a paper at E-Learn '06 (Liestøl 2006b).

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Converging Forms of Communication?

Marika Lüders

Until the second half of the 1990s, the differences between mass mediated and interpersonally mediated communication were relatively clear, and mass communication was the main analytical focus within studies of media and communication. Studies of mediated interpersonal communication such as letters and phone-calls gained less attention (although there were exceptions such as Aronson 1979; Fischer 1988; Pool 1977). E-mail and interpersonal, dyadic instant messages, sms/mms and phone-calls remain forms of media that support private communication between people (i.e. content is not generally accessible). However, the implementation of digital and network technology has increased opportunities to construct and publish content, available to anyone with access to the Internet: the individual has become a potential mass communicator, and interpersonal conversations regularly take place in generally accessible environments. On the other hand, mass media increasingly develop arenas where readers/users can express themselves. Historically, letters to editors and call-ins have been important (McNair et al. 2002), but digital technology increases the scope and significance of audience-generated content. People are encouraged to share their thoughts and points of view: commenting online articles; texting opinions to TV-debates; and texting and sending camphone-photos to sms-based television shows (Beyer et al. in press).

A consequence of this development is the emergence of fuzzy and indistinct areas situated between the interpersonal- and the mass-mediated. These blurred boundaries between forms of communication constitute the point of departure for this chapter. More specifically I ask: *Are different forms of communication converging to the extent that the conceptual distinction between interpersonal and mass mediated communication is no longer useful?* The purpose is hence to explore the increasingly complex grey areas, which cannot be described as purely interpersonal or mass mediated.

The first part of the chapter will discuss the concept of communication by examining aspects of interaction, participation and social integration. These three aspects are then applied as variables in an analysis of examples of

conversations in a personal weblog, Underskog (a geographically specific social calendar combined weblog for people in different cities in Norway), and a reader-discussion following an article published in the online edition of the Norwegian tabloid *Dagbladet* (db.no). In the concluding part I maintain that the concept of convergence is initially of value in discussing the development of forms of communication such as the practice of private individuals functioning as potential mass communicators, and the increasing use of audience-generated content within mass media. However, the conversations, discourses and networks that are supported are very different, despite an apparent blurring of boundaries of practices. While initially useful, the concept and meaning of convergence can easily disguise the different characters and social functions of discourses.

Social practices of communication

A number of scholars have already suggested that distinctions between interpersonal and mass communication are converging, and that boundaries have become blurred as a result of emerging forms of computer-mediated communication (see Caplan 2001 for a discussion). Scott Caplan claims that the prevalence of phenomena that resist the traditional mass-interpersonal distinction indicates that a new type of communication has emerged. A new system of hyperpersonal communication has materialized, which cannot be analysed with reference to either interpersonal or mass communication theories. Caplan builds on Joseph B. Walther's concept of hyperpersonal, which Walther introduced to account for the specific experience of computer-mediated communication as, under certain circumstances, more socially desirable than face-to-face interaction (Walther 1996). This is typical when "users experience commonality and are self-aware, physically separated, and communicating via a limited-cues channel that allows them to selectively self-present and edit; to construct and reciprocate representations of their partners and relations without the interference of environmental reality" (ibid:33). Following Walther, Caplan argues that hyperpersonal communication systems are fundamentally different when it comes to the characteristics of message receivers (access only to restricted verbal and nonverbal cues), message senders (highly controlled self-presentations), and the message exchange process (un-constrained by time and space).

I have three objections to Caplan's thesis that hyperpersonal communication, as a product of computer-mediated communication, is a separate system compared to interpersonal and mass communication. Firstly, Joseph B. Walther's original concept of hyperpersonal, a very useful concept *per se*, is hardly apt to describe a third system of communication, as I rather interpret the notion of hyperpersonal to concern quality-aspects of communication. A distinction between mediated interpersonal communication and

hyperpersonal communication is a fuzzy one, as mediated interpersonal communication such as letter writing can have hyperpersonal characteristics. Secondly, proposing a third system of communication seems to be an unnecessary option and a substitute for explaining the complex relationships that exist between forms of communication. Thirdly, and related, a distinction between three separate systems of communication implies a danger of working against fruitful theoretical links between different disciplines of media and communication. As Patrick O'Sullivan (1999) argues, the dichotomy that exists between interpersonal and mass communication research is artificial and detrimental to the advancement of communication research as a whole. With this in mind I look at social practices of interpersonal and mass mediated communication by theoretically expounding on the three variables of *interaction*, *participation* and *integration*. These qualities are employed in the subsequent empirical analysis, aiming to elucidate if and how forms of communication are converging.

Interaction

Interaction is a key-word for discussing possible converging tendencies between interpersonal and mass communication. Mediated interpersonal communication, e.g. a telephone conversation, is essentially symmetrical and therefore characterised by reciprocal interaction between communicating parties. Mediated interaction is an important part of social life in post-traditional societies, and the social consequences of an ever-increasing arsenal of personal means of communication have been recognized in a series of studies (Bargh et al. 2002; Baym and Zhang 2004; Boase et al. 2006; Haythornthwaite 2002; Lycoppe and Smoreda 2005; Lüders forthcoming-a; Tidwell and Walther 2002).

Mass communication, on the other hand, is traditionally depicted as supporting asymmetrical interactional relations between communicating parties. This has been called 'para-social interaction' by Donald Horton and Richard R. Wohl or 'mediated quasi-interaction' by John Thompson (Horton and Wohl 1979; Thompson 1995, 2005).

The interaction, characteristically, is one-sided, nondialectical, controlled by the performer, and not susceptible of mutual development. There are, of course, ways in which the spectators can make their feelings known to the performer and the technicians who design the programs, but these lie outside the para-social interaction itself (Horton and Wohl 1979:33).

Horton and Wohl make an apparently obvious yet still very important observation, which becomes especially relevant as digital personal media are increasingly used to initiate contact between members of the audience (horizontally) and between members of the audience and performers in mass

media (vertically): interpersonal interaction may take place within a mass-mediated environment (e.g. a chat on the TV screen) or outside (e.g. e-mails to a program-host), yet it is questionable whether this changes the fundamental asymmetrical relationship between mass media institutions and the audience. In contrast to interpersonally-mediated communication, mass-mediated forms of communication only give an illusion of intimacy and friendship (Cathcart and Gumpert 1986; Meyrowitz 1986; Thompson 1995).

The relationship between forms of communication and forms of media are, however, not clear-cut. Although electronic and print media have mainly been used for mass communication purposes, this is by no means due to essential characteristics of mass media technologies:

The term “mass”, however, is not intrinsic to media. It is a characteristic of only some media, such as the electronic media, that are extremely efficient delivery systems for bringing messages to huge, undifferentiated audiences. Any of today’s “mass” media could be utilized for “non-mass” purposes, such as point-to-point communication, e.g., a “ham” radio operator talking to a friend on the other side of the world (Gumpert and Cathcart 1986:13).

Letters can similarly be tokens of interpersonal relationships or formal and standardised information sent out to an unfamiliar mass of receivers (Lüders, forthcoming-b; Thayer 1986). Lee Thayer argues that it is the use of the medium that decides whether a given medium is a communication medium or a mass communication medium (Thayer 1986:42-43) (an argument which situates Thayer as a scholar with an instrumental perspective on technology). The widespread appropriation of digital technology has blurred the distinction between mass communication and interpersonal communication and emphasised even more strongly that there is no easy and straightforward connection between (inter)personal communication and personal media on the one hand, and mass communication and mass media on the other hand (Lüders forthcoming-b). Media forms such as e-mail or weblogs are used for both mass communication and interpersonal communication and, using Thompson’s choice of concepts, can consequently be said to facilitate both mediated interaction and quasi-interaction. Hence a central question, which will be addressed in the analysis, is how to understand the characteristics of relationships in public and semi-public mediated forms of interaction. In any case, mediated communication (whether mass- or interpersonally-mediated) has to be understood and discussed in the context of appropriate technological realities and not compared to a (still dominant) face-to-face conversation ideal (Avery and McCain 1986; Moores 2005:81-3). Clearly, mediated communication is not as rich in cue systems as face-to-face communication, but contrary to earlier perspectives on social presence, social context cues and information richness, recent research proves mediated interaction to be very personal, dealing with significant issues and fostering real social relationships (see the following for discussions of media richness and cues-fil-

tered-out perspectives: Berger 2005; Fortunati 2005; Haythornthwaite and Wellman 1998; Hu et al. 2004; Lamerichs and Molder 2003; Tanis and Postmes 2003; Walther 1996; Walther et al. 2005).

Participation

An analysis of the relationship between interpersonal and mass mediated forms of communication becomes more nuanced if including a discussion of *participation*, and moreover an examination of the relationship between participation and interaction. Participation is here used in a non-normative sense, i.e. merely referring to non-professional partaking in mediated environments without an explicit focus on deliberative democratic theories.

Layperson participation in mass media has a long history (McNair et al. 2002; Wincour 2003; Ytreberg 2004). In radio and television formats that include audience call-ins, performances are formatted: non-professional participants are expected to meet requirements of performance connected with the format (Ytreberg 2004:689). The contrast to user-comments in certain digital media-forms is considerable, as there appears to be a lack of interest in and ability for editorial screening of opinions before publication. The 2005 revision of the *Code of Ethics of the Norwegian Press* is a telling example. The increasing amount of user-generated content led to a discussion of whether these contributions should be edited before being published. The board of the Norwegian Press Association decided not to include such a paragraph in the Code of Ethics, but emphasised that editors have a responsibility for removing contributions that are not consistent with good press-ethics.

Whether motivation is idealistic or commercial (or both), there is little doubt that mass media institutions see increased user-participation as vital in their future development. A forceful web 2.0 discourse, focusing on catchphrases such as “collective intelligence”, “architecture of participation” and social software (O’Reilly 2005), is taken seriously by the media industry. The increasing importance of user-participation is also apparent among major international media-corporations: BBC’s “Create with the BBC”-service invites the audience to share their stories, photos and videos as well as playing and creating with existing content (BBC, 2006); CNN similarly launched CNN Exchange, inviting “YOU to connect with the news: Share your stories, your pictures, your videos” (CNN 2006).

The challenge in the following analysis is to examine the relationship between participation and interaction. Can some of the analysed practices be described as participation without interaction, i.e. close to John Durham Peters’ concept of dissemination (messages being cast out, not aimed at specific others and with less chance of obtaining replies) (Peters 1999)? Also, considering the heterogeneous and relatively larger audience of online newspapers, will participation here especially suffer from lack of interaction and reciprocity between participants?

Social integration

Communication facilitates the maintenance and construction of imagined and real social networks, and relationships between individual users. Consequently, a discussion of mediated communication needs to consider its social or ritual functions. As the interactional roles and relationships differ significantly between interpersonal and mass mediated forms of communication, the ritual significance is also likely to differ. This is not to imply that quasi-social relationships typical of mass communication do not have real social significance. Mass communication is an essential part of the social symbolic process of constructing and maintaining reality and the representation of (sometimes illusory) shared beliefs (Carey 1989). As David Holmes (2005) emphasises, broadcast media have an essential social integration role despite an apparent lack of direct or symmetrical interaction. Instead, mass-mediated integration relies heavily on audience identification and recognition. Brent D. Ruben (1986) similarly argues that the study of communication is the study of human individual and collective symbolic integration: it is how we come to know and be in relationship with our world both in terms of personal intracommunication (thoughts) as well as interpersonal and mass communication. Hence, communication cannot be fully comprehended simply by focusing upon interaction in the form of source, message and receiver (Ruben 1986:142).

The challenge is to discuss the social and ritual significance of communication without adhering to utopianism. Perspectives on communication easily romanticize communication as facilitating sharing, communality and understanding between individuals; closing the gap between solitary subjects and transcending differences (Chang 1996; Peters 1999). Such a romanticizing perception of communication is, for example, evident in early theories on virtual communities (Rheingold 1993). It is therefore crucial that theoretical models of communication include the practice of interpretation, and consequently of misinterpretations (Eco 1977; Hall 1999; Luhmann 2000).

John Durham Peters (1999) manages to articulate the conundrum and the blessing of communication, describing dialogue as two people taking turns broadcasting at each other, whereas dissemination, as already noted, covers forms of communication where messages are cast out, not aimed at specific others and with less chance of obtaining replies. By this Peters suggests that face-to-face talk is just as laced with gaps as distant (mediated) communication. Peters reminds us that there is always an abyss between us, and communication is merely our hope to bridge this abyss. Communication "is the name for those practices that compensate for the fact that we can never be each other" (Peters 1999:268). Communication is a significant quality of human existence as it proves the importance of significant others in our lives, but it never implies a transcendental meeting of minds. It is consequently essential to acknowledge that the significance of communication cannot be grasped simply by trying to decipher who says what to whom. In this chapter, social

integration is introduced as a quality-attribute of communication that describes aspects of communication that are not merely concerned with meaning-making per se. Social integration, instead, concerns the implications of communicative traces as expressions of being-in-the-world of self and others.

Ella's weblog, Underskog and dagbladet.no

In the following, I analyse examples of threads in Ella's personal weblog, Underskog (a members-only Norwegian social network site) and Dagbladet.no (the online version of a Norwegian tabloid newspaper). These examples are chosen because I expect them to be differently positioned on a continuum between the interpersonally- and the mass-mediated, yet each thread is situated within the blurred area of interest. In the analysis I address aspects of interaction and participation as well as the social context and the ritual significance of these conversations. In so-doing, the differences and similarities between the threads are illuminated, indicating the extent of convergence between forms of communication.

Interaction is analysed according to the symmetry or asymmetry of conversations. Symmetrical interactions imply that participants in threads actually read and respond to other user-comments. In mass media contexts this ideally also involves journalists and editors, or else the fundamental structure of mass communication remains asymmetrical. Principally the structure of the communication process is made somewhat more symmetrical even when comments are merely read though not responded to. *Participation* is used to describe number of participants taking part in discussions. Interaction always involves participation, but participation does not necessarily imply interaction in the form of users responding to each other. Whereas interaction and participation only concern users who leave explicit symbolic traces in threads, *integration* principally includes the majority of users who may read (parts of) threads yet do not leave comments. Users may sympathize or disagree with remarks independently of whether they take a visual part in on-going discussions. Importantly, *symbolic integration does not depend on interaction or participation*. As has been argued, mass communication has an integrating role despite lack of symmetrical interaction, as integration also concerns developing and maintaining imagined and real senses of community and belonging. Since, also, the ritual roles of communication consequently concern matters beyond the textual traces of participating individuals, the analysis of social integration is tentative. That being said, the integrating roles of personal and collaborative media expressions are connected to patterns of interaction, as mediated communication helps to maintain and construct social ties.

To summarise, the three variables that characterise social practices of communication, are defined as follows in this study:

	THEORETICAL DEFINITION	OPERATIONAL DEFINITION
INTERACTION	The characteristics of the relations between communicating parties as symmetrical or asymmetrical.	The extent to which communicating parties actually read and respond to each other indicates degree of symmetrical interaction.
PARTICIPATION	Discernible partaking in communicative environments – shaping the content in a communication process.	Number of contributors in a talk or discussion (independently of whether actors actually take part in symmetrical interactions).
INTEGRATION	The ritual significance of communication as facilitating the maintenance and construction of imagined and real social relations between individual users.	Not directly observable. Includes users who do not take a discernible part in discussions (i.e. most users).

Ella's weblog

In a study aiming to characterise weblogs as a genre, Susan C. Herring et al. (2005) calculated the mean number of comments received per entry for weblogs that allow comments, to be less than 1. Commenting and interaction between author and readers were hence not found to be significant parts of weblogging practices. Weblogs in the studied sample were generally individualistic forms of self-expression. Nevertheless, in the following discussion of Ella's weblog, the focus is on the relations between Ella and her readers, as weblogs indeed may have important social significance. I have carried out qualitative interviews with 15 users aged between 15 and 19 years old about the social and personal significance of weblogging practices¹. For these, commenting emerged as a relatively significant aspect of weblogging:

Anders (17): I read all comments. I think the comments are important. Some people say they have a blog for their own sake. But I think that's bullshit because then they wouldn't keep it public.

Marika: How often do you write comments yourself then?

Anders: I don't know. I try to comment on most of the things I read. (...) I feel that they sometimes need to know that I have read it.

Receiving comments is not equally important to all informants, and they differ significantly when it comes to how many comments they write (from hardly any to 20-30 comments a day). Webloggers with several reciprocal friends or contacts, and who are eager commentators themselves, tend to get more comments and to appreciate this aspect of weblogging. The point here, however, is not to discuss how common, or how significant, comments are to the weblog genre. I do not aim to find a 'representative' weblog regarding content, social and personal function, or amount and character of comments received. There is no such thing. However, the example studied here is typical for a group of young weblog-users who write about personal eve-

ryday issues, and for whom the weblogs represent an important part of their social lives.

Ella is an 18-year old LiveJournal (LJ) user from Norway². Her diary dates back to March 2002, and she currently has 124 mutual friends on LJ. Only some of her entries are public and hence accessible for readers who are not part of her LJ-network. In one of her public entries, Ella tells her readers about how her mother surprised her with a question concerning a party Ella was planning but had not yet asked for permission to hold: 'the hairdresser at the salon had told her about it! HOLY CRAP, my mom summed it up this way: "I guess you've learnt what a small town this is."' The entry ends with a self-portrait of Ella, from waist to chin, in a new t-shirt. The point here is not to provide a comprehensive analysis of the meaning of the entry or the conversations that follows between Ella and her commentators, but simply to examine number of commentators and who they are (participation), and to what extent Ella and her online friends take part in symmetrical interactions.

Beginning with characteristics of participation, there are 19 comments to this entry. Nine comments are written by users on her friends-lists, one comment is from a user not on her friends-list, and eight comments are written by Ella herself as responses to comments received. The thread is hence strongly characterised by symmetrical interaction between Ella and her online friends:

From: Rabbit

Date: January 26th, 2006 02:01 am (UTC)

i can't really see the print on the t-shirt, but i guess you're hot in it any way.

i miss your parties.

(Reply to this) (Thread)

From: Ella

Date: January 26th, 2006 03:01 am (UTC)

there'll be many more when you guys get back :)

(Reply to this) (Parent)

Rabbit lives in the same town as Ella, but was studying in Australia when this entry was posted. Online diaries are commonly used in combination with private forms of communication such as instant messenger (IM) to keep in touch with friends who have moved away for shorter or longer periods (Lüders forthcoming-a). The other comments to Ella's post are very similar: commentators credit how she looks in her new t-shirt and request to be invited to the party, whether or not they live geographically close to her. Ella consistently replies, suggesting that, for her, welcoming and visibly appreciating comments is central (see Brake 2007 for a typology of relations between webloggers and their readers).

From: saveme

Date: January 26th, 2006 09:15 am (UTC)

YOU'RE HAVING A PARTY AND I'M NOT INVITED.

(Reply to this) (Thread)

From: Ella

Date: January 26th, 2006 04:55 pm (UTC)

dude, we've been through this before. if it's not likely that people are able to be there, i won't invite them.

if you moved here, however :P

(Reply to this) (Parent)

This request to be invited is first of all a symbolic expression, indicating a recognition of the social relationship between saveme and Ella. There is no doubt that social interaction between Ella and her friends is a significant part of her LJ-practice. This thread is generally accessible for an audience unrestricted by time and space, yet the characteristics of the content of the thread is typical for interpersonal communication between friends. Over time, these relationships tend to evolve and deepen, existing friendships are maintained, and new social ties are constructed (Lüders forthcoming-a). The ritual aspects of these kinds of interactions are evident as users acknowledge the importance of others in their lives. The ritual function of social weblogging practices has to do with forms of reciprocity, often merely as the mutual reading of journals without necessarily commenting. Moreover, writing and contributing to public discourses have ritual functions as practices of being-in-the-world.

Underskog

In November 2005 Alex Staubo, Simen Svale Skogsrud and Even Westwang launched Underskog, aiming to create a constructive and collaborative social arena for their own extended networks. Underskog was initiated as a geographically specific social network site based on offline connections (members inviting their friends and acquaintances to join), featuring a social calendar, a collaborative weblog, user profiles with contact-lists, and an embedded messenger application. Discussions and profiles are only accessible to members, yet non-members have access to the social calendar (<http://underskog.no/kalender/liste>). Member-size has been constrained by allotting a restricted number of invitations, yet the size of the network soon challenged server- and administration-capacities: the number of users was nearly 6000 in June 2006 and more than 9000 in December 2006. As the size of the network increased, the initial small-scale structure of the site became a problem, illustrated for example by incessant meta-discussions concerning ap-

appropriate content for the front-page collaborative weblog. To meet the demands of the increasing size, Underskog 2.0 was launched on the 3rd of July 2006, introducing significant new participatory structures: members were given the opportunity to individualise the site according to their own preferences. Entries are now posted to different forums created by the members (e.g. reviews, ticketcentral, fashion, feminism, the market-place, posters, work-in-progress, TV). Those who initiate a forum choose whether it is open for all members to participate, who can comment and whether entries to the forum are visible on the Underskog front-page. Members can choose which forums to follow and which ones to ignore.

The entry "The new Woman" (Underskog 2006) was posted 23 May 2006 to the general weblog (before the launch of Underskog 2.0). The thread consists of a discussion of whether or not the winner of the Norwegian-Swedish Big Brother 2006, Jessica Lindgren, represents a progressive and liberating or a regressive female role model. Jessica's stereotypical blonde and narcissistic appearance is combined with a sexually-active and forceful personality. The weblog post refers to the radio-program *Kulturbeitet* (broadcast 23 May 2006) in which the media-scholar Alex Iversen hailed the winner as a liberated and liberating woman, and the more questioning and ambiguous comment by journalist Anne Lindmo from the Norwegian paper *Dagsavisen* (Lindmo 20 May 2006).

The thread contains 46 comments written by 30 different participants (last comment was posted 24 May at 2 am). The comments indicate a general negative attitude to Jessica as a potential feminist role model, but also acknowledgments as well as harsh critiques of Jessica as a person. Regarding further attributes of participation and interaction, users in this particular thread are relatively responsive to previous comments and points of view: 24 comments include direct responses to other user-comments. As such the conversation is characterised by users having an opinion to share, as well as reactions to claims and arguments previously made, i.e. it is typically characterised by participation *and* interaction.

An important aspect of interaction and integration concerns the characteristics of the relationships between the participants in the thread. The example from Ella's weblog was characterised by patterns of symmetrical interaction between Ella and her commentators, and the commentators were, with one exception, people from her friends-list. Although Ella's weblog is publicly available, her weblog has a limited scope of actual readers. The characteristics of the relations between 30 different participants from a member-base of several thousands will likely be different. Crosschecking the contact-lists of the participants reveals that 11 of them do not know any of the other commentators. The remaining 19 participants share between one and four reciprocal links. A closer look at other threads proves that some are highly connected to specific social networks, while others are not. The ability to create and personalise forums (with Underskog 2.0) has made the differences between threads more apparent. Nonetheless, Ella's weblog is

an interpersonal (yet publicly available) arena for interaction between friends, whereas Underskog provides a semi-public arena where discussions commonly evolve between participants who do not share social ties.

Still, participants may get an impression of each other based on reading member profiles containing self-presentations, embedded photos and videos, and links to external personal websites. 27 users in this specific thread have profiles with information about their full name and/or links to external websites such as personal weblogs and Flickr. Three users have chosen to stay pseudonymous, conveying an image of who they are merely by reference to their nickname. However, with Underskog 2.0, even pseudonymous users reflect who they are through their practice in Underskog, as the profile-pages archive user-comments and entries.

The discussion about Jessica shares a typical characteristic with several Underskog-threads as users appear to be divided when it comes to popular-cultural products such as Big Brother. Some users have a rather elitist approach to culture, exemplified by one member who is strongly critical to “un-interesting trash-culture being discussed in a serious radio-program about culture”, and equally critical towards the role Jessica plays, arguing that she is similar to the type of woman that has traditionally been cultivated in the sex-industry. Other users are more open-minded towards pop-culture:

It would've been more inappropriate if a serious program about culture on NRK P2 had ignored un-interesting trash TV, which for better or worse contributes to define our time.

Besides, K: the women's ideal that the sex-industry has cultivated for decades is a lot more passive (Written by B Tuesday 23. May at 14).

The user quoted here elsewhere acknowledges the multifaceted personality of Jessica. Whereas none of the participants fully agree with the view that Jessica represents a liberated ideal, there are manifest pro- and con views represented among the commentators, and feelings of identification with similar others may develop according to such preferences. These patterns are vital when discussing social integration and include the majority of users who merely read and make their own reflections without explicitly sharing their points of views through commenting. As such, communication in Underskog relies on reader identification and recognition in a similar manner to mass mediated integration, yet with the very important distinction that Underskog-threads are only accessible for registered users. It is likely that ritual aspects are shaped by the restricted access to Underskog, as having access to a closed network may increase feelings of fraternity.

dagbladet.no (db.no)

As noted, there is a long tradition of audience participation in mass media forms (McNair et al. 2002; Wincour 2003; Ytreberg 2004). Digital technology, as well as a dominating discourse of user-participation as an ideal, undoubtedly further increases implementation of user-created content. As a final example, I look at the audience-debate following an article in Dagbladet (db.no) about the AIDS-epidemic in South Africa (Thoresen 30 November 2006). A selection of articles in db.no is open for reader-participation in the form of comments, and some discussions attract large numbers of participants: 1290 comments, for example, were added to a discussion following an article about the problem of racism dominating some reader-debates about immigration and terrorism (Nærland 15 June 2006). Reader-participation in the AIDS-epidemic article is, in comparison, more modest: the thread consists of 194 comments written by 97 participants; 25 users have written two or more comments, and the most active user contributed 19 comments.

The degree of symmetrical interaction can be examined vertically, as interaction between journalist(s) and readers, and horizontally, as interaction between readers. As argued by Michael Karlsson, journalists hardly ever respond to reader-comments (Karlsson, 2006: 129-130; see also Øvrebo, 2006). The journalist in this example similarly took no visual part in the discussion, though this does not imply that the journalist did not read the comments. Principally, the communication process is more symmetrical, even if journalists merely read (some of) the comments. Expecting a significant degree of reciprocal interaction in the form of written responses between journalists and readers is vain, as the scope of these discussions are regularly overwhelming. Lack of vertical symmetrical interaction is evidently also related to the professional reality that journalists face. In an online news-editing world, the time-pressure to constantly produce updated and new stories is considerable (Hestvik 2003; Rasmussen 2006). Nevertheless, important examples of participating journalists can be found: one significant example is the above-mentioned article about the unbalanced character of debates concerning immigration and terrorism, in which the journalist Mina Hauge Nærland responds to several reader-comments (Nærland 15 June 2006). She expresses gratitude for constructive suggestions to improve the debates, and emphasises that db.no sincerely hopes to support democratic and open conversations (see also Thoresen 9 March 2007). This example does not change the fundamentally asymmetrical character of mass communication, but it underlines that mediated communication is no longer easily divided into interpersonal and mass mediated forms.

Considering horizontal interaction, participants in the AIDS-epidemic thread are remarkably receptive towards other comments: 155 of 194 comments are responses to other comments. Commentators constantly criticize, elaborate on, misunderstand, compliment, defend and mock each other's comments. A comparison with other reader-discussions shows that a high degree of responsiveness is common for db.no reader-debates, indicating a high degree of hori-

zontal symmetrical interaction among readers: a discussion about the failure of Norwegian policy on drugs yielded 65 comments, of which 31 were comments on previous comments (Fretland 20 May 2006). A debate following an article about North-Korean missiles consists of 140 comments, of which 85 were responses to previous comments (Sæbø 19 May 2006). In a discussion following an article about animal testing for medical purposes, 135 out of 203 comments were responses to previous comments (Bore 7 June 2006).

There is consequently no reason to believe that the anonymous or pseudonymous position of the participants, and the lack of social ties between them, in any way encumber horizontal symmetrical interaction. Messages are not merely cast forth, but regularly aimed at specific others. The fact that most of the participants are anonymous, or pseudonymous in the form of a chosen nickname, is interesting in a discussion about attributes of interaction and integration. At the time of the AIDS-epidemic article, users could leave comments without registering personal information and remain anonymous to db.no (though IP-addresses were logged), and db.no-readers. Participants who stick to the same nickname may earn a recognisable positive or negative reputation (Donath 1999; Henderson and Gilding 2004), even if there is no contextual information about them (in the form of, for example, user-profiles). Yet, participants are relatively free to comment without worrying about social relations, reputation or status; and they do not seem very concerned with the appropriateness or consistency of their messages.

Flesh to flesh!, they say...

Written by **xaw** 30.11.2006 at 22:38

My god!... It's really too bad that so many people die. That a lot of innocent children die because of aids. But. There's a BIG but... A lot of people can blame themselves. I've seen quite a few documentaries on TV about Aids/HIV. And those people down there are well aware of condoms, but do they use them? No! I've heard a lot of them say "I like it flesh to flesh".. They know about the danger, they know what could happen, they know that there's a lot of HIV around... But they don't give a damn... They don't care. So why the hell should we care?

RE: flesh to flesh!, they say...

Written by **DUST [stupid]** 30.11.2006 at 23:17

That's something you've heard "them" say often, right...

Jeez. Jeez. Jeez.

Please.

People down there are well aware of condoms.

OH MY GOD. SHUT UP, OR THINK BEFORE YOU WRITE.

There's a fucking government down there that has been denying the existence of AIDS for an eternity, and the minister of health

suggests garlic as medicine [information from the article]. Then you can just guess what the level of knowledge is in rural areas. YOU MAKE ME SICK. YOU'RE A DISGRACE!
(...)

RE: flesh to flesh!, they say...

Written by **Barrista** 01.12.2006 at 10:02

I more or less agree with you xaw, but I think Mother Earth has her own mechanism to control population growth; epidemics, earthquakes, tsunamis etc. (...) Yes, I know I seem cynical, but I can't see that there are other reasons for natural catastrophes. If the leaders in those countries that suffer so much can't give of their own abundance to their own people, then why should we? (...)

This extract does not provide a representative or fair impression of a debate where the participants vary greatly when it comes to opinions, ability to argue, and political perspectives. The point is rather to illustrate the temperature of the debate, and the distance that can sometimes (far from always) characterise reader-comments compared to editorial content. The disdainful tone of some comments can be problematic, especially as db.no follows editorial norms for publishing content. This is especially difficult in discussions of complex political matters, for example concerning immigration, economics or environmental problems, where disagreements tend to materialise in irrational and highly emotional quarrels. As previously noted, audience participation in mass media is traditionally formatted to meet the requirements of mass media publishing (Ytreberg 2004:689). With online reader-debates, db.no follows a different strategy, and although the participatory potential of digital technology is warmly embraced as a tool to allegedly improve conditions of free speech, problems of new mass media practices are still being negotiated. Db.no for example improved the functionality of the commenting system in November 2006. Participants are now encouraged to log-in, and registered users are admitted advantages such as a higher rank when commenting and recommending other user-comments (Thoresen 1 November 2006). Registered users are still typically pseudonymous to other readers, but the log-in process is likely to increase a sense of awareness, as the participant will be present with the same nick-name in all of her/his comments (unless having registered several user-accounts). From March 2007, anonymous users have to register a valid e-mail address in order to post comments (Thoresen 9 March 2007).

Discussions within db.no convey alternative and often dissident voices from below, and the discussions are characterised by interaction between the participants (horizontally). Increasing opportunities to participate may enhance the feeling of connectedness of the individual to societal discourses. However, the prevalence of comments strongly disagreeing with the journalistic angle creates an image social *disintegration*, and the importance of avoiding overemphasising a harmonic communality-function of mass media.

This is very evident, for example, in an article about US friendly fire pilots in Iraq (Klungtveit 6 February 2007). Several readers perceived the article as part of an enduring anti-American propaganda in *Dagbladet*, and such comments indicate that readers are not easily convinced by mass media content, verifying the frequency of oppositional readings (Hall 1999).

Concluding discussion

Mass mediation of interpersonal communication makes boundaries between forms of communication seem blurred. Although interaction as well as participation appears as significant parts of all analysed threads, the social relations between participants differ significantly: from fleeting and ephemeral connections to stable and strongly tied networks. Consequently, the ritual importance of different forms of mediated communication varies.

Individual weblogs are spaces for personal and creative expressions, and may additionally be important as apparatuses supporting the maintenance and development of interpersonal relations. Ella's online diary is, for example, a personal weblog with an unambiguous social function as a space where Ella maintains weak as well as strong social relationships. The interactional structures are typically symmetrical and appropriately described as participation *as* interaction. The significance of her weblogging practice in relation to aspects of integration is connected to the social functions of her weblog, but this should not overshadow the importance of keeping a weblog as a way of being-in-the-world. This is particularly important, as the interactional aspects are not necessarily a general attribute of weblogging practices.

Underskog is a networking-service, as well as a venue for expressing points of view and sharing knowledge. Underskog supports different forms of interaction though, typically, patterns of interaction are not too dependent of existing social networks. Conversations are structurally characterised by interaction *and* participation. The ritual functions extend beyond those who leave visual traces in the form of comments, though still limited to those who are registered members.

User-participation in db.no is placed within the context of mass mediated articles, and are supposedly intended to encourage open and democratic discussions among citizens (or consumers). Db.no runs several community-oriented services such as the highly successful social network site blink.no and the blogging-service blogging.no, but the reader-discussions analysed in this article contain few embedded features for social networking. Commentators remain relatively anonymous and unconnected. The aim of reader-debates on db.no is not to foster social relationships, and research of mediated communication easily tends to overemphasise the significance of social networking. There is an independent and very important value of providing readers with simple tools to participate and express their points of view.

Despite experiments with increased user-participation, the fundamental ritual role of the mass media remains the same and is not dependent on symmetrical relations. Mass communication, with or without integrated systems for horizontal audience interaction, is a vital part of the social symbolic process of constructing and maintaining senses of reality and the representation of shared *and conflicting* beliefs. In line with an overemphasis of interactional aspects of communication, there appears to be an overemphasis on dialogue as superior to monologue broadcasting (Peters 1999). Hence, claiming that mass communication is asymmetrical is not the same as claiming that mass communication is inferior to symmetrical forms of communication. The prevalence of unformatted user-participation within digital mass media forms such as db.no does not imply the end of the structurally asymmetrical relations between mass media performers and audience, as interaction mainly takes place on a horizontal level among the audience. Yet the increasing levels of user-participation represent interesting areas for research, e.g. as a way of analysing voices from below. For instance, the db.no-thread previously characterised as problematic due to commentators flirting with racist points of view, indicates considerable distances in values between journalists and large groups among the audience.

The opposite ends of the interpersonal and mass mediated communication axis are still easily distinguishable: phone-calls and an IM-conversations are interpersonal and the content is available to the communicating parties only. Most newspaper articles, radio-shows and television-programs are mass mediated with institutionally produced content available to an un-known, un-participating (nonetheless active) audience. Yet the three examples studied above illustrate the extent of the grey area in between the interpersonally and the mass mediated. The distinguishing point between interpersonal and mass mediated communication cannot solely be whether the content of communication is generally or publicly accessible, but has to be connected to patterns of participation and interaction, as well as the (dis) integrating functions of communication.

Notes

1. I have interviewed 20 young people about various aspects of their use of personal media, but five of the informants do not write any form of weblog or online diary.
2. All names are pseudonyms. Ella is not one of my informants.

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Mobile Media and Genres of the Self

Lin Prøitz

Understanding genres and their communicative efficacy facilitates the way one understands how to act and participate in a society (Kwasnik and Crowston 2005:76-88; Miller and Shepard 2005; Askehave and Nielsen 2005). As a range of new technologies evolves, a need for understanding new modes of media genres increases. However, according to Frandsen and Johansen (2001:50-68), classifying and labelling new modes of media, in accordance to a specific genre, may be tricky. One main point is that digital media (e.g. mobile phones) consists of a complexity of converging technologies and genres that make distinguishing them particularly challenging. Another issue is that, although a genre is seen as something relatively stable, it is simultaneously in the flux of continuous social, cultural and historical changes. Hence, distinguishing new genres may imply taking into account past examples, as these generate models and expectations for succeeding ones (Agre 1998; see also Miller and Shepard 2005; Berkenkotter and Huckin 1995; Larsen 2006:379). In short, one can say that genres involve an amalgamation of novelty, adjustment of boundaries, and modifications of ideology. In this manner, examining and distinguishing new genres implies achieving insight into how a new stability is imparted, and as Berkenkotter and Huckin (1995:6) argue, “how rhetoric accommodates change and accommodates us to change”.

This chapter considers evolving practices and genres in mobile communication. It investigates to what degree young people’s new communication practices illustrate a convergence, or recombination (Liestøl in this volume) of previous genres, and to what degree, and in what ways, the evolving genres represent distinctly new forms of communication.

The study is based on in-depth interviews with Norwegian teenagers and analyses of their own communicative acts.¹ More concretely, I have analyzed the genres of two frequent uses of mobile phones among young people: love text-messages and camera-phone self-portraits. In order to examine the rhetorical innovation of these new genres, the text messages and self-portraits are compared with related ancestral genres. Through these analyses and comparison I aim to grasp the complexity of young people’s communi-

cative acts, as well as the social effect that mobile phone genres may produce.

Little research has hitherto contemplated the correlation between the mobile phone medium, its practices and genres. Hence, in the next section my aim is to scrutinize genre theories in relation to medium of the self (text-messages/camphone images) and its rhetoric (here; love, intimacy and the self).

What do genres want?

Genre is a junction of numerous phenomena in a context of use. Hence, genre is not one thing, nor is there any consensus of what a genre is or consists of. For example, Norman Fairclough (1995:55) defines genre in relation to language and its specific activity whereas Frye (1971) and Black (1978) claim that the situation itself contributes to localize a genre. Another approach is suggested by Bhaktin (in Montgomery 1993) who, rather than making use of the term genre, employs the term 'chronotope' in order to stress how genres are related to current social and historical discourses. In Swale's (1990:58) work, genres are seen as constituting communication premises for a social group with shared aims. In addition to the various interpretations of genre, Agre (1998) states that genres sometimes imply one another, or to a certain extent serve corresponding functions in the same kinds of activity. However, common aspects emphasized in most genre theories are that genres are seen as related to a set of shared purposes and expectations of how we are to act by means of texts, or various social contexts (Berge and Ledin 2001; Askehave and Nielsen 2005).

Interpreting genres as a social phenomenon that reproduces and manifests itself over time is taken further by Carolyn Miller (2001:19). By emphasizing the act used to make use of a specific genre, Miller sees genre as a junction of intentions and effects in which meaning is achieved from the situation, and the social context in which the situation appeared; it is a rhetorical tool. Overall, I share Miller's (1984, 2005) perspective that genre is constituted by social acts. However, rather than merely emphasizing social acts and rhetorical strategies as such, I suggest that, in order to distinguish mobile-phone genres, there is a need to emphasize the genre's linkage to the specific media in use. In Agre's (1998) work on digital genres and new media, he suggests that genres are "the meeting point of producing media materials and the process of using them". In this sense, he further claims that genres ought to be studied in relation to the specific medium utilized. For example, a short text or a visual articulation such as a self-portrait impart different practices and significances, according to which medium is materialized (e.g., a painted self-portrait signifies and produces other cultural and social meanings and effects than does a camera-phone self-portrait), likewise the significance of a short text via a text message differs from

a postcard. This perspective is advanced in Inger Askehave's and Anne Ellerup Nielsen's (2005) work on non-linear, multi-modal, web-mediated documents. They argue that digital genres challenge traditional genre theory, as they not only act as texts but also as medium. In this sense, when analyzing non-literary genres, genre and media are seen as undividable concepts: "...the media is not only a distribution channel, but also a carrier of meaning, determining aspects of social practice (how a text is used, by whom it is used, and for what purpose)" (2005:138).²

In young people's culture, text and multimedia messages are a specific social phenomenon that has recently and rapidly manifested itself. Therefore, in a genre analysis, it seems futile to study SMSs and MMSs disconnected from media and social practices. Hence, inspired by the approaches of Miller, Agre and Askehave, and Nielsen, I will, in the following analysis, examine and discuss mobile-phone practices in order to distinguish and examine potentially evolving genres in young people's mobile-phone culture. As mentioned, the mobile telephone is a complex technological device that consists of various converging media (e.g., television, mp3, camera, email, sms, voice-calls, memos, notebooks, calendar, logs), some of which have developed new genres through the practice of everyday life. I have chosen to single out the two most frequently used communicative acts among young people: love text-message communication and camera-phone self-portraits. Thus a focus will be on how these communicative acts are used in intimate relationships.

The intimacy fiction

According to Lynn Jamieson (1998), the concept of intimate relationship may be associated with dimensions such as love, caring, sharing, close friendship, "deep" understanding and privileged knowledge. To have intense interaction with a person or to share detailed knowledge about each other requires trust and faith, which, in turn, are central aspects of intimacy and friendship. Hence, one of the foremost hallmarks of a modern friendship is that friends are voluntarily chosen. Friends select each other by personal inclination, where mutual sympathy and individual choices are required. This is in contrast to kinship, which is not chosen but is obligatory and ascribed. However, as Jamieson also points out, dimensions of intimacy and expectations of needs in terms of love and caring are culturally multifaceted and socially constructed, and vary and take on different meanings over time (ibid).

A common ancient Greek term that describes friendship is *philos*. The term describes people who are closely connected with each other, either as friends or kin. However, according to the philosopher Helge Svare (2004), being someone's *philos* entailed some very specific ways and norms of conduct that are more similar to the politeness we exhibit today with neighbours, relatives and colleagues.

Nevertheless, it is the Renaissance that is recognized as the era where friendships became more personal and emotionally close. The change from the Middle Ages gave rise to, and emphasized, a more individual lifestyle. Philosophical meditations on friendship are plentiful in the essays of the French philosopher and writer Michel de Montaigne: in one of his essays, his relationship with his friend Étienne de la Boétie is described as “two people melting together ... becoming one person with one will” (Svare 2004: 63).³ In the 17th and 18th centuries, romantic friendship is frequently seen expressed in letters, stories and other literary writings between same-sex friends. In this period, relationships that involved passion and strong emotions were highly valued and treasured socially. These relationships were supposed to be found with a close friend, or rather, one’s “twin soul”.

In the transition between the 18th and the 19th centuries, however, this idea changed as a new capitalist economy spurred the growth of cities. In turn, this rendered people’s identities less connected with kin and class, which to a considerable extent made it possible, or necessary, for people to establish their own identity through their own acts and achievements (Ziener and Lorentzen 2001). Accordingly, new distinctions and norms between the public and the private followed. Subsequently, this made the home and marriage the very core, private, setting for intense intimacy (Jamieson 1998:18). This cultural and social shift meant a further separation of private homes and public spaces, as married couples increasingly protected their relationship with isolation and distance from others.

By looking at the historical and social shifts in the meanings of intimacy, the outline above indicates how these distinctions may appear as cultural constructions. In the next section, I will follow this outline, focusing on how the meaning of intimacy can be influenced and even re-shaped by new technologies such as mobile telephony. This will be seen through the perspective of Tina, the most active text-message prod-user from my fieldwork.

Text messages – almost like a drug...

The first time I met Tina, she had just turned sixteen. At that point she had forwarded about 300 text messages to my mobile phone in five days.⁴ She very clearly expressed her relation to her mobile phone with these words: “My life was less full before I got a mobile phone” (Prøitz 2003: 11). In my second meeting with Tina, she had turned eighteen years old,, but, despite some changes in her text-messaging habits, she still ranked her mobile telephone as the most important material item in her life. Below, Tina tells the story of how her relationship with her current boyfriend started. The story sheds light in particular on how new technology in itself can make parallel, diverse and multiple intimacies possible.

In the beginning, when I met Tor, we told each other via text messages that we liked each other, and we sent lots of messages at that time. After a while, we wrote that we wanted to kiss and things like that, but when we met the next day at school, we didn't even dare to speak or to look at each other at all. It was very embarrassing. However, when we got home, we just started messaging again. Then it wasn't that dangerous, it wasn't embarrassing... After a while we wrote "I want to have sex with you" – even though we couldn't speak together at school. ... I don't know why one dares to write such things, but it felt like two different worlds. Somehow it seemed like he was a different boy. It felt like that. At least I thought that's how it was ... maybe one is "a bit drunk" when one writes messages. After all, that's how it seems. We lose our inhibitions. Then you aren't shy and can say things just the way you feel ... almost like a drug (Prøitz 2005: 5).

Tina sketches out at least two very different worlds in terms of intimacy. In the face-to-face world, they are both shy and embarrassed, whereas in the text-messaging world they act very differently: they are quite self-confident and valiant. They play with sexual issues as they express intimate and sexual desires, and excite each other far beyond their face-to-face limits. As Tina puts it, "it felt like two different worlds. Somehow, it seemed like he was a different boy". The quote may reveal how individual navigation in the performance of intimacies and selves emerges in the very moment of the performance, here presented by Tina who experiences the text-messaging world as distinct from the face-to-face world, though both are experienced as real. The fragmentation of traditional social forms influenced by the introduction of new technologies is here seen as producing spaces in which different meanings of intimacy appear. I would argue, as Jamieson does, that individualization gives rise to further opportunities for self-expression, including the expression of emotions, which in turn will allow multiple ways of performing and experiencing intimacy (Jamieson 1998:36).

According to Tina's words, the text-messaging world and the face-to-face world appear as quite separate and distinct arenas. The closeness and intimacy that Tina and Tor experienced with each other via text messages were not transferred into the face-to-face world. They did not even dare to look at each other at school. However, after a while Tor started to call call phone Tina. Tina experienced this as feeling quite uncomfortable:

It was okay ... but in the beginning it was a bit embarrassing because I couldn't stop and think in the way you do with text messages ... in the beginning we had quite superficial conversations about what we were doing and such things, but after a while it became more challenging... phone calls are a bit more personal (Prøitz 2005:5f).

The embarrassing point here seems to be related to the reciprocity of the examination of the other, where control is lacking. In an asynchronous text-

message communication, Tina would be able to read, edit, and rewrite the text before she sent it. In a synchronous phone-call conversation, these options are not present.

However, producing text-message spaces, in which new innovations of intimacy can appear unfettered by the face-to-face world, may have a value of its own, as Tina testifies when describing her relationship with a boy who actually does not like her in the face-to-face world: “Yes, there is a boy I like, but I know he doesn’t like me. But he seems so nice in his messages. So I choose to live in that world in a way. In a way we are together in messages. Pretending” (Prøitz 2005: 6). As shown in this case, Tina chose the most convenient world, the text-messaging world, where various ways of cultivating and reinventing selves and intimacies seem to appear. To see the self as a reflexive project is closely related to Michel Foucault’s interpretations of the term. In the next section I will look at how this reinventing and reshaping of selves and intimacies may be a continuation of the old Greek custom described by Michel Foucault as “technologies of the self”.

(Re)making the relationship

According to Foucault, there were four relevant types of technologies, all related to specific techniques that people would use to understand themselves (Foucault 2000:224). Each of the technologies worked out as a matrix of practical reason:

(1) technologies of production, which permit us to produce, transform, or manipulate things; (2) technologies of sign systems, which permit us to use signs, meanings, symbols or signification; (3) technologies of power, which determine the conduct of individuals and submit them to certain ends or domination – an objectivizing of the subject; (4) technologies of the self, which permit individuals to effect by their own means, or with the help of others, a certain number of operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality (Foucault 2000:225).

I focus on the fourth type, i.e., technologies of the self, in order to examine to what extent the ancient “self-ordering” of the individual parallels the media of the self.

The techniques of the self consist of self-mastery and self-knowledge: if you take care of yourself by concerning yourself, you will achieve self-knowledge. In a way, this art of existence refers to the ways in which we learn to present ourselves as works of everyday art. However, being able to embody the exercise of power on and through oneself is supposed to epitomize the route to all social good, which in turn develops your manner and morale,

and transforms you into a good, dutiful and obedient citizen and worker. Hence, the improvement of human manner and morality are the main ethical aspects of self-caring.

One way to achieve this self-mastery was to keep notebooks that, according to Foucault, had a role as a “truth test”, and therefore functioned as a personal exercise: “a ... labor of thought, a labor through writing, a labor in reality” (Foucault 2000: 209). The individual notebook, or *Hypomnemata*, was a guide for conduct where the intent was to capture and transform what was said, heard or read in order to “shape oneself”. Foucault sees the role of this self-writing as a “principle of rational action in the writer himself” (2000:213). By examining the old old old ancient custom of writing notebooks as a media of the self, I will look at how self-writing as a conduct of the self may have been inherited by mobile-phone prod-users in the modern world of text-message communication.

In the excerpt below, we follow Tina as she describes how one typical text-messaging day might unfold; an excerpt that exemplifies how text-messages are utilized as a medium of the self. Her description covers her text-message movements from the moment she wakes up until she goes to sleep at night:

When I wake up, I check my mobile and see if I have received any messages. And my mobile is just beside my head when I sleep. It is in silent-mode. Then I turn off the silent-mode and check if there are any messages, and if not I'll write a message to my boyfriend: “Are you awake? I just woke up now”. And then he writes back and says that he has been awake for an hour and is going to take a shower. And then I write “Okay, I'll take a shower as well”. And then I take the shower, and when I am finished I write a message “I am finished taking a shower”. Then he writes, “I was finished half an hour ago” [laughs]. And so I write “Okay, what happens next?” and he will answer something about that he needs to do some work, but he will come over in about half an hour or so. And then I write that I'll eat and dress or something like that. Then he writes “Okay”. After doing that I'll write “Are you coming soon?”, and then just “Yes, I'm coming over now”. And then I'll wait until I receive a message from him saying “I'm in the parking lot. Come down!” and then I'll write “Okay, I'm coming down”. Then I'll go down and we drive to his place. After some hours I receive a message from mum who asks “When are you coming home? Where are you?” I reply that I am at Tor's house, and that I will come home soon. Then she writes “Okay, just make sure you're home for dinner at four o'clock”, and then I write “I'll leave soon”. Then I go home. After I have eaten, I write to my boyfriend “I am finished eating now” and then he replies “I can come over to your place after I watch *Hotel Caesar*”⁵. And then I'll write “Okay”. Then he shows up. And when he is at my place, he is the one who receives messages from his parents. When he has left, I go to bed – and then I'll wait for messages from him where it says that he has arrived safely home. I want to know because he has just got a driver license

so I worry about him driving off the road or something. Then I receive a message again: "I'm home now. Good night, sweetheart" and then I'll write "Yes, good night! I love you very much!". Then I fall asleep. [laughs] (Prøitz 2005: 8).

One may be astounded by the massive number of messages this young couple produces, apparently self-imposed and used for continuously self-reporting their everyday life. At first sight, it seems that the main purpose of Tina's text messaging with her boyfriend is to coordinate a meeting during the day. Nevertheless, instead of making an appointment immediately, they send persistent text messages to each other from the very moment they wake up until they go to sleep – interrupted only, so to speak, by the text-message break that occurs when they are physically together.

Does this practice have parallels to an operation on thoughts, conduct and ways of being in order to shape oneself? If we take a closer look at Tina's story, we find that she sent and received 20–25 text messages that day. The high number of text messages together with the very detailed self-reporting texts such as "I just woke up now", "I'm finished taking the shower", "I'm finished eating now", "Now I'm home, good night sweetheart", may be interpreted as, if not guides for conduct, as at least reports of conduct. Each step she takes, each movement she makes is reported, and when there is a break in the text-message traffic, she seems somewhat paralyzed: "... and then I'll wait until I receive a message from him saying 'I'm in the parking lot. Come down!'", as if every "sending surface", each moment is completely covered and consumed.

One can look at text messages as a modern, individual notebook practice as demonstrated in the way this young couple captures and transforms what is said and done by bringing to light the impulses of thought. As we have seen from the excerpt, the non-stop commentary of Tina's and Tor's everyday movements are documented. According to Foucault, the intent of the *Hupomnemata* was indeed this everyday documentary: "The intent is ... to capture the already said, to collect what one has managed to hear or read, and for a purpose that is nothing less than the shaping of the self" (Foucault 2000:211).

In this respect, the young couple's text-messaging practice indeed has clear parallels with the ancient notebook. The idea was that by writing, one reads what one has written, and in turn this exercise would provide occasions for a personal exercise of the self. In a previous study, I found that the participants made a point out of the technology's characteristic that allows one to thoroughly think through what one writes while writing it (2003:51). This is the point Tina highlighted in the above section, emphasizing how embarrassing it was when her boyfriend started to phone her instead of keeping the contact on a text-messaging level. However, there are of course several obvious differences between the ancient Greek *Hupomnemata* and text messages. First of all, the major purpose of the notebook was not to com-

municate with others, but mainly to take notes for oneself as part of one's own improvement of manner and morality.⁶ The other main difference concerns the storage of the texts. Text messages seem to be of a much more temporary nature than the *Hupomnemata* writings. The study participants say they store those text messages that make them feel good, or those texts that are from someone they care about, but generally they delete both the sent and the received text messages after a short time. Although Foucault's perspective may not be completely idiomatic in this comparison, I would argue that it is an interesting supplement in understanding how self-caring and the self are accentuated by the means of text messages. Then again, as first proposed, the expected meeting between Tina and her boyfriend seemed to be the main purpose of the communication. At second glance, however, the communication and the momentary orientation in itself appear as significant as the primary purpose. Likewise, the high frequency of text messages can also underline and confirm the couple's belonging to each other. In that respect, it may not be the self as such that is re-made or taken care of, but rather a relationship that is remade.

Foucault's perspectives have been fruitful in terms of examining self-caring through text messages. By looking at the text-message documentation of Tina's everyday life, text messages have been suggested as constituting a continuation of the ancient personal self-writing exercise. The rate of recurrence of Tina's text messages emphasizes how the impermanent orientation in itself, as well as the avowal of these young people's belonging to each other, draws attention to how text-messaging has become a medium of the self; text-message communication influences, transforms and even customizes young people's social interaction to an extent that conveys new challenges.

Although I find Foucault's perspectives fruitful, I argue that one needs to advance the analysis in order to examine how the media of the self constitutes new genres. By grasping evolving genres, one may comprehend more specifically how media of the self materializes and functions in young people's concrete, everyday, lives. Hence, in the next section the genre of young people's love text messages will be analyzed in the light of a previous genre of love messages.

The text-message effect

Text-message communication is a product of communicative acts whereby short texts are exchanged between two (or more) people. As various mobile-phone researchers have stated, text messages among young people are frequently utilized in order to micro-coordinate meetings, maintain relationships and constitute, negotiate or uphold sexual romantic projects (Haddon 2004; Hareide 2002; Hiorth 2005; Johnsen 2000; Katz and Aakhus 2002; Lee 2005; Ling 2004; Ito, Okabe and Matsuda 2005; Prøitz 2003, 2005a, b; Skog

2006; Sti 2002). In addition to these functions, one of the foremost intents of young people's text-message communication is to perceive a sense of being as a part of an immediate, intimate and social (micro-) community (Prøitz 2003). However, as text-message communication fluctuates in relation to various purposes and situations (e.g. text messages between young people and their parents are distinguishably different than text messages sent between young couples), I argue that text messages must be examined in accordance with this. I will particularly focus upon text-message communication in young people's love projects (sexual-romantic negotiations, flirting, love declaration and confirmations, etc).

Through a range of various media, such as emails, letters, postcards, notes, and travelogues, expressing intimacy and love to each other has long been a well-known practice. Therefore, although the love text message has emerged with mobile-phone technology, it simultaneously draws upon and shares several features with well-established genres and discourses. One genre that may be seen as the text-message's forerunner is the *Billet* genre.

A *billet* is a little card the size of a traditional visiting card and was used in bourgeois societies as a communication mode in the 18th and 19th century. According to Tore Brøyn (1996), the *billet* is a part of the letter medium. A note on a *billet* consisted of a short message used mainly in (initiating) love projects. The texts were often characterized by noting something, by requiring something of someone, or by offering something (e.g., announcing one's love or arranging an imminent meeting). Apart from being short, the text structure was quite informal, bearing an implicit questioning mode where an intimate atmosphere was produced and intended. In the following example, a note for Miss Aalberg, from the well-known Norwegian writer Alexander Kielland, reads:

...but now I would like to ask, because my remembrance is so poor, if it is so that I should write the whole day of today and the whole day of tomorrow and the whole day of the day after tomorrow? – or if it was rather a matter of a small “*visite de récréation*” tomorrow – for instance at 2 p.m.? – would that be convenient for you, Miss? Remember anything about this? (Kielland in Brøyn 1996: 43).

Apparently, the purpose of Kielland's *billet* was to re-confirm a meeting/date with Miss Aalberg. As seen, he initiates the *billet* by asking Miss Alberg whether he recalls correctly: whether they are supposed to meet for a *visite de récréation* tomorrow at two o'clock. The non-formal linguistics, the rather infantile, implicit questioning mode, blaming his poor memory, may also be a rhetorical form wherein he intends to 'conceal' his simple purpose: to invite Miss Aalberg out.

Once the short message was written, the *billet* was sent by horse taxi or with a friend going in the recipient's direction. In this manner, the recipient received the *billet*, answered, and returned it the very same day. The rapid-

ity of a *billet* exchange (it exceeded the postal delivery at that time), with its short, personal and intimate love text and requests, resembles love text-messages in several ways.

On examining the youngest informants' (15-16 years) love text messages, several attributes stand out. First, the overall intention of communicating is to confirm and re-confirm one's love to each other. The next step is to find out how and where to meet, implying how to escape parents' monitoring eyes. In general, these meetings are imminent; they concern the next hour or the next morning; it is very rarely about the next week. Moreover, the texts often consist of a request or an offer – as seen in Kielland's *billet* to Miss Aalberg. However, the most characteristic features of love text messages among young people are an indiscreet, direct and bold rhetorical form in combination with the high frequency of the exchange. When examining the most intense text-message exchanges, an exchange rate of 1.5 messages per minute (lasting for hours) is not unusual; findings that are probably quite common among same-aged youths.

In accordance with its context and historical situation, I find both Kielland's and the young couple's love texts quite informal and intimate. The main purpose is an imminent meeting, and the immediate exchange (again according to the historical context) makes a feasible comparison between the *billet* and today's text-message frequency. However, there are obviously clear differences in these communicative acts. First of all, *billets* were a practice of a bourgeois society rather than among ordinary people, as are text messages. In this sense, people, regardless of social class, participate in the modern form of billet exchange. Furthermore, the change from analogue to digital exchange also plays a role; in text-messages, no one else intervenes between the two intimate parties. As long as one does not send the message to the wrong recipient (which sometimes occurs), text-message communication is a safe, confidential process. Yet as mentioned, the most distinguishable feature is the rhetoric, quickness and frequency of the communication act; although a one-day *billet* correspondence was the fastest correspondence one had in the 18th and 19th century, a 1.5 per minute text-message exchange makes text-message communication closely related to a synchronous conversation. Thus I argue that sending daring and juicy text messages, strongly resembling a conversation, yet distinct from a face-to-face communication, is facilitated by the technology itself.⁷ The love text messaging as a genre enables one to be both intimate and immediate in a shared, constituted space while simultaneously physically separate.

In this sense, although love text message draw upon and borrow features from previous genres, it adds distinctiveness hitherto unseen in traditional genres. Hence, text messages are thus more than *billets* transferred to the mobile phone. I argue that the text-message distinctiveness, the properties, attributes and practices it conveys, must be seen in relation to the mobile-phone medium as a whole. As Askehave and Nielsen (2005: 128) claim in their development of a digital-genre analysis model, there is a mutual inter-

play between medium and genre that implies that one should take into account the medium's properties, its purposes and its form. In this fashion, I suggest that love text messages represent a rhetoric and practice that have widely accommodated change and have accommodated us to change; it represents a new genre.

Another distinct genre that has proliferated through the last few years is the camera-phone self-portrait. The visual self-practice also involves a fusion of past and novel genres. In the next section I will, through discussion of its attributes and properties, examine the camera-phone self-portrait genre.

Camphone self-portrait: A manifesto of the self

The self-portrait is one of several painting genres. In Norwegian art history there is a range of artists that have painted self-portraits mainly from the second half of the 19th century (Borgersen 1988: 6). Contrary to the diary's focus on the past, a self-portrait conceives a 'here and now'; it's an image of the moment (Mallon 1985; Gombrowicz 1988). As Borgersen (1988) points out, the foremost characteristics of a self-portrait are that it is made out of one's own interests and painted by the artist her/himself. Except for children's drawings and paintings, painting self-portraits has not been a common practice. Predominantly, the act is time-consuming, strenuous and requires considerable skill. Painted self-portraits still remains exclusively an act of a few.

The most renowned painted self-portraits were created at a time when photography evolved. As with paintings, the photo practice required technological and aesthetic skills and knowledge that only a few experts had. Apart from a few photo-artists, the self-portrait never became common practice, even after the launch of the cheaper lightweight 35 mm camera. Although self-timer release made self-portraits possible, snapshots were – and still are – mostly of friends and family.

Except for the performance/presentation of the self, I argue that there are several aspects that distinguish the camphone self-portrait. Among young people, the camera-phone is a close-fitting, body-worn, omnipresent personal device. Due to the corporeal sense of it, most youths perceive the camphone as a very private component of their lives. Moreover, its user-friendliness makes it easy to operate and manage. Most people familiar with the mobile phone have no difficulties in learning how to snap images with the in-built camera. Contrary to painted self-portraits, it requires no complicated technological or aesthetic skills. In addition, the no-cost processes in combination with its multiple delete/edit-functions contribute to the distinct camphone self-portrait-effect: numerous self-portraits are taken in numerous situations and arrangements by numerous people. Loads of images are saved simultaneously as others are deleted.

When looking at the informants' camphone self-portrait-aesthetics, there are some specific features that characterize its rhetoric form and style. Overall, all images are frontal or profile self-portraits (face and/or torso) taken at arm-length distance. Due to poor pixels and limited distance from the camera eye and the 'I', the images are often slightly blurred. The out of focus aesthetic creates a rather lowbrow visual articulation of the 'I'; traditional attributes of amateur snapshots (and new-realism photo-art). However, I find the most distinct characteristics to be the arrangement and performance of the self in front of the camera Eye/I; the young people appear highly comfortable, self-confident (and obsessed) in front of the camera eye/I. They easily pose and play with the self, mocking the traditional self-portrait high-art genre, or rather, prod-using a new one.⁸ I suggest that one must see the camphone self-portrait genre in relation to a more general media trend (e.g. the intensified self-broadcasting culture such as You Tube, My Space, Flickr etc).

Trail Signs of Me

As a part of the self-broadcasting and reality-trends that emerged in the late 1990s, Calvert (2000) suggests that one must rethink the traditional significances of, for example, voyeurism and exhibitionism. First, he puts forward three social forces that promote mediated voyeurism: a) the pursuit of truth; b) the desire for excitement; and c) the need for involvement. The first force concerns a lack of trust in journalism which leads individuals to search for a more "authentic reality", whereas the second involves the thrill of 'peeping' into other people's unguarded lives. The latter force is derived from a desire for mutual knowledge and shared community. He defines mediated voyeurism as follows: "...the consumption of revealing images of and information about others' apparently revealed and unguarded lives, often yet not always for purposes of entertainment ... through the means of the mass media and the Internet" (Calvert 2000: 2). In this fashion, rather than interpret voyeurism in a traditional sense (associated with sexual gratification), Calvert suggests that mediated voyeurism must be understood more broadly, as a part of people's desire and right for knowledge.

Moreover, in relation to mediated voyeurism, Calvert (2000: 83) brings forward its counterpart, mediated exhibitionism which concerns four central aspects: a) self-clarification; b) social validation; c) relationship development and d) social control. In a loose sense, all aspects may be seen in relation to "technologies of the self" as they concern various self-processes that may improve one's self-understanding and way of conduct. However, apart from being technologies of the self, Calvert argues that mediated exhibitionism concerns well-directed/"administrated" revelations of personal information and selves, which in turn make people's subjectivities into a flamboyant commodity. Similarly, Sella (2000) argues that the increasing self-

broadcasting-culture, where ordinary people achieve the opportunity to (over)-share and expose every facets of their lives in public, calls for a need to re-interpret the meaning of exhibitionism: "As TV and the Net enlist more and more people to reveal themselves, the formerly unsavory phenomenon known as exhibitionism is being redefined. It's being rehabilitated as an adventure/..." (Sella 2000: 54).

In various media-cultures, including young people's camphone culture, monitoring others or displaying oneself have become common acts. Whether one understands the trends as technologies of the self, flamboyant commodity, an adventure, or a play, I support Calvert (2000), Sella (2000) and Miller and Shepard's (2005) comprehension of the altered meaning of voyeurism and exhibitionism, as expressed here:

Both voyeurism and exhibitionism have been morally neutralized and are on their ways to becoming ordinary modes of being, subject positions that are inscribed in our mediated discourse. Validation increasingly comes through mediation, that is, from the access and attention and intensification that media provide (Miller and Shepard 2005).

These theoretical approaches are highly fruitful when examining the camphone self-portrait genre. A range of self-portraits are shared and exchanged among friends, partners and family through the telephone-network, Bluetooth or photo-sharing net-sites. Other informants state that self-portraits are frequently utilized as screen-savers on their mobile phone. However, although all informants took self-portraits and shared some of them, most claimed that they rarely shared self-portraits but merely kept them in their own mobile phone galleries/archives as a part of a self-commemorating practice. Rather than merely comprehending the vast amount of camphone self-portraits as a part of a culture of confession and obsessive self-act, I suggest that the camphone self-portrait genre ought to be seen in relation to the power of memory (Prøitz 2007).

To keep a particular narrative going is, according to Giddens (1991), a vital aspect of subjectivity formation. Continuous self-reporting through text-messages, notebooks, diary writing or self-portraits may be seen as a part of "the story of the self" or, as Keteelar (2003) suggests, as a part of an 'archivalisation process'. The latter proposal entails the process of which records one chooses to create, operate and use; a choice, Keteelar argues, that is culturally and socially discursively produced. New digital

technologies and acts enable new genres. As he further stresses, 'being digital' enables people to here uttered from an archival scientific approach: Being digital allows archives a continuing enrichment, using digital technologies as relationship technologies, to establish relationships with the people, connecting public and private memories, shaping the pluralizing dimension of the records continuum, constituting a new public space (Ketelaar 2003)⁹. In this sense, the act of keeping personal records, such as camphone self-

portraits, is seen as an active articulation of a specific archivalisation process, where the personal immediacy and broadcasting potentials of camphone self-portraits represent a novel act and genre.

Conclusion

Communication and social interaction make use of new media. In turn, new media expand the possibilities of how we relate to each other. In order to understand new media such as the mobile phone, its significance and determining aspects of social life, there is a need to analyze the linkage between the specific media in use, the practices it generates, and its genres.

In this article, I have examined the ways in which the usage of mobile-phone communication, such as text messages, interplays with social interaction and intimacies amongst young people through the development of new genres. The analysis has shown how Foucault's perspectives on self-caring are fruitful in order to understand self-caring activities through text messages. The text-message documentation of Tina's everyday life suggests that text messages are used in intimate relations as a continuation of the ancient personal self-writing exercise. The rate of recurrence of Tina's text messages emphasizes how the impermanent orientation in itself, as well as the avowal of these young people's belonging to each other, draws attention to how text-messages have become a medium of the self.

But, the new genres are not only recombination (or convergence) of previous genres of the self in new technological wrapping; the emergence of something distinctly new is evident in the examples of love text-messages and the camphone self-portrait. I have argued that although the love text message draws upon and borrows features from previous genres, it has its own distinctiveness as it enables intimate and immediate communication in a shared space while, simultaneously, being physically separate. Furthermore, the camphone self-portrait represents a new genre, different from other genres of self-portraits – a genre that may best be understood in relation to the more general media trend of intensified self-broadcasting enabled by digital technologies.¹⁰

Notes

1. The article is a part of a longitudinal study of young Norwegians' mobile phone practices. From 2001 to 2005 I carried out three phases of various in-depth interviews (individual-, groups- and partner-interviews) of a total of 23 informants. Some of the 2001 informants, who were then 15-16 years old, have been re-interviewed through all three phases, a method that has provided unique longitudinal insight of a complex youth culture. In addition to the interviews, the study is based upon 2000 text-messages and 300 camphone images that various informants have sent throughout the four years.

2. Although Askehave and Nielsen (2005:129) stress the relation between genre and media, they simultaneously claim that medium does not always plays a role in distinguishing a genre. As an example they refer to a pdf file of an annual report, arguing that it doesn't 'significantly change the status and function of the genres.
3. My translation.
4. The first fieldwork took place in 2001.
5. A Norwegian TV-soap series.
6. The notebook could serve in correspondence as raw material for text that one sends to others, although this was not the main purpose.
7. In general, the intense, cheeky and eccentric rhetorical devices used are highly characteristic features of young people's sexual-romantic culture of the 21st century (Pedersen 2006; Prøitz 2003).
8. Analyses of camphone self-portraits and family images are discussed elsewhere (Prøitz 2007a, Prøitz 2007b forthcoming). These performances are also seen and supported as paradigmatic trends in other personal media works, see e.g. Koskela 2005; Rosen 2005; Senft 2005).
9. Available online at: <http://cf.hum.uva.nl/bai/home/eketelaar/publication.html#top>
10. I will express my gratitude to Tanja Storsul and Dagny Stuedal for their brilliant and constructive comments and thorough remarks to this article.

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Talking Cleanly about Convergence

Andrew Morrison & Synne Skjulstad

The title of this book is perhaps not what many advertisers or branding consultants would have chosen to call campaigns involving digital media and online articulation. Be convinced rather than feel uncertain, be persuaded instead of departing from a website with a sense of ambivalence. In this chapter our interest is on emerging, participatory Web-based advertising and popular cultural referents. Much of the research into online advertising has been dominated by studies of consumer identification, click-through rates, banner ads, purchasing patterns, and cross-media marketing models. However, to draw us towards desirous and identificational relationships with their marketed products, online advertisers employ a range of mediational persuasive semiotic and rhetorical moves. Relatively little attention, however, has been paid to advertising on the Web in terms of social semiotics of mediated communication and relationships of changing technologies of mediation and participatory genres.

Taking selected examples of online advertising and branding as our focus, through textual analysis we examine the convergences between pro-

Figure 1. (Left) 1955 TV advert for Blenda washing powder; (Right) 2006 Web advert for new mobile telco TalkMore ('Only 29 kroner for one month with free downloading'.)



duction and consumption in the persuasive discourses of advertising on the Web. We therefore distance ourselves from earlier determinist notions of media and technology convergence. Our analysis centres on how interrelationships are realised through references to popular digital culture and the mediated activity of consumers in new spaces of participation. In terms of genre, we see a move from broadcast modes of advertising to ones that involve consumers in brand experience and affective engagement through their social action in shared meaning making (e.g. Miller & Shepherd 2004).

Earlier studies of print and TV advertising have looked at the persuasive character of declarative discourse and its mediated connotation. With regards to the multimodal and multi-mediational character of emerging network inflected advertising, we analyse how both consumers and advertisers are appropriating new tools in making mediated action in which persuasion is still present. Relations between technical platforms and online expression are realised through playful, ironic and self-reflexive mediations involving references to digital culture itself. Consumers' activity is now what increasingly concerns advertisers. References from popular techno-culture are often a main component in the socio-cultural situatedness of digitally mediated cultural activity. Sub-cultural icons from cyberpunk novels and films from the 1990s have now been conjoined with corporate marketing for the mainstream online. As regards the ambivalence of mediated cultural convergence, research is needed into how persuasion and participation play off one another and potentially challenge advertisers' roles in composing, managing and manipulating the persuasive in marketed discourse.

Talking cleanly

As audiences and consumers we are now being drawn into participative acts in relation to advertised goods, services and affects (e.g. Moor 2003). It is through our participation that 'messages' are fulfilled: producing online discourse in written and audiovisual forms (Fagerjord 2003) is now a part of moving what is advertised out of the grip of powerful commercial concerns and into the hands of citizens communicating with one another online. However, advertisers have already begun to appropriate such social networking forms of expression and exchange. Broadly, we see a move from earlier instructional and didactic adverts (the superior 'bleaching' of one washing power over another), to contexts in which messages and their mediations leach, or colour one another semiotically, and are realised through consumers' engagement in experiencing brands.

This is suggested in the two images from Norwegian TV adverts with which the chapter opens (Figure 1). The first is a commercial from the 1950s in which washing powder is being marketed through a domestic scenario that displays the hurried activity of taking down super-white sheets as the weather takes a turn for the worse. This advert appears on the website for the same

soap manufacturer. In the second advert, a mobile phone provider connotes its technical and computational expertise by importing the 'code' of an animation of dataflow from the cyber-techno film *The Matrix*. It rearticulates this popular, digital cultural reference as a means of differentiating itself within a highly competitive mobile phone and services market by accessing both digital and cultural codes.

In online adverts we see that cross-media publication and popular cultural references cohere. As Jenkins (2006:243) writes in *Convergence Culture*, convergence is not just a matter of delivery systems:

Rather, convergence represents a paradigm shift – a move from medium-specific content toward content that flows across multiple channels, towards increased interdependence of communicative systems, towards multiple ways of accessing media content, and toward ever more complex relations between top-down corporate media and bottom-up participatory culture.

In this chapter we take up the relations between discourses of hierarchical corporate advertisers and the emerging participatory and 'ecological' qualities of social networking environments and communication. Our analysis draws on a socio-cultural perspective to communication design and 'new media' (e.g. Manovich 2001) that places focus on the role of activity of participants in meaning making (Wertsch 1991).

Conceptual framework & context

A sociocultural perspective on communication design

A socio-cultural perspective on Communication Design argues for the importance of relations between tools, signs and significations in the production of meaning. Meaning is realised through situated activity of participants to discourse events and their compositional roles in implicit and explicit production of discourse in, through and as action (Norris & Jones 2005), drawing on shared cultural resources, histories and modes of engaging with one another. This extends representational approaches to the study of advertising as social semiotic – for example, the inscription of persuasion and power in the circulation of visual references and production – from the studios of advertisers and their publishers and distributors to multiple participants and representations. These may be co-ordinated in new online social network relations through which meaning is generated, shared and critiqued as multimodal discourse (Kress & van Leeuwen 2001).

The writings of Bakhtin (e.g. 1986) are relevant to understanding advertising and branding in a networked, participative frame. He conceived of speech genres that emerge from social contexts of 'speaking'. Where addressivity refers to how in all discourse events relations between speak-

ers and listeners are coeval, speakers always perform utterances in anticipation of being heard. Wertsch (1991) has suggested that we need to extend Bakhtin's notions of utterances from who is doing the talking to ones that inquire into who owns the meaning. Wertsch (1991:86) has further argued that meaning is realised when we 'populate' speech genres as mediated action. It is this move that we examine in online adverts.

Persuasive discourse and online advertising

Within media and communication studies, print adverts were very much the focus of social semiotic approaches to the deconstruction of persuasive texts from the mid-1970s (e.g. Williamson 1978). From a focus on the mediation of power through verbal-visual relations (e.g. Vestergaard & Schröder 1985), studies increasingly centred on the engendering of desire and persuasion. The business of advertising is to produce persuasive discourse: different media are geared towards generating an appetite and an affinity that ideally can be recirculated and extended so that consumers develop brand loyalty. Advertisers access cultural codes and reinscribe them within products and services as part of our social and popular cultural landscapes (e.g. Leiss et al. 2005) that are realised across media types and contexts of situation.

With the rise of the Internet, advertisers have been able to extend multi-level campaigns to an additional platform that in time has spawned a variety of formats. Rodgers and Thorson (2000) outline five Web advert formats: banners, interstitials and pop-ups, sponsorships, hyperlinks and websites. Referring to the capacity of broadband connections, Faber and Stafford (2005) extend this to include added audio-visual elements, animations, 3D adverts and advergames. As we show, in addition, video is already a rapidly growing part of Web advertising. To this list of formats, we further add the collaborative exchanges of word-of-mouth promotion that online are transformed into a new Web genre of viral marketing.

In tandem with the growth of digital branding and marketing, online research journals have also emerged such as the *Journal of Interactive Advertising*. What we find in many such journals is a predominance of research that is concerned with tracking audience behaviours and quantitative market measurement (e.g. Li et al. 1999). For example, studies take the form of Web-based protocol analyses and throughput rates from one to other parts of websites. Naturally, these studies have their place in understanding changing practices of advertisers and consumers. It is interesting to see though how little detailed qualitative textual analysis of online advertising has been carried out into how persuasion is constructed online.

In the past decade, however, increased attention has been placed on the construction and building of brands and their identities, and emotional and experiential ties for consumers (e.g. Klein 2001; Zaltman 2003; Landa 2005).

Studies have examined the processes and mechanisms through which brands themselves become icons (Holt 2004). Brand building has been extended to the Web and has been studied for example in relation to integrated marketing surrounding the US Superbowl (Kim et al. 2005). Web-based adverts in particular extend the potential for socio-semiotics or situated meaning-making through their inscriptions of cultural codes in online settings as 'push' media.

In a recent paper (Morrison & Skjulstad 2006) we analysed how intricate digital visualisations of neurological processes are used by Toyota to market online their luxury, hybridly-powered Sports Utility Vehicle (SUV). Our analysis looked at the ways in which digital tools and visual imaging technologies are turned onto the mediation of a superior technology by this leading manufacturer. The website we analysed is an amalgam of differently mediated representations. It draws on techno-aesthetics in popular film, medical imaging technologies and animations and overlays mediated through the software *Flash*.

In this chapter we extend such an analysis of one site, and especially one animated film, to a series of sites that are more diverse. Most importantly, these are sites in which popular cultural references are twinned with varying degrees of participation and authoring on the part of consumers. Our analysis of these sites is related to recent interest on cultures of consumption and relationships between production and consumption (e.g. Arvidsson 2005, 2006) with respect to brands and brand building.

Advertisers and brand consultants alike now need to heed the emerging cultures of participation afforded by social network technologies and practices of community and self interest that are built online. Digital composition and distribution technologies allow for participation by audiences, not simply as attentive consumers but as active creators, circulators and commentators of persuasive marketing. The emergence of advertising driven by participatory approaches designed to entice consumers by their own activity in Web-based arenas is still largely to be studied. An approach such as Integrated Marketing Communication (IMC) seeks to see multimodal and multilevel approaches as part of a convergent whole (e.g. Kitchen et al. 2004). However, accessing popular cultural practices as well as opening out for increased performativity on the part of publics, who also produce advertising of their own, challenges the integrated approach crafted by corporate entities. It moves them into potentially more diffuse, less-hierarchical patternings and processes where aspects of popular culture are paramount but where 'presence' and actions of consumers cannot be guaranteed. Analytically we are therefore in need of a situated yet flexible conceptual apparatus that helps us account for the processes of meaning making in and through production and consumption on the part of participant consumers. A socio-cultural approach to communication design, more generally, offers means to address the multimodal and multimediational activities of meaning making in the persuasive discourse domain of online advertising.

Popular cultural circulation

Advertisers are adept at tapping into existing and especially emerging cultural trends, including those of popular cultural phenomena and expressions (Storey 2003). This has been studied in terms of print and television and linked to wider analyses of youth, media and meaning-making (e.g. Livingstone 2002). Advances in digital technologies, imaging and especially effects as applied in 'cyber' oriented films, have given advertisers new popular cultural references to include in digitally mediated brand building and multimodal marketing. For example, a recent Norwegian TV ad for *Blenda* washing powder uses the trope of a scientific representation of data projected onto a glass wall-sized screen and manipulated by embodied human gestures, mimicking a scene from the Hollywood film *Minority Report*.

Advertisers need to locate their mediated messages within accessible cultural constructs that are now shaped, exchanged and modified on the Web. This has been taken up notably by the sports manufacture *Nike*, drawing on earlier affective campaigns (Gibbons 2005). Cultural products now become resources for mediated meaning-making in which the primary purpose is to persuade consumers, by direct or indirect means; branding now concerns marketing an experience that can be related to a product within a stable of items and where the affective marking of memories and associations is generated and circulated by consumers (Moor 2003).

Four instances

Below we present a qualitative textual analysis of four widely available Web adverts. We situate them against our own extensive use of the Web and access to online adverts. The adverts are: 1) A European car manufacturer's site in which the anthropomorphising of modular toys is generated in animations. 2) An integrated corporate campaign that reveals its multi-level marketing approach that includes print and TV ads but also incorporates pop music artists and *MTV*-like video as well as personal video & blog. 3) A car producer's website with related TV campaign, connected to sponsored hosting of personal videos uploaded on the social networking site *YouTube*. 4) A contemporary pop band's self-marketing in a social networking space, with loops back to *MTV*, and a competition for fans linked to *YouTube*.

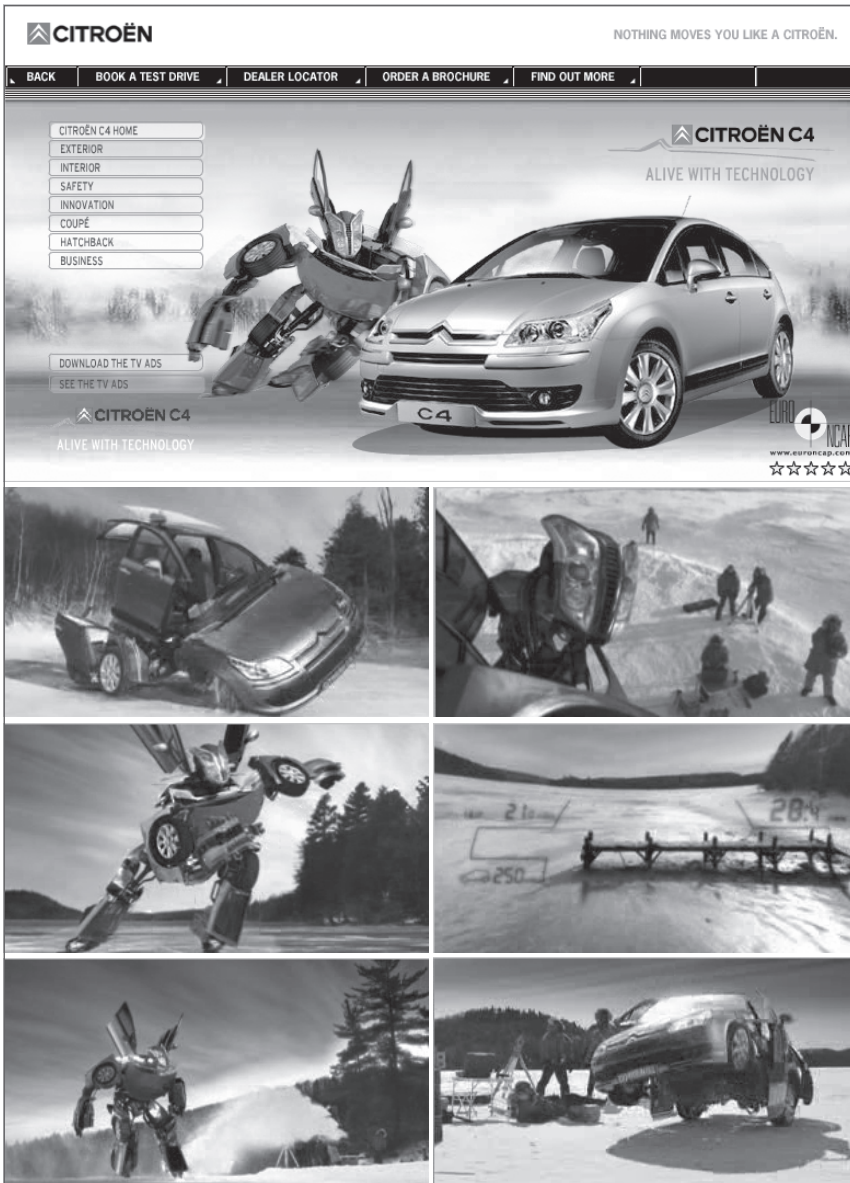
Analysis of selected online adverts

Example 1. 'Alive with technology' – Citroen C4

In marketing its new C4 model, Citroën developed a cross-media campaign that also included two TV adverts on a related website (Figure 2). These ad-

verts incorporated a number of cultural tropes from cyber-techno games, films and their marketing tie-ins. On the startscreen of the site both product design (the integrated, new model) and the popular cultural referent (the deconstructed

Figure 2. (Top) Startscreen for Website for Citroën C4 entitled 'Alive with Technology' with links to product details and downloadable TV adverts. (Bottom) The malleability of digital media as material, Citroën C4 advert for TV accessed via the Web.



power toy, the classic 2CV model) are placed side by side on the ice. The static car may be explored via the menu to the left, while its sense of aerodynamic and technologised motion may be accessed via the two animated sequences at the base, echoing the logo 'Nothing moves you like a Citroën'.

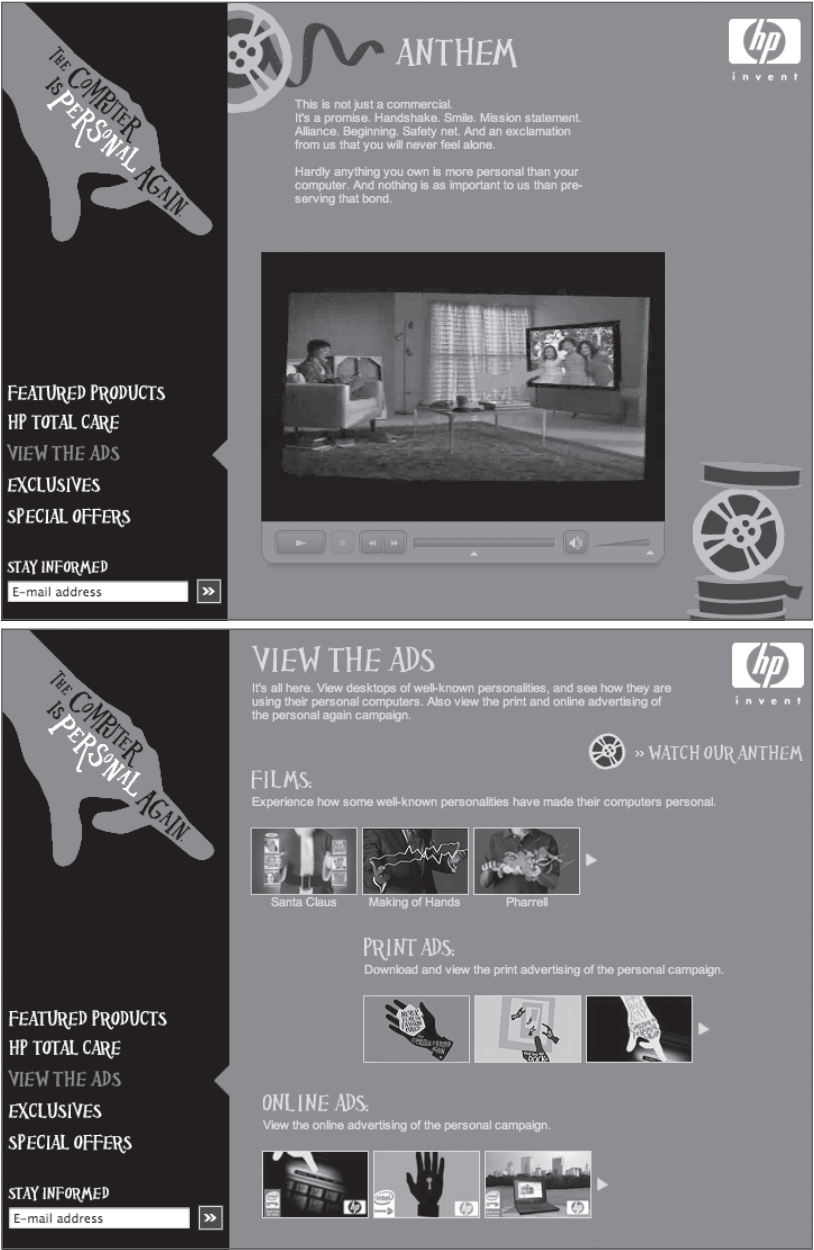
This movement can be seen in screengrabs from the dramatised and animated sequence accessible online. A 'team' dressed in red get out of the car and it quickly mutates from the actual product of car to a modular power figure composed of the car's components, with for example, wheels as biceps. This cyber techno figure has strong allusions to the 1980s *Transformers* toy, TV series and subsequent film.¹ The figure skates off onto the icy lake and dodges markers, jumps a jetty and comes to a playful stop, covering the red-clad group with a shower of snow before reforming itself as a car. This is a car that has agency; it has multiple incarnations, and a machinic liveliness that is agile yet playful. Seeing this played out to a techno music soundtrack, we as consumers understand that this is a popular cultural pastiche, filled with energy. For young adults it also an ironic re-articulation of their earlier plastic toys and of early televisual and filmic representations and special effects. We regard this as a form of cultural modularity in which digitally composed and mediated advertising recirculates ludic references from popular culture and literally moves them across a frozen lake, larger than life, and light on their feet.

The product being advertised is thus repositioned and repurposed. Consumers see interface and interaction converge in product mediation in which persuasion is achieved through an animated movie placed online. In this site we encounter intertextual reference to existing popular cultural icons. Connections are mediated between a toy, TV series and film for online consumers.

Example 2. 'The computer is personal again' – Hewlett Packard

In 2006 Hewlett Packard launched a global, cross-platform marketing campaign to brand their hardware in the personal computer sector. The campaign was entitled 'The computer is personal again', suggesting a major role in repositioning our relationships of use, consumption and production via the PC.² This is a graphically-driven campaign that achieves its identity through block colour illustrations and layout. It employs a font that alludes to ones from 1950s cartoons and popular culture with the more organic forms of 1970s experimental and non-commercial typography. The logo signals a specific attention to the hand drawn, yet which is knowingly computer-generated. The main message of the campaign is signified in both the figure of the hand as well as in the written text on the hand itself, connoting our own tangible relations to our electronically mediated lives via computers. The site claims that 'We've reshaped our business to reflect what it means to own a personal computer. It should be an experience, an adventure, a bond.'

Figure 3. (Top) Anthem and accompanying video, with still image showing animation that draws activity and 'belonging' through the flatscreen in the private space of the living room. (Bottom) Section showing different adverts for different media platforms; film ads designed for TV and cinema are available on the Web, as are print ones. The online ads can only be seen online.



This campaign is presented as an integrated and coherent whole, a feature of online adverts using multiple mediations (Skjulstad 2007 forthcoming). We see this in the inclusion of an 'anthem' (Figure 3 top) which is realised through a short programmatic text and further supported by a video that mixes various modes of representation: film, animation, sound etc.³ This can be seen in Figure 3 where the notion of a 'bond' as both a result and a process is conveyed. The video serves as a 'wideshot' of the corporation's approach. It embodies many of the aspects of the overall cross-platform campaign while also pointing to the ways (as we discuss below) in which they are realised in specific media, e.g. film, through transitional overlays of animation and moving image, borrowing from music video and developments in compositing and montage in motion graphics on the Web. The multiple mediations and multi-level marketing and cross-media approach of this campaign can clearly be discerned on the Web. As shown in Figure 3 (bottom), the user can view the adverts and these are grouped into three main sub-sections: film, print and online.⁴

The site has a series of TV films that are also suited to the Web, as is now the case with many cross-platform campaigns. A video about the making of the films can also be accessed. It briefly demonstrates some of the digital compositional techniques used to visualise the campaign. These films draw on three modes of visualisation. The first is illusionism and magic: sleight of hand is used to convey the extraordinary, though here made personal and achievable by the individual purchaser. The second is that of the screen as interface and presentational medium are simulated. We the audience see our own potential performances 'personalised'. Well-known contemporary personalities with strong popular cultural currency stand and present the mediational and communicative potential to us on our desktop screens. The lure of integrating digital media and modes of articulation is pictured via hand gestures: significantly, faces are kept out of these representations. These gestures demonstrate and also signify an ease of access, combination, and professionalism that is available to each of us as individual consumers. Third, simulations of digital production and visualisations are themselves visualised and placed within arm's reach, taking the sense of tangible interfaces into the Web interface and drawing them seemingly closer to us.

In order to illustrate and analyse this more closely, we now focus on one film that refers to a globally popular U.S. hip-hop artist. The widely mediated and international campaign by HP on making the personal computer personal incorporates this figure who is not only known for his acumen with digital production but whose music may also be bought online via a personal computer. The desktop, now a webtop, contains a legitimating reference to another, now mainstream, domain of digital media and its applications of digital tools in the production of a genre of popular music. As a digital music mixer and recording artist, Jay Z is known for his use of various names for himself, here the title, the 'CEO of Hip-Hop' (Figure 4 top). His usual, less formal, attire is replaced by a suit and silk tie; his face is never visible,

Figure 4. (Top & middle) Examples of tv ad in website. The hip-hop singer and producer Jay Z is featured on the HP site. (Bottom) animated hand indicates owner's location leading to rubric 'you are your own hotspot'; (Bottom) A video file is placed within a blog section of the site.



but the voice-over is his own. In the video he holds an animation of a current record mixing which he then collapses into his hand. At once, he performs the motif of digital convergence and resemioticises the graphically represented hand of the campaign logo as his own hand, which has been put to use in many successful careers. The caption 'Go deeper, explore Jay Z's computer' (i.e. the 'personal desktop') leads to his simulated desktop with, for example, photos. The video thus contains the desktop as a metaphorical link back to our own, personal digital spaces.

In the online components of the wider campaign by HP, we see how a large technology corporation extends its hand towards the emergence and personal uptake of social network media and popular youth culture. In Figure 4 (bottom) the overall graphic design of the site has been (legally) appropriated by an individual in Fingerskiltz.tv, marking this site as one sponsored by the corporation.⁵ This example shows a blog and video entry. An individually produced video (with help from a colleague) personalises the desktop through the use of blog and social aggregating software. The phenomenon and genre of the blog as a mode of self-expression are inscribed into the campaign: 'The computer is personal again'. A video entry shows the form of a soccer player drawn onto the author's hand. Variations of playing soccer with a crunched up post-it note in an office space are given, including using the PC screen as a practice wall and goal. Participation with playfulness is hereby symbolised through a short video that does not need a voice-over to carry the campaign to an audience used to the gritty non-professional production mode of social network media.

Overall, this site reveals how a global manufacturer of personal computer hardware markets itself as enabling the mediation of personal expression by inscribing references from popular music and its cultures of mixing through animated video, along with self expression in the form of a blog, and an animated sequence.

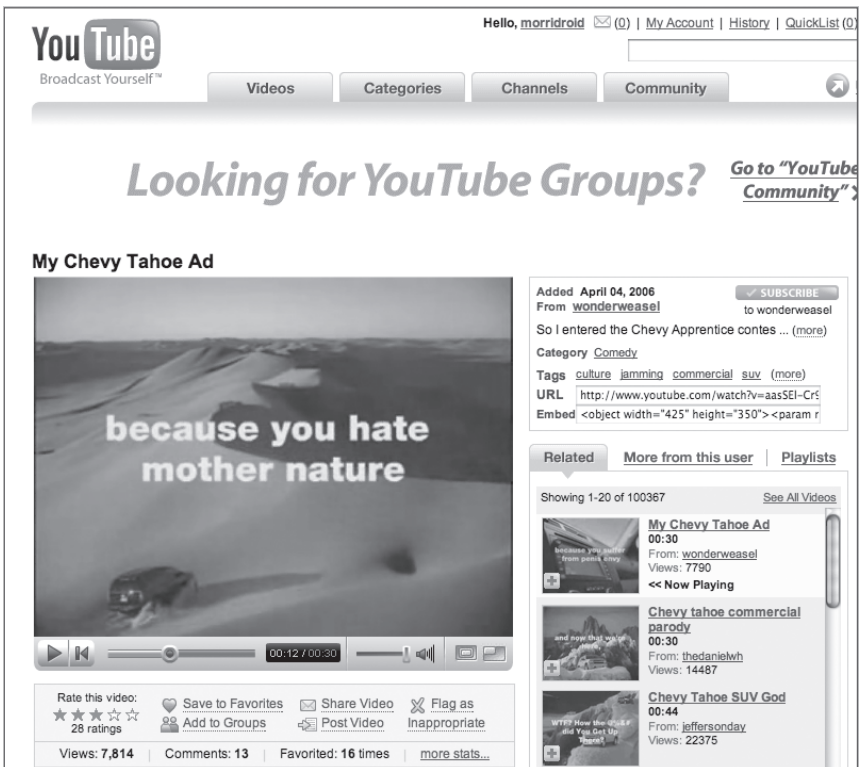
Example 3. En-corporating popular voices – Chrysler Tahoe

Sports utility vehicles (SUVs) have until recently been marketed against rugged landscapes and the negotiation of 'unmarked' terrain. This is the case especially in North America, navigating the great outdoors where once there was the far slower motion of horseback. Recently, given advances in hybrid fuel technologies and escalating fuel prices, Toyota has developed an advertising campaign that is scripted via neural imaging references, blueprint drawings and an overall ambient and sparse aesthetic (Morrison & Skjulstad 2006). This Japanese auto-maker, once immigrant to the home of the car, is now a market leader that can draw on cultural aesthetics from Japan alongside techno references to superior technology.

In contrast, the US automaker Chrysler has not invested heavily in hybrid fuel technologies. However, Chrysler has also engaged some astute market-

ing techniques to promote its new petrol-engined SUV, the *Tahoe*, with its popular cultural reference to being 'off-road' (or at least the capacity for its well-off owners to be so), and taken it online. This is not simply a matter of publishing yet another Web advert: Chrysler has deliberately employed the popular cultural and participatory domain of *YouTube* as an adjunct to their main Web presence for the *Tahoe*. They have supported the publication of video-based spoofs and critiques of their SUV. Consumers, activists, devotees and critics have all contributed to a corpus of over 30 000 videos in *YouTube* that are, in one way or another, a pastiche of this advert. The original advert has been transformed through editing and by way of the voice-overs and textual content. This can be seen in Figure 5 where one of the resemioticised adverts claims such vehicles exist 'because you hate mother nature'.⁶

Figure 5. Example of personal video pastiche of corporate advert in campaign sponsored by Chevrolet and linked with the over 30 000 submissions to *YouTube*.



In opening out to user participation in this way, Chrysler has extended their traditional marketing initiative onto the Web and via the off-ramp of social networking technologies that allow uploading of videos and related com-

ments and links. The thousands of contributors were able to see their own perspectives online, alongside those of a similar and contrasting tone. The advertiser has drawn on other models of Web advertising that play on the practice of ‘word of mouth’ online (e.g. Vilponnen et al. 2006). They have clearly co-opted such social networking and its popular references to draw attention to their vehicle: repeated, often harsh criticisms eventually weaken as they are repeated and the aesthetics of the open landscape prevail. Research reported in WIRED magazine (Rose 2006) has also shown that many consumers follow through from these videos and comments to the actual manufacturer’s site, thus showing how such manifold marketing, even when dissonant, can lead towards the core product site.

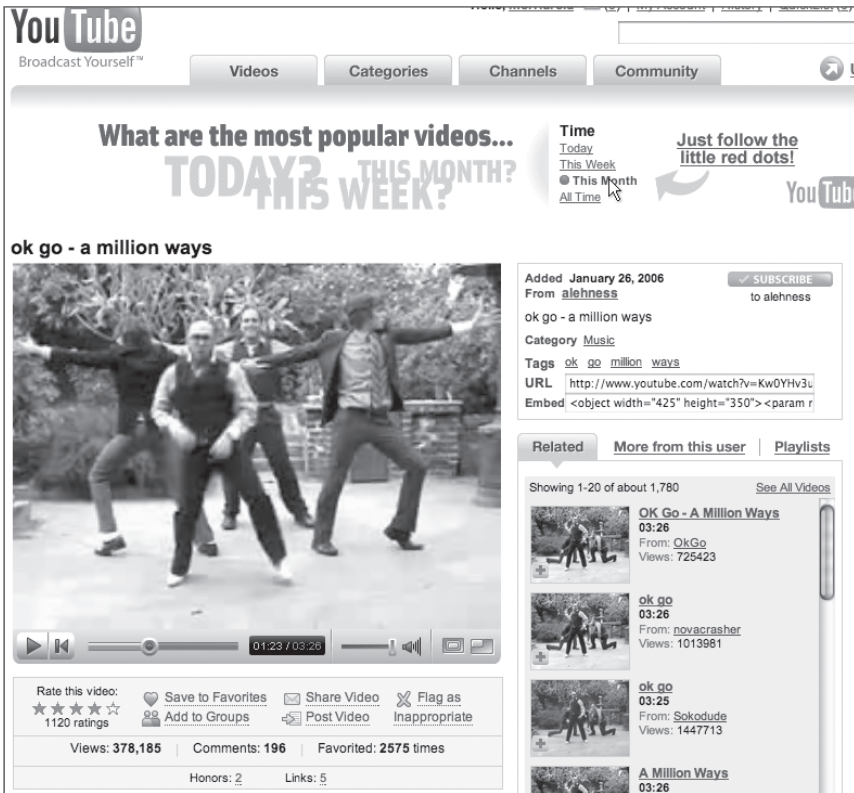
We might say in conclusion that the product eventually appears inviolable as its manufacturer en-corporates it within a wider network of criticism, allowing it to be repeatedly seen and circulated until the criticism wears thin through its voluminous repetition. The multi-purpose vehicle becomes multiply marketed, and the multiple iterations serve to distance consumer views, as personally motivated, from that of the corporately constituted. This example illustrates how a leading carmaker co-opts popular participatory Web culture and public expressive activities online. Multiple and even exhaustive variations are performed by publics, but the original product remains a commodity to be bought and driven.

Example 4. Playing the treadmill – OKGO

Social network technologies have spawned a variety of expressive texts with often personal views that reflect the popular cultural convergence of shared interests and non-commercial concerns. However, as in the previous example, Web spaces may also be used to market ironic and critical views on a commercial product. In Figure 6 we see a still from a video for the song ‘A million ways to be cruel’ from *YouTube* by the band OKGO.⁷ This largely unknown band, now with cult status, used the social network site *YouTube*, with its video-driven approach, as a self-marketing tool. The video develops an anti-corporate and popular culture style. This reduces the distance between popular audiences and the ornate visualisations and increasingly sexualised selling of contemporary commercial music on television and in print media.

Leaving the treadmill of conventional and costly advertising has been the move this band has chosen. In terms of a marketing convergence across channels and media types, this video has been seen by millions of viewers online. They have made and shared numerous comments. In a move that is an inversion of typical corporate branding, this video has been taken up by MTV and circulated again on television,⁸ at the same time pointing publics back to the Web. We view this advert as a clear instance of the enactment of performativity on the Web. The owners of the content have used a public

Figure 6. OK GO video 'A million ways' on YouTube, showing thousands of views multiple comments and the modes of responding available in YouTube, especially video



medium to their own advantage, linking to audiences and at the same time embodying them online through modes of participation in accessing, using and sharing popular cultural references.

In terms of genre, this is clearly a case of genre as social action. Where Miller and Shepherd (2004) apply this concept to blogging largely as written discourse, we see such a move as needing to be understood in terms of the enactment of the performative utterance across several modes of discourse. With respect to Bakhtin, in this OKGO video we see a polyvocal performance across media types that indicates how advertising is being transformed by the potential of collaborative technologies and communicative co-operation online. As a genre, we see the emergence of branding in which relations between production and consumption are looped and circulated. However, there is more at work here than a model of cross media convergence: it is the participation and engagement in the exchange of related popular cultural expression that is connected to this self-branded video.

Around this video a variety of activity-based mediations have been developed. They may be understood through their notion of discourse in action (Norris & Jones 2005). Discourse is seen as being realised in mediated activity in which 'dialogue' is central. Where this notion has been applied, it is typically to verbal discourses. Here we see the use of digital video in a variety of parodic takes on this popular culture music video on the Web (Figure 6). OKGO further linked their cult Web status on *YouTube* by launching a tongue-in-cheek dance competition⁹ around one of their videos 'A Million Ways.'¹⁰ One of the comments in *YouTube* posted by Angela87 mentions that 'The elaborate tributes ... include an (almost) traffic-stopping performance in the middle of a busy Hollywood intersection, a blind-folded version, many elaborately costumed renditions, and a faithful recreation of the dance as a professional ice-skating routine.' Other versions we highlight include a dance-karaoke style, a hilltop version including sheep, and a rendition at a wedding.¹¹

This contemporary music group has employed the medium of the Web to mediate their own performance and to sell music. They have also motivated their fans to publish their own humorous versions of the performances and gather these together in a competition on *YouTube*. The contributions are also linked to commentaries, further linking production and consumption relations online. This is a clear example of the uses of a genre that is possible to store, distribute and build through popular participation and related commentary. Waluszewski (2006:113) comments that:

... creating economically vigorous networks is neither about out-competing surrounding units nor about directing a structure in a particular direction, but rather about keeping a 'rainforest'-like process alive, in which actors with differing interests are utilising each other's resources. To succeed in building network structures is not the same as to succeed in breeding network processes.

It is these processes that now are no longer in the hands of corporations alone. However, recent legal action has resulted in *YouTube* having to suspend unlawful publication of television copyright material at the same time as companies have invested in the new subscription online TV service *Joost* embedded in a social software networking environment.¹²

According to Jenkins (2006:257), broadcast media amplifies while 'grass-roots' media diversifies. This example shows how these two approaches may be blended but leaves participation in the hands of playful consumers of popular culture who add their own cultural contexts of use. In this way grass-roots media may speak back to mass media (Jenkins 2006:248). However, strong corporate interests, as the example from Chevrolet shows, may co-opt participation back towards the mass-marketed product.

Discussion & Conclusion

Tensions between projection and performativity

The public, participatory and popular cultural character of emerging online adverts suggests a shift in how advertising is being influenced by digital technologies and the activity of consumers in building brand identity and its peer-to-peer exchanges, ones with which advertisers may be connected. On the Web, audiences are now given multiple points of entry to cross-media persuasion. There is room for increased personalisation yet at the same time a delicate balance needs to be achieved by online advertisers to create credibility as well as avoid intrusiveness (Faber & Stafford 2005). As we have shown, the uses of media types and their convergences and divergences are now central to discourses enacted by consumers; advertisers are likely to continue to draw on earlier approaches of both interpersonal communication and mass marketing within web-based environments.

Complex relations of production and consumption now arise specifically out of the communicative affordances of digital technologies applied to the Web. The ambivalence of convergence thus concerns an incipient tension between how social network software technologies and their related popular and participatory uses in sites such as *YouTube* are being inscribed within campaigns by corporate concerns but also, as accessed by players in the popular cultural arena, to build their own brand identity and popular following. Earlier approaches to the persuasive discourses of advertising need to be recast in the context of emerging technologies and branding strategies and, as researchers into convergence, we need to continue to examine them critically (Arvidsson 2006).

Washing the Web

Our title 'Talking cleanly about convergence' acknowledges that adverts online have predecessors and conventions. These have their roots in modes of persuasive mediation that move from the intermissions in the original soap operas and their resulting TV ads, such as the one for *Blenda* washing powder, to those that reflexively play with conventions of online marketing and its mediations related to popular digital culture. However, coming clean also refers to a metaphor of rotational washing, in which technologies enhance our activities; we have applied this to a line of argument that moves from discussing adverts that are the output of corporations to those that are incorporations of public participation in, and as, genres that are only realisable online.

Such adverts are co-present on the Web. They are articulated by activities of special interest groups. Participation within them is sponsored by corporations. In seeing convergence as ambivalently situated, not only is it possible to wash different colours together and generate new configurations at the level of genre and mediated expression, but there are questions, and

perhaps some hope, as to how the participatory and the formally branded may remain distinct from one another. Advertisers, however, as is their business, will always be motivated to turn the dial of persuasion to 'spin'.

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Notes

1. http://en.wikipedia.org/wiki/Transformers_series; http://en.wikipedia.org/wiki/Transformers_toyline; www.transformersmovie.com; http://movies.yahoo.com/feature/transformers_hd.html
2. <http://h41112.www4.hp.com/personalagain/uk/en/index.html>
3. <http://h41112.www4.hp.com/personalagain/uk/en/viewing/anthem.html>
4. <http://h41112.www4.hp.com/personalagain/uk/en/viewing/index.html>
5. <http://www.fingerskilz.tv/DasBlog/PermaLink,guid,53a8c7c9-02ab-4f4a-9014-6c4f889c887f.aspx>
6. <http://youtube.com/watch?v=aasSEL-Cr9Y>
7. <http://www.youtube.com/watch?v=Kw0YHv3ub-k&mode=related&search=>
8. <http://www.youtube.com/watch?v=NINJQ5LRh-0>
9. <http://okgo.net/dancecontest/>
10. <http://youtube.com/watch?v=bav63MWNuKg>
11. http://youtube.com/watch?v=fv0m_Va5Xuc; <http://youtube.com/watch?v=8lzE6pF8Lk&mode=related&search=http://youtube.com/watch?v=uojhahf7lo4&mode=related&search=>
12. <http://www.joost.com/>

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Media Technologies, Transmedia Storytelling and Commodification

Göran Bolin

Digitalization of the media is a phenomenon that has been central to the reshaping of the media landscapes over the past two decades or so. The process of digitalization has affected all areas of the media industries from production practices, over distribution technologies and audience reception, and has in turn made the media more mobile, increasingly interactive and overwhelmingly versatile. This mobility, interactivity and versatility have their roots in the fact that the media are involved in a process of convergence, where the borders between different media technologies are becoming blurred. Following from this process, it becomes increasingly difficult to make distinctions between different media technologies, as they adopt functions and forms from each other: we can listen to the radio on television, computers, mobile phones, etc. We can watch feature films at the cinema, on our television sets, in our mobile phones and, again, on our computers. In fact the computer, with its digital technology based on transistors and integrated circuits, is found at the heart of this development (and in that respect the mobile phone is just a variety of the computer) (Winston 1998). The computer is also the very medium surrounded by the discourse of convergence, as it so obviously 'melts' several older media into its technology.

The literature on 'new media', new technologies and new media landscapes is vast, as has naturally been noted previously (see e.g. J.F. Jensen 1998). Indeed, there have always been 'new media' around, as what is new for one generation is old news for the next. That the media and technology is at the heart of societal development is also a common assumption, as is the perception of the development as being increasingly rapid. Take this quote from a classical study in urban anthropology from the 1920s as an example.

[w]e are coming to realize, moreover, that we today are probably living in one of the eras of greatest rapidity of change in the history of human institutions. New tools and techniques are being developed with stupendous celerity, while in the wake of these technical developments increasingly frequent

and strong culture waves sweep over us from without, drenching us with material and non-material habits of other centers (Lynd & Lynd 1929:5).

I am quite fond of this quote, as it covers so many of the foundational problems that we as scholars of the humanities and social sciences are still struggling with today: the rapidity of social, technological and cultural change, the flow of cultural influences around the world (globalisation), etc. In short, what it proposes and points to is the very modernisation process – and the constant need to analyse contemporary technical, social and cultural phenomena as they appear around us. You could stretch this further and even say the constant need to reflect on our own societal and cultural actuality.

There is a certain grandness of scope in the quote above that is quite fitting for an opening of a major classical study such as the one that Robert and Helen Lynd had conducted with their study of Middletown. However, I do not have such grand pretensions with what I am about to do in the following. My aim is merely to try to give a short contribution to the debate, with a focus on the relation between technological digitalization and convergence, as well as textual divergence. I will do so from a perspective that also considers the fact that convergence, digitalization and textual divergence all are processes triggered by, or at least related to, the commercial media and communications industries.

I wish to proceed in three steps. First, I will say some introductory things about the history of the concept of convergence, in which I also want to briefly discuss the concept of divergence – a word not equally widespread, but also central to the development. Secondly, I will qualify the discussion with some consequences of the convergence/divergence process for narrational praxis. Thirdly, I will give a couple of reflections on the fact that texts are working in a commercial setting, and the consequences for value formation that goes along with this development. I will conclude with some general reflections on the possible impact of the digital development for the contemporary media landscape.

Technological and Institutional Convergence

Convergence, in its technological meaning of the blending or merging of different media technologies into one another, 'terminal convergence' as it is labelled in the opening chapter to this volume, seems to have appeared in the early 1980s, with the publishing of the US political scientist Ithiel de Sola Pool's *Technologies of Freedom* (1983). To refer to the technical capabilities of the media to blend into one another is obviously also the most common way in which convergence is used. This technological root of the concept needs to be related to the digitalization process, and convergence is thus seen as being a consequence of what digitalization permits. The con-

vergence effect springs from the unique capacity to break down all kinds of information into binary digits that makes it possible for technical functions and textual content to appear on different media technologies, as long as these are also digital. Danish communications scholar Jens F. Jensen has described this process as 'liberating it [the information] from dependence on any given medium' (J.F. Jensen 1998:41). This would then be the second wave of liberation for media texts, the first being connected to the advent of mechanical printing, when the words were liberated from their authors, as this is famously described by Roland Barthes ([1968]1977).

Although computers have existed since the 1940s, the debate on convergence did not appear until the 1980s. Computer technology was, at first, built around valve-based machines, which made them large and sensitive. It was with the change to transistor technology and microprocessors that computers first became personal computers (PC), and accessible for larger parts of the population of the Western world. This happened in the 1970s (Winston 1998:207ff), and is one explanation of why the concept of convergence did not get widespread recognition until the effects of the large-scale dissemination of personal computers had taken place in the early 1980s, and further actualised in the process of increased Internet and World Wide Web access in the 1990s.

However, although we often attribute convergence to a technological process, it is quite obvious that the development transcends the technological, and connects to vaster areas of society. Technology is always embedded in social and institutional structures. It thus transcends the mere technological in its effects, into what Robert Latham and Saskia Sassen (2005:16ff) has termed 'sociodigitization'. When we, for example, speak of 'the media', we speak about at least two things. On the one hand we speak about a technology that can bind people together in common, shared experience, or a technology that can disseminate stories, information, etc. On the other hand, we speak of an organisational form, where 'the media' refers to the institution, the media, with its sub-divisions – the journalistic institution, the entertainment industries, etc.¹ We then need to discuss this both as technological convergence, and as institutional convergence.

Digitalization and technological convergence

Digitalization, then, can be analysed from different perspectives, which all correspond to a pattern of convergence/divergence. Firstly, we can speak of an increased digitalization of media *production*. If we see (book) printing as the first mass medium, we can see that the production practices initiated by Gutenberg and others in the mid-fifteenth Century remained principally the same up until the early nineteenth century, when the steam-driven cylinder and rotary press, and new setting machines radicalised production (Williams [1958]1963:290). Such refinement of techniques has, of course, been

at hand over the years. The past two decades, however, have seen the rise of digital technology replacing previous analogue procedures: in printing we have gone from off-set printing to digital printing. If we look at the area of academic publishing we can also see that, in a very short time, the academic journal has become totally digital, downloadable, and has thus taken on a new form with inevitable consequences for not only production, but also distribution and reception. Within music production, film production, photography, we have also seen the rise of digital production procedures for recording sound and still and moving images, all of which is 'liberating' the information and making it increasingly more fluid.

The fluidity of content is also what brings us to *distribution*, as the second area where digitalization has set its mark. The last couple of years have, for example, seen the gradual replacement of analogue television broadcasting to the benefit of digital signals, in Sweden as elsewhere. This is perhaps to most people today the most significant contact with the process of distributive digitalization. However, distribution of music and films over the Internet has become increasingly common, following from the rapid spread of broadband access. Broadband distribution does not always flow from the media industry to media users. There is also large quantity of film and music distributed through peer-to-peer networks. This is an area where things are changing very fast, and the film and music industry is working hard to try to secure their assets in order to be able to control the content flows and thereby securing their revenue streams (cf. Miller 2007).²

Thirdly, one could also speak of a digitalization of *reception*. By this is meant the need for audiences to buy increasingly more media technologies that can decode the digital content. We can call these technologies or media platforms *means of consumption*, as they, on the one hand, are commodities in themselves (DVDs, computers, mobile phones), but, maybe most importantly, on the other hand are necessary for us to be able to take part of media texts at all. We not only need these means of consumption in order to handle the problem of distribution, but also in order to consume or use the texts we buy. Without these machines we would have to rely on printed books, magazines and journals.

The new means of consumption, the technological equipment that we all surround ourselves with (cf. Nowak 1996), are becoming increasingly complex. Within the mobile phone industry, for example, the research and development sections are intensely occupied with adding new functions to our small pocket computers, which makes them less 'phone' and more 'mobile'. As the mobiles are filled with increasingly more functions it is also very hard to 'choose away' functions. Even if I do not want a mobile phone that is "the electronic equivalent to a Swiss army knife", as Henry Jenkins (2006:5) has put it, there are no phones that are only equipped with the basic function of just talking. So, irrespective of whether we want it or not, we are forced into the possibilities of multi-functional communication (in the same way as we cannot today choose a car with manual window winders). And, naturally,

we also need to pay for this over-capacity, irrespective of whether we want to or not.

This multi-functionality means that we all have an equal access to different functions and different kinds of services. In a given society, then, most people have the same possible access to the same possible services. We could say that our access structures are converging in the way that they are becoming increasingly similar. On the other hand, there are discernable patterns in the ways in which we use, to take the most obvious example, the mobile phone. Even if most people have access to SMS functions, not all people choose to send text messages. In fact, the older you are, the more likely it is that you use your mobile phone as an ordinary telephone – to talk to people. If you are young, it is more likely that you use other options, most notably SMS, but also other technological options such as mobile Internet, radio, television, downloads, etc. (Bolin 2007). However, not all young people will use the phone in exactly the same way as everybody else in his or her age group. We will then have diverging patterns of use – what we perhaps could call user divergence.

Institutional integration and market convergence

Convergence can also point to *institutional integration* and *market convergence*, connected to the fact that the media as institutions operate in commercial markets. Media markets in themselves are, of course, nothing new. With the advent of a mass medium such as the book, there also appeared a market, with publishing houses and people with special skills with working procedures connected to these. However, since printing was the only available media technology, there were no other sectors that could be integrated. Since then, new media have continuously appeared, adding new markets in relation to these. So, in the longer historical perspective a plurality of media markets has gradually appeared, specialising in their respective genres tied to specific media technologies: the publishing industry, the newspaper industry, the film industry, radio industry, television industry, etc. These media markets are, at present, being integrated. This integration does not always follow from the digitalization process, although this process has certainly speeded up the development.³

In this process of market convergence, media companies formerly in different media branches join forces, which lead to institutional convergence. On the organisational level this has led to a situation where media organisations that had previously concentrated on a specific medium, say print, such as Bonniers, Schibsted, and others, have today developed into media houses that move into other sectors such as the broadcast media, the film industry, etc. These kinds of tie-ins have, of course, long since been observed by scholars within the field of political economy of the media (e.g. Wasko 1994; Herman & McChesney 1997), but they are increasingly hard to neglect even

for those more interested in media aesthetics and media reception, since these relations, as I will explore in greater detail below, have effects on the construction of the media texts (and hence have a bearing on media reception).

As audiences and media users, to an increasing extent, are becoming dependent on the means of consumption, and as content is becoming increasingly fluid and hard to control for content providers and copyright holders, the means of consumption are also becoming the locus of the generation of capital within media industries. When, for example, the music industry is facing a decline in record sales, and hence a loss of profit in this specific sector of the industry, they are compensated by the increased profitability of concerts, including various kinds of merchandise sold at these events. There are also many examples of negotiations between music companies, such as Universal and other content providers, and producers of the means of consumption, such as Apple (Chaffin 2007). Apple has its own music distribution through iTunes digital music store, which provides owners of iPods and other MP3 players with content for purchase. Apple thus provides both content and means of consumption.

However, we should not confuse market convergence with institutional integration (and maybe convergence can be used also for this phenomenon), since markets can perfectly well converge without the merger of institutions. This was in fact the case for quite a long time, when the film industry coordinated releases of films with the record releases of soundtracks together with the music industry. Although leitmotifs for films had previously been popular, it was not until the 1970s that the film industry developed more strategic techniques for this kind of market convergence. According to film studies scholar Thomas Schatz (1993), this rise of 'the New Hollywood' came with the releases of *American Graffiti* (1973), *Jaws* (1975), *Star Wars* (1977) and *Saturday Night Fever* (1978). With these films, Hollywood entered into a new era of filmmaking, where market considerations, 'commercial tie-ins and merchandising ploys' (Schatz 1993:18) became as important as choosing the director for each production. The timing, in the mid-1970s, also coincided with a converging market, and a diverging technological sector: the emergence of, firstly, a new relationship between cinema and television, including the advertising of films on television, secondly, the rise of pay-cable services ('movie channels'), and, thirdly, the 'home-video revolution' (Schatz 1993:21), all of which were new distribution and marketing channels for feature films. These channels thus functioned as different platforms for the diverging film texts. Hollywood, then, since the Second World War, had gone from having been an industry marked by 'vertical integration' (that is, owning both production and distribution facilities), to "horizontal integration of the New Hollywood's tightly diversified media conglomerates, which favors texts strategically 'open' to multiple readings and multiple reiteration" (Schatz 1993:34). The cinematic texts then became constructed to appeal to several different audiences.

Another example of market convergence can be seen in the coordinated initiatives by media and non-media enterprises, where media enterprises get involved in co-operations with producers of other, non-media market products in order to co-ordinate their activities to the benefit of both. An obvious example of such market convergence is Disney logos on H&M products, or Disney toys in Macdonald's 'Happy Meals' for kids in connection to cinema releases (or re-releases on DVD). Disney does not own, or have economic interests in, either H&M or Macdonald's (yet?), but they have joined forces to the presumable benefit of all.

These campaigns build on, and thus point to, the importance of fictional characters as commodities. This is also a phenomenon that has grown over the past few decades, and it could be seen as another kind of textual liberation, that is, the liberation of *textual components*. This has meant that trademark law has become increasingly important for securing profits, as of media characters such as the Simpsons, Superman, Winnie the Pooh, Batman, etc., become trademarked and move into non-media settings on T-shirts, thus integrating these characters into the urban sign landscape (Gaines 1990).

So it is obviously beneficial for media houses to control texts that travel over several media technologies, in what has been described by Janet Wasko as a form of *cultural synergy*, whereby "the megacorporations which produce and distribute cultural products" develop an "economic logic" where commodities (characters for example) benefit from moving between different formats (Wasko 1994:252). The Disney industry is perhaps the most elaborate in this respect, but others are equally efficient in taking advantage of popular characters that can appear in films, television, books, magazines, computer games, etc.

These tendencies naturally have consequences for the training of people that are to work within the media industries, and media production training today privileges textual production that travel over technologies. In educational jargon (or is it industrial jargon?) this is called 'platform independent' production, which means that you produce texts that fit many, possibly all, platforms. However, on the contrary, such production is in fact platform dependent, as it is dependent on the weakest link of textual presentation. When television companies adjust their web pages to mobile phone displays, as BBC and Swedish SVT have, they have had to adjust it to fit a small screen. This means that it cannot take advantage of the larger screens of television sets or computers.

These technological and institutional convergence processes are naturally affecting the ways that texts are produced. The next section will discuss some of the consequences.

Textual divergence and transmedia storytelling

Convergence in its technological aspect is thus the most common way in which the concept is used. What is less often discussed is the textual *divergence* that follows from this, in a dialectical opposite to the technical convergence (Jenkins 2006:10ff, cf; Jensen 2006). Media content, or texts, that previously were considered as belonging to a specific medium are today produced for audiences through a range of different distribution techniques. As already indicated, and exemplified above with the happenings in the 1970s, when new distribution technologies were introduced for cinema feature film, we can watch a film in the cinema, on television (stored on video, laser disc, DVD), on computer, etc., and we can distribute it through a range of technologies or platforms: celluloid, magnetic tape, DVD, or any other digital storage form. If we do not listen to music live, we can choose to do so on a similar range of platforms: shellac disc, vinyl disc, CD, magnetic tape, DVD, VCR tape, MD, iPod, memory stick, etc.

When films started to get produced with these different platforms in mind, they were accordingly adjusted to the future trajectory of cinema release, video/DVD release, pay-channel release, etc. The media industry has since, to an increasing extent, started preparing for platform independent content to be produced. As I have argued above, this in fact means that texts are constructed in order to function on several platforms, which might then be limiting for what can be told or represented. However, platform independence, or the fluidity of media texts, makes them divergent in character: something happens with the text when it is transferred from one technology of representation into another. There is at times a striking difference between watching a film at the cinema, and watching it at home on the television screen. Not only has the format changed, the film text has also been transferred to another reception context (cf. Bolin 1994): cinema is watched in a dark room with very few competing sources of attention; the television text is watched in the home, often in a semi-dark setting, and often with a range of competing sources of attention (people walking in and out of the room, noises from the kitchen, children toddling around, etc.). Furthermore, if we are watching the film via video, DVD or blue-ray, we can alter the order of scenes, take a break, etc., which are all options we do not have at the cinema. This is the divergent character of texts suited for a multi-platform setting: each medium has its own specificities when it comes to the conditions of reception. For some media technologies you can control in which order you can take part of a narrative. For some media you can also choose at which speed, or tempo, you want to take part of a narrative (you can read a book slowly or you can skim through its pages). Some media are mobile and you can therefore control the spatial location of reception, some media allow for social reception (such as the television, or the music record), and some are more individualised (such as the book).⁴

As Thomas Schatz (1993) observed, in the 1970s the films produced were consciously addressing different layers of the cinematic audience: the texts

became open to multiple readings. This is perhaps best exemplified by Disney films, which on the one hand address the very young pre-school children, but on the other hand also address grown-ups, with political and other references that are obviously way above the heads of five-year old children. This, then, means that such extremely polysemic films tend to be directed towards several different niche audiences.

However, in the prolongation of this trend, there is another phenomenon that has arisen as an outcome of the institutional and technological convergence and the textual divergence that has followed from that, namely what Henry Jenkins has termed 'transmedia storytelling' (Jenkins 2006:93ff). This means that the media content providers are developing texts across several technological platforms, thus taking advantage of each platform's specific qualities and abilities. The example that Jenkins engages in is *The Matrix*. This science fiction film trilogy cannot be fully understood from only the film text, but needs to be complemented with the computer game. The story thus unfolds on several platforms, and was consciously produced to do so. This is how artists can develop narrative construction in more 'ambitious and challenging works' (Jenkins 2006:96).

Transmedia storytelling also involves examples of how texts are promoted through other media. A notable example also mentioned by Jenkins is the promotion of the film *The Blair Witch Project* (1999), which was promoted through the construction of a web site that paved the way and produced a large interest in the film already, a year before its release. Through this web site fans could also discuss and engage in the speculations about the film, thus actively contributing to its reception context.

There is, of course, also another background to transmedia storytelling. Remediation, as theorised by Jay Bolter and Richard Grusin (1999) in their book of the same title, refers to the phenomenon where older media and media texts re-appear in new media forms. Narratives from literature become adapted to the stage, to the cinema, etc. And there are, of course, examples of narratives that have appeared in many different media forms. *The Hitchhiker's Guide to the Galaxy* was, for example, first made for radio and broadcast on the BBC in the UK for the first time in 1978. The year after, it was published as a book by the same author, Douglas Adams. The radio show was released as a recording and the radio production was also translated and produced for the Swedish Radio, by the same translator that also translated the book into Swedish (Tomas Tidholm). In 1981 it was adapted for television, and in 1984 the narrative was released as a computer game (in English), where you could follow the same adventure into space as you could in the first book. Four sequels have since been published (Bolin 1994). It has since been re-made for film in 2005. It has appeared as comic books, TV-series, etc. And throughout it has had a large fan following.⁵

Although something happens with the narratives when they are transferred between media technologies, this is not exactly the same as transmedia storytelling, since the aim with new adaptations is not to add something to the sto-

ries (although in reception this is of course unavoidable). And although the various versions of *The Hitchhiker's Guide to the Galaxy* seem to have changed slightly between the various versions that Adams himself produced, resulting in some contradictions, this does not seem to have been consciously made in the same way as *The Matrix* was (although it certainly changes the meaning of the story, dependent on which of the forms one has taken part of).

Commodified communication

Although there are undeniable aesthetic and artistic gains connected to transmedia storytelling, there are also profound economic incentives for its development. It makes the customer (reader) dependent on not only one medium or means of consumption, but on several platforms in order to be able to appreciate the story in a comprehensible way. It also encourages consumer loyalty. In a multi-channel environment, where each media user has an almost indefinite number of texts to choose from, it is important for the media industry to try to create loyalty among the audience members. Serialisation and transmedia storytelling are but two such techniques. And they both build on the fact that popular culture texts circulate in a commercial market that demands profits, and hence commodifies all communicative acts.

This is also why the audience is increasingly becoming a more important factor. In the age of technological convergence and textual divergence, content becomes more fluid, and thus harder to control and capitalize upon. As it has become increasingly hard to charge media users for content, the media industries need to develop new ways to secure economic revenue. This is why the market divisions of media companies are nervously trying to control another of their chief commodities: the audience. By selling this commodity, this statistical aggregate, to advertisers, economic revenues are secured. However, in a situation where audiences have almost indefinite access to millions of stories on a multitude of media platforms, the techniques for constructing the audience commodity, that is, the price-setting mechanism that is used to negotiate prices with advertising agencies, are in constant need of adjustment. There is an increased need to fine-tune these instruments, as the zapping audience is a moving target, and it is important to try to find out every second of audience attention (cf. Bolin 2005). This is also why one can argue that it is consumption, rather than production, that is the motor of development within the media industries.

The commodities, meant to attract the audience, that are circulated on this market are of two kinds: texts and means of consumption. Dependency on means of consumption is a way for the integrated hardware and software industries to secure profits, even for those products that are mainly user-generated in content (e.g. on YouTube, MySpace, etc.), as these also require

means of consumption (which are, at the same time, means of production for those who upload material to these sites).

The Matrix, and other texts that are played out across several platforms are, on the one hand, examples of the possibilities of constructing increasingly sophisticated narratives. On the other hand, there are obviously very materialistic reasons for why these possibilities have arisen: it motivates more consumption of both texts and means of consumption. It also makes audience measurement more flexible, as the increased complexity of the statistical audience composition makes this commodity even more abstract, symbolic or text-like. This is also why Simone Murray is wrong when she ends her otherwise illuminating essay on 'media convergence's third wave' by saying that "content no longer represents merely the filler for industry pipes but, rather, that it now constitutes the media industries' structural logic" (Murray 2003:16). This is wrong because although content is important, and has structuring power within media industries, the means of consumption cannot be neglected, nor can the role of audiences as commodities. And these also have structuring power over the media industries. In fact, you could say that the powers that structure the industry, as well as the viewer, reader, listener reception, are based on the very combination of converging technologies and diverging texts and narratives.

Notes

1. This has also led some scholars to try to distinguish between the two uses by giving them separate names. Simone Murray (2003:16), for example, uses the plural term 'mediums' when referring to multiple content delivery systems in order to differentiate such usage from the more generalised term for communication industries as a whole, namely the 'media'.
2. I hesitate to use the term 'meaningware' suggested by Liestøl (2003), as it connotes materiality in the same way as hardware does. By using the term 'ware', we imply that texts are goods for distribution in a way that plays down the conceptualisation of texts as webs of meaning. It then privileges a transmission perspective on communication that I wish to avoid.
3. Film and television, for example, did integrate their activities in certain national markets – for example in the US – long before digitalization (Wasko 1994:11ff).
4. For a more detailed account of the conditions of reception in relation to different media technologies, see the discussion in Bolin (1994).
5. For details on all of the different media appearances, see the quite detailed information on Wikipedia (http://en.wikipedia.org/wiki/The_Hitchhiker's_Guide_to_the_Galaxy).

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Concepts of convergence and converging processes have triggered considerable attention and activities in media research during recent years. This has been an inspiring context for the discussions and analyses presented in this book.

The book elucidates a variety of understandings related to the concept of convergence, and at the same time reflects on the analytical advantage of the concept. The contributions discuss the impact of media digitalization and the degree to which the prospects of convergence have been realized. The studies range from investigations of institutional and regulatory change within media and cultural institutions, to analyses of communicative genres and social practices related to digital media.

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