Martin Schreiber, Clemens Zimmermann (eds.)

Journalism and Technological Change

Historical Perspectives, Contemporary Trends

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Preface

This volume is based on a conference that took place on 22.–23. März 2013 at Villa Lessing in Saarbrücken, organized by the Chair for Cultural and Media History at *Saarland University*. The conference brought together international experts in the research field of media and journalism studies from different disciplines and countries – and we hope that this volume reflects some of its inspiring atmosphere which was made possible by many supporters:

First of all, the generous financial aid of *VolkswagenStiftung*, and particularly the assistance of the responsible consultant Wolfgang Levermann, made the realization of the conference and the production of this volume possible. For the planning and organization of the conference, the Saarbrücken staff – Susanne Dengel, Aline Maldener, Michael Röhrig and Heike Werner – once more proved invaluable. We thank all of them very much for their great commitment. Further thanks should be given to Volker Linneweber, the President of *Saarland University*, and to Michael Kuderna from *Saarländischer Rundfunk* for their illustrative and revealing introductory contributions. Of great importance and indispensable was the work undertaken by Ilka Braun and, especially, Aline Maldener at the Chair of Cultural and Media History who edited the manuscripts with great care and indefatigable attention.

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Saarbrücken, May 2014   *Martin Schreiber, Clemens Zimmermann*

Introduction: Towards a New Perspective on Journalism and Technology

Clemens Zimmermann and Martin Schreiber

Technologies, media and journalism are closely interrelated. This is true for the present time as much as in historical perspective. Technologies such as telegraphy and the rotation press contributed to the multiplication and globalization of news and accelerated their distribution (Bösch 2011, 128–142). The piecemeal use of photography led to fundamentally new conjunctures of text and image and facilitated considerably expanded potentials for layout and new journalistic formats (Zimmermann and Schmeling 2006).

While countless representations of journalistic practices at present and in history largely ignore technological aspects and factors, a perspective on the 'impacts' of technologies is virtually impossible. It is thus necessary to take into account economic, social and cultural determinants of the history of usage of relevant technologies. Although the implementation of digital computer technology decisively changed the overall process of the production of media and especially journalistic practices over the last decades, the yet unanswered question is who used it, where it was used and for what motives. This volume hence approaches this complex from an interdisciplinary perspective and aims to contribute to its analyses of the manifold interplay between science and technology on the one hand and between society, culture and politics on the other.

These correlations imply that the causal relationship between technologies and their effects is distinguished, that both the production and sphere of consumption count in the history of applied technologies, and that not only continuities but also discontinuities should be observed in the implementation of technologies (Boczkowski and Lievrouw 2008). In this way, the volume ties in with the discussion of the social construction of technologies, which was directed against technological determinism. This discussion worked out that 'relevant social group' and 'interpretative flexibility' are among the key concepts of such an approach (Bijker 2008). In the German research context, the concept of 'appropriation' (Aneignung) was strength-

ened (though in relation to audience and not journalism research). Appropriation is to be understood as the complex historical process during the course of which new media and technologies are incorporated into standards of conduct, in which those perceptions and requirements of the users are adopted that are understood as acting subjects (Schmidt 1998).

1 The Current State of Research

In the history of media so far, the question of the technological implications of journalistic professional practice assumes in a positively striking way only a very limited significance. Neither for the 19th nor the 20th century have studies on the history of media paid even remotely sufficient attention to the question of technologies in the workplace and journalists' interaction with communications systems such as telegraph, telephone, teletypewriter and Internet. Research focuses on questions of political context, commercialization processes, cultural appropriation of American journalistic styles in Europe (investigative practices) and the political self-conceptions and dependencies of journalists (Zimmermann 2006; Hodenberg 2006). Media history has so far largely bypassed above all the massive economic and technological upheavals of the last decades, right up to today's medial applications (Agar 2005). However, general acceleration and globalization processes of medial communication were worked out and the nationally diversified parameters of journalistic practice repeatedly highlighted in the history of mass media (Barbier and Bertho Lavenir 2000; Requate 2010).

Within communications studies and journalism, on the other hand, which are open for the question of the actual impact of technological innovations on journalistic work and the appreciation of technologies by journalists, but where the question is also posed as to how important technologies as a whole are in the alteration of journalistic practice (Cottle and Ashton 1999), historical perspectives play practically no role at all. There are, however, striking exceptions: Especially the effects of the acceleration of global information flows and the alteration of the forms and content of newspapers by new means of communication have been addressed on different occasions. Such effects emerged by no means automatically, and the 'old' and the 'new' forms of reporting stood side by side. This means, at the same time, that earlier linear models of modernization in favor of more complex

perspectives were abandoned (Bonea 2010). For the USA, the links between technological developments, the emergences of news agencies and, as a result, new forms of cooperation on the part of newspapers were highlighted (Blondheim 2000). It was likewise demonstrated for the USA how the industrialization and professionalization of newspaper journalism prepared current developments in the arena of news work and the convergence of media against the backdrop of the growing economic concentration of media enterprises. The history of technology is incorporated from this perspective into the history of growing institutional differentiation and division of labor in media (Nerone and Barnhurst 2003).

Current research shows that journalists strongly perceive changes in their work as being determined by technology, since they are confronted by it directly and on a daily basis in their workplace (Örnebring 2010, 58). It equally demonstrates a whole suite of studies that interpret changes predominantly as technology-driven (McNair 1998, Pavlik 2000, Welch 2000). These studies therefore follow a perspective of technological determination and stress economic efficiency. Applied to the area of media and journalism, this deterministic model that was disseminated in the USA supported a perspective according to which technology substantially determines the form in which content is presented.

Conversely, European and in particular German research has underestimated the technological basis of the media. This tendency is simultaneously supported by the traditional dichotomy of research into media and communication: Technological developments are subjects of engineering and the natural sciences, while dimensions of content are studied by the social sciences and humanities. This dichotomy, however, has been relativized with time. Now, in their definitions of the notion of 'media,' communication studies—traditionally more concerned with the person specification (work requirements) than with technological aspects of the journalistic profession—relate the media's characteristics to the state of the art of technologies used for the production and distribution of information and entertainment offers (Kleinsteuber 1992, 305; Weischenberg 1995, 15–16). Since the mid1980s and against the backdrop of an accelerating advancement of digital computer technology, media technology increasingly became the subject of media and communication studies. On the one hand, new technical systems and their effects on the editorial process were considered; on the other it was attempted to estimate future trends in journalism via surveys of users

(Weischenberg 1978, Prott 1983, Mast 1984, Weischenberg, Altmeppen and Löffelholz 1994, Weischenberg, Malik and Scholl 2006).

The results of such studies were quite contradictory. While some observed the disintegration and 'Taylorisation' of journalism, others stated that new technologies allowed for more autonomy and 'holistic' use (Haas 1999, 77–78). Many (meanwhile themselves historic) future scenarios turned out to be wrong. Yet it is worth noting that the findings of media and communication studies regarding the mechanization are often just snapshots and thus quickly relativized or superseded by new developments.

Research into media history that principally is in a position to put into perspective such deficits, however, is still dominated by a far-reaching blindness regarding technology. As elements of research, technical structures and actors are at least often not related in such studies. Mutual interrelationships are not sufficiently acknowledged or merely implicitly suggested. Ultimately, however, there are studies that explicitly consider media-technological developments—for instance in the area of printing and (media) agency technologies—from historical perspectives. These studies partly remain in the realm of listings and descriptions of media-technological innovations (for example Gerhardt 1986). Other studies embed the proliferation of new information and communication technologies more strongly in their respective cultural, economic and social contexts, yet at least in part appear to derive their findings from implicated medial properties rather than from empirical data (for example Giesecke 1991).

Of the newer publications in the area of journalism research that explicitly engage with the relationship between journalism and technology, Mark Deuze's study on working conditions in media companies (Deuze 2007) and in particular Patricia Dooley's overview of technologies in journalism in historical perspective (Dooley 2007) are especially noteworthy. Although the latter concentrates almost exclusively on the US and overstresses specific individual developments, it remains the first to acknowledge the specific social and cultural environment in a broader historical perspective. Equally good insights into the relationship between the 'new journalism' and the world wide web as well as between broadcast technology and journalism since the 1950s are offered by Martin Conboy's study on Britain (Conboy 2004).

A prospective new approach to the problem has been introduced by Henrik Örnebring (2010), who reverts to approaches originating in 1970s Labour Process Theory. Örnebring studied the interrelationship between journalism and technologies by focusing on changes in journalism as 'work' and 'pro-

fession' and the standards and qualifications associated with these changes. Since several newer studies within contemporary journalism research are concerned with how technologies are restructuring and transforming journalistic practice (e.g. Boczkowski 2004; Deuze 2007; Neuberger, Nuerbergk and Rischke 2009), this perspective equally has potential benefits for the analysis of recent and present developments in the area of journalism. In this context, the necessary historicization of the topic is striking. Even before the general digitalization, media technologies as well as interactive videotext constituted alternatives to print products, though they by no means gained such massive acceptance as their potential might have suggested (Boczkowski 2004, 19–50). As newer historical case studies demonstrated, massive tendencies of computerization already took place from the 1970s onwards and formed the basis for today's digitalization. With the replacement of film by electronic picture recording, the introduction of text-processing and content management systems as well as desktop publishing technologies, editors had to first of all accustom themselves—in view of the demands of multitasking—to working with the new graphical surfaces. These processes were evaluated by the journalists themselves as both an expansion of research possibilities and a growth in autonomy, at least in principle. It was not the technologization as such that was scarcely criticized by journalists but rather the rationalization imperative that was behind its introduction. The cutback in fixed positions and time pressures constitute far greater problems than the new technology (cf. Reddick and King 1997; Egnolff 2010; Gränitz 2010; Raubenheimer 2010).

2   Approaches and Aims of the Volume

The volume 'Technology, Media and Journalism' picks up such newer perspectives and is geared towards developing further research at an international level. It departs from the premise that new technologies are not effective sui generis, but on the contrary develop their specific potential only within the cultural and social contexts in which they are applied and through which they are mutually interrelated.

In particular, this book aims to introduce the great potential of historical knowledge into the research area of Technologies and Journalism. For the first time in this field, the volume brings to the fore consistently historical

perspectives that go back to the 19th century. Corresponding with the basic assumption that history reaches into the present, contemporary developments will be considered as part of the historical perspective.

Based on these underlying assumptions, previous processes in the field of journalism and technologies will be related to more recent and present developments. In general, one can demonstrate that journalism itself has always been innovative and was able to meet challenges—regardless of whether these were induced either by technological developments or by the transformation of the economical, socio-cultural or profession-political context. The following general criteria meet these observations and try not to act on the assumption of a unidirectional technological determinism, but to represent the complex and multifactorial set of conditions with respect to professional journalism over the last one and a half centuries.

(1) *Separation and immediacy:* Since the development of professional journalism in the 19th century, the technological basics of media have always influenced the work of journalists. In this context, the separation between printing technology and the work of news gathering and editing was in the first instance fundamental for the emergence of the journalistic profession. Up to the present time, editing technology gained more and more immediate influence on the work of journalists because the number of mediating entities was reduced. Important steps in this process were the immensely increasing news flow due to telegraphy, the emergence of local news reporting around the turn of the 20th century, and the introduction of the teletype machine/ticker in the 1930s.

(2) *Speeding up the news process:* Since the mid-19th century, newsmaking has been sped up tremendously. The discourse of speed—understood as 'at heart a capitalist logic of competition and use of technology to increase productivity' (Örnebring 2010, 65)—has become a wholly naturalized element of journalism and forms a template for how journalists understand new technologies, i.e. primarily as an opportunity to speed up the news process (Hampton 2004). There is a wide spectrum of significant developments in this area, ranging from the speeding up of post and passenger traffic, telegraphy, telephony and teletyping to digital communication media of recent times. Notably, the increasing speed required news to be concise and brief, related to their extent as well as their linguistic complexity.

(3) *Mobility:* Technologies whose primary function was to transcend space made journalists' work less mobile and more individualistic. Thanks to the telegraph, and later the telephone and the teletype machine, journalists did not need to leave their desks to get the news. Along with that, their desk with typewriter and, later, the computer as a workplace gained increasingly in importance. Based on Boyer's (2004) study of the role of the typewriter in the mechanization of office work, primarily by spatially linking the office worker to the journalist's desk, one can speculate that the typewriter might have been used for similar purposes in newsrooms. Indeed, MacGregor (1997) attributes exactly this function to the computer, turning journalists into 'mouse monkeys,' bound to their computers and tasked with repackaging incoming information into a variety of multimedia content.

(4) *'Taylorization' vs. 'Autonomization':* Although gaining more control over the process of media production has always been an important intention of the implementation of new technologies in the editorial departments, there is no clear tendency towards a 'Taylorization' or 'Autonomization' of journalists' work. As several studies (Pavlik 2000, MacGregor 1997, Deuze and Paulussen 2002) have shown, the introduction of new computer hard- and software required journalists to become more skilled in carrying out technical tasks and this led to new dependencies in the production of media that may undermine the autonomy of journalists and give more power to editors. However, the new technologies remain always an instrument/a tool that has been adapted to the specific socio-cultural contexts of media. Do we perhaps think of the antagonism 'Taylorization' vs. 'Autonomization' only because the work of journalists—since the origins of professionalization—always had to submit to certain constraints (as for instance the political orientation of newspapers and media enterprises)?

(5) *News gathering vs. news processing/editing:* Nevertheless, there is a tendency towards an increasing importance of news processing (including the visual composition) in place of news gathering and investigative reporting. In some cases, this may result in a polarization of journalism as a profession: A few journalistic 'stars' (most frequently TV news presenters, but some newspaper columnists have also acquired 'star' status) who command public recognition carry out the investigative research on-site, whereas the majority of journalists performs routine tasks in the newsroom (Ursell 2004). At the same time, editorial departments use more and more pre-processed informa-