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Technology and journalism-as-labour: Historical perspectives

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Abstract

Technological determinism is common among journalists when reflecting on changes in their profession; several studies show that journalists ascribe great power and independent agency to technology. There are at least two reasons for the persistence of technological determinism as an explanatory factor among journalists vis-a-vis their own work: first, technology is a highly integrated and therefore very tangible part of the everyday working life of journalists; and second, the technological paradigm for explaining change in journalism has deep historical roots. It is argued that analysing journalism as *labour* presents a way to address both the integration of technology in the everyday working practices of journalists, and the history of the inter-relations between journalism and technology. It is further argued that journalism studies as a field has not paid much attention to journalism as labour.

This article is concerned with the second part of this programme for research, i.e. the historical analysis of journalism as labour. The framework of analysis is based on *labour process theory*, focusing on four themes in the history of journalism: (1) the importance of the separation of conception and execution of labour; (2) the increased differentiation of the labour process; (3) the use of technology to increase productivity; and (4) the deskilling of labour.

Introduction

The starting point of this article is the following question: *Why is technological determinism so popular among journalists?* By posing this question I do not mean to say that journalists

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are particularly committed to technological determinism as a social theory, but rather that, when asked to reflect upon the changes taking place within their profession and the world of news media in general, journalists frequently invoke technology as a self-sufficient explanatory factor. Journalists in general seem to view technology and technological development as inevitable, impersonal forces that directly cause many of the changes taking place within journalism; this is demonstrated in a number of studies of journalists and how they relate to change in general and technological change in particular (Avilés et al., 2004; Deuze and Paulussen, 2002; Duhe et al., 2004; Huang, 2006; Liu, 2006; Preston, 2006: 46ff.; Quinn, 2006). In the minds of journalists, many if not most of the changes taking place in contemporary journalism are essentially *technology driven.*

This can be contrasted with the prevalent views on technological determinism within the social sciences in general and in the field of journalism studies in particular. In the social sciences, strong versions of technological determinism are generally discounted, and there is a well-established body of work critiquing it (e.g. Bijker et al., 1989; Douglas, 2006; Heilbroner, 1967, 1994). In journalism studies, some theorists and commentators were quite taken with technology in the early days of the internet and took a decidedly determinist stance (e.g. McNair, 1998: 125; Negroponte, 1995; Pavlik, 2000: 229; Welch, 2000: 6–7), while others were critical of it from fairly early on (Cottle and Ashton, 1999: 23). Later work dealing with the relationship between journalism and technology has generally rejected technological determinism in favour of more nuanced explanations, placing technology in its economic, social, political and cultural contexts (e.g. Boczkowski, 2004; Deuze, 2007; Dooley, 2007).

A big part of the explanation for the persistent tendency among journalists to attribute great power and independent agency to technology probably has to do with the proximity and integration of technology in the everyday working life of journalists. Explanatory factors used by journalism scholars, such as 'commercialization', 'professional socialization' and 'organizational structure', are for most journalists abstract and it is often difficult to see how they translate into everyday working practice. But when the entire newsroom has to change to a new content management system, or when journalists are required to learn digital production techniques in order to create content for different media platforms, that represents tangible changes in their working lives, changes that are readily perceived as being 'caused' by technology. This is not to say that journalists think that technology and only technology has the power to change their work – journalists do experience and articulate the pressures and changes caused by commercialization, for example (e.g. Preston, 2006: 42ff.) – but only that there are some obvious reasons for the dominance of a technological paradigm for understanding change among journalists.

However, this is not the whole answer to my initial question – if it was, then this would be a very short article. What we could call a technological paradigm for explaining professional change cannot be attributed solely to individual psychological mechanisms whereby journalists, as do we all, assign importance to things they interact with every day. The integration of technology into the everyday working practices of journalists remains an important reason for the continuing strength of this technological paradigm, and therefore a historical analysis that integrates issues of work practices and the context(s) of journalistic work is needed. The following attempt to historicize the relationship between journalism and technology uses the concept of *labour* as a lens through

which we can see the relationship between journalism and technology in a different way. As a lot of contemporary debate about journalism has to do with how technology is restructuring journalistic work (e.g. the emergence of citizen journalism, user-generated content, 24/7 news cycles), placing labour at the centre of analysis also addresses contemporary concerns over the state and future of journalism.

Analysing journalism as labour

There is no room to reiterate the theoretical debates surrounding the concept of labour in economics, sociology, law and history. I use labour to refer to *exertion which generates surplus value and presupposes a contractual employer–employee relationship*. The fact that one of the core changes in contemporary journalism is the rise of journalism that no-one is apparently paying directly for (i.e. citizen journalism, blogs) does not detract from the value of this definition, as a) such unpaid labour still has an opportunity cost for those engaged in it and therefore generates value, and b) the wider issue of which forms of journalistic labour are paid and which are unpaid then becomes an issue of both empirical and theoretical interest.

Journalism studies have broadly been more concerned with *work* in the general sense rather than *labour*. The landmark studies of journalistic work practices and work routines (e.g. Fishman, 1980; Gans, 1979; Tuchman, 1978) are primarily ethnographic and do not contain much information about, for example, salary levels, job security, degree of management control over labour processes, and conflicts in the workplace. There is a strand of work in journalism studies dealing with how the work of journalists is controlled and managed, but this work generally does not use the concept of labour, focusing instead on social control, professional ideology and similar concepts (e.g. Altschull, 1995; Bagdikian, 1974; Breed, 1955; Ehrlich, 1995; Soloski, 1989). This is said, not to detract from the central contributions made by the scholarship quoted here, but merely to point out that labour has not been a widespread concept used in the analysis of journalism (the work of Marjoribanks, 2000a, stands out as a relatively recent exception).

This lack of interest in labour is difficult to explain; it certainly does not have to do with any lack of theories on labour within the wider field of the social sciences. A speculative answer, and by no means the only one possible, may be that labour simply was not seen as a very relevant concept in analyses that were based on newsrooms within large, stable organizations where most journalists were employed on a permanent basis. However, in an era where all work, including that of journalists, is increasingly subject to casualization, freelancing and other non-permanent contractual arrangements, flexibility and insecurity (Baines, 1999, 2002; Benner, 2002; Crompton et al., 1996; Dex et al., 2000; Edwards, 2005; Ekinsmyth, 1999; Gallie et al., 1998; Head, 2003; McFall, 2004; McKinlay and Quinn, 1999; Platman, 2004; Purcell et al., 1999; Storey et al., 2005; Ursell, 1998; Walters et al., 2006), labour may well be a more useful concept for the analysis of journalistic work.

Faced with this lack of attention to journalism as labour, I suggest a turn to *labour process theory*, as it specifically deals with the relationship between technology and labour. The basis of labour process theory is set out in Harry Braverman's 1974 book *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*. In this

work, Braverman emphasizes the role of technology as a servant of capitalism rather than as a force in itself: technological developments are used under monopoly capitalism to displace labour from high-productivity industries to labour-intensive industries, which concentrates workers in low-skilled, low-wage jobs (1974: 117ff., 163ff.). Braverman's work has since been criticized, not least because of his lack of any hard empirical evidence for his assertions (Attewell, 1987; Littler, 1982). Braverman's notion of deskilling, i.e. that the capitalist drive to reduce labour costs leads to a systematic degeneration of craft skills in the workforce, is contradicted by empirical findings from large-scale surveys of the workforce: the general trend is upskilling of the workforce, as skill demands in most jobs increase (Ashton et al., 1999; Gallie et al., 1998). However, later developments of labour process theory have found evidence for increasing management control and fragmentation of work tasks (Burawoy, 1979, 1985; Frances, 1993; Knights and Wilmott, 1990). And while deskilling remains a controversial concept, where critics argue that upskilling and/or 're-skilling' are much more common in the new economy (Smith, 1994), deskilling has been observed among so-called 'knowledge workers' (Greenbaum, 1995). Greenbaum also points out that 'upskilling' of some groups of workers can be economically feasible as long as the work can be done by fewer of them (1996: 52) – especially if the overall objective of management strategy is to control the labour force and lower overall wage costs (Braverman, 1974: 163ff.). The focus on the relationship between technology and labour in labour process theory still makes it a useful overarching theoretical framework for my purposes – while of course acknowledging its flaws (see also Marjoribanks, 2000a: 15ff., 20ff.).

Four central themes emerge from the labour process theory literature cited previously: (1) the importance of the separation of conception and execution of labour; (2) the increased differentiation of the labour process; (3) the use of technology to increase productivity; and finally (4) the eradication of skills from work – the so-called 'deskilling' of labour. My historical analysis follows these four themes.

Some notes on journalistic labour

Before I embark on my analysis, something must be said about the nature of journalistic labour. What kind of labour is it that journalists do? This is a difficult question to answer, as the definition of journalistic labour has always been surrounded by controversy and linked to who should be included in the profession and who should not. The recent debate on whether bloggers should be considered journalists (for academic treatments of this debate, see Carlson, 2007; Lowery, 2006) is merely the latest in a long series of debates on the nature of the profession of journalism.

Journalists do a lot of things, and always have done. They produce editorials, comments, reviews, consumer advice and listings in addition to news. They frequently write about areas outside the domain of traditional 'hard news', such as entertainment, celebrity and everyday life. Many journalists (particularly freelance journalists) mainly produce features and human interest stories, sometimes for purposes more akin to advertising (e.g. for organizational and marketing magazines). The purpose of this article is not to untangle all these sometimes conflicting notions of what journalistic labour consists. Instead, I focus on a particular aspect of journalistic labour: *news gathering*. In this I include finding

the news (consulting and checking relevant sources), selecting the news (deciding on what to present and not present to the news consumers) and presenting the news (the production of actual news items by writing, editing, filming, recording, and so on). This is not the only form of labour that journalists do, but a definition of journalism-as-news gathering is broadly consistent with a large body of work on journalism as a profession. Many studies view journalism as a profession mainly engaged in rule-bound information gathering and presentation of said information (Chalaby, 1998; Elliott, 1978; Golding and Elliott, 1979; McQuail, 2000: 252ff.; Schudson, 1978; Tuchman, 1978: 2ff.). This definition is also likely to resonate with the common-sense definitions of journalism among journalists themselves: most journalists, when asked, state that gathering and presenting information is one of their key professional tasks (Weaver, 1998; Weaver and Wilhoit, 1986).

This definition does not say anything about the organizational and institutional framework within which this labour takes place. For example, the journalist is commonly not personally responsible for making sure that the collated and re-presented information reaches the audience: distribution (whether via print or broadcast) is handled by the organization that employs the journalist. Another example is that the individual journalist generally does not do the collating, organizing and presentation of the information collected entirely on his or her own: other journalists, editors, subeditors, graphic designers and technicians are also involved in this process. The definition presupposes both a particular *division* and a particular *structuration* of journalistic labour, and both division and structuration are the outcomes of historical processes. First, I turn to how the division of journalistic labour has developed over time, a process centred on the technology of printing and the economic organization of that technology.

Separation of conception and execution: from printshop to conglomerate

According to labour process theory, the first element of capitalist control over labour is the separation of conception and execution of labour (Braverman, 1974: 35, 86ff.). In the early history of the press, gathering and disseminating news was a form of craft labour, not yet distinct from the craft of printing. When first introduced, the newspaper represented a continuation of previously existing networks and services, for example the 'walking newsmen' who gathered in public places in urban areas and told people news in exchange for money. The labour of collecting, presenting and distributing information was all done by one person, the newsman himself. The written newsletters circulated from the second half of the 15th century similarly relied on one person to collect, collate and present all information, but the distribution was taken care of by emerging postal networks – arguably, the distribution (by post) was more central to the news circulation process than the collection/collation part of the labour (see for example Arblaster, 2005).

The distinguishing feature of the printed newspapers that started appearing in the 17th century was their *periodicity* (Harris, 1996), i.e. the 'tacit promise to publish consistently' (Høyer, 2003: 453). Regular and periodical publication demanded a new division and structuration of labour. The emergence of this new division and structuration was a gradual process. For a long time, the boundaries between conception (planning the content of the

newspaper, deciding what type of material to print, taking steps to gather that material, and contracting writers) and execution (the actual writing and gathering of information) were quite fluid. For example, Schudson refers to early 19th-century newspapers as still being essentially 'one-man bands' (Schudson, 1978: 65). Up until the mid to late 19th century, news gathering was often an ad hoc process, where printers and publishers could not necessarily rely on a predictable supply of material. This in turn made the conception aspect of labour difficult, as printers and publishers were not really *managers* in a labour process theory sense, since the sometimes random nature of news gathering made conception and planning on a detailed level very difficult.

A more rigid division between conception and execution did not emerge until the press became industrialized in the mid to late 19th century. Steam presses and typesetting machines made it possible not only to print more copies, but also to print more copies more quickly – the main uses of technology were to increase both the speed and the quantity of news. As the cycle of periodicity became shorter (daily publication of news rather than monthly or weekly), the press became subject to the same capitalist logic as other industries: a stricter demand for a more rigid division between conception and execution of labour. And what quickly emerged was a division where the labourer responsible for the basic gathering of information, the reporter or newspaperman, had a distinctly low status.

Being an editor or publisher always had higher status – though in many cases it would be more correct to say that editors and publishers had more status not so much because they were editors but because they were of a higher social class and independently wealthy before becoming editors. However, being a *writer* for a periodical did not always carry with it any special status – like the editors, some writers had a name and status already, whereas other writers (often those engaged in news gathering) were held in lower esteem (see Brake, 1988: 7ff.; Conboy, 2004: 112ff.; Lee, 1976: 106ff., for examples of the attitudes of the time).

The professional hierarchy among men (for it was mostly men) of the press in the 19th century was many layered, as the work of Elliott and Lee shows (Elliott, 1978: 173ff.; Lee, 1976: 108ff.; see also Örnebring, 2007). The editor was at the top, but within the editorial profession there were differences in status between centre and periphery (London and the provinces, in the case of Britain). The leader writer came next in pay and status. On about the same level as the leader writer were the parliamentary reporters and foreign correspondents. Beneath them came the subeditor, i.e. the person whose task it was to manage journalists and reporters directly and to edit particular sections or subject areas within the newspaper. The regular reporter, the person most directly involved in actual news gathering, was of lower rank than the subeditor, and the casually employed penny-a-liner was the lowest ranking of all (King and Plunkett, 2004: 295ff.).

The press thus broadly followed the logic of industrial capitalism as described by Braverman, i.e. the highest status was accorded to those that either controlled the capital or represented capital as management. Reporters formed the 'proletariat' of the newspaper industry (Hardt, 1995; Salcetti, 1995). However, it should be noted that the distinction between 'workers' and 'management' is not always applicable to newswork. There are many cases where editors and publishers have identified more closely with their journalist employees than with the owners of the newspaper. Perhaps surprisingly, this

position of the editor as a profession 'in-between' management and journalism is little studied (the Norwegian study by Eide, 2000, does not seem to have any equivalents in other nations). But while the position of the editor can be discussed further, the fact remains that the newsgatherers were consistently low-status employees.

The gradual division of conception and execution of journalistic labour represents a gradual *disconnection* of the technology of printing from the actual news-gathering labour – the reporters and newsmen did not need (and nor did they have) any knowledge of or skill in printing. However, this was a disconnection only in terms of practical, technological skill: in many other respects, it also represented a *reification* of technological factors limiting the genre(s) of journalism. The market demands associated with the industrialized press and its print and distribution technologies placed demands on journalism to fit particular formats: 'news' gradually became defined as brief snippets of factual and ideally entertaining information, suitable for filling a newspaper page with shorter blocks of text (Brown, 1985: 80; Høyer, 2003: 455; Örnebring, 2007: 76, 80).

The differentiation of journalistic labour: Specialization and technology

Høyer explicitly describes the history of the press as a history of increasing differentiation of labour:

> A likely development may be sketched by the following succession of work roles connected to the newspaper text: the all-purpose printer, the printer/editor, the fully employed editor, the news writer, the reporter, the specialised beat reporter, the fully employed journalist, the subeditor etc. Likewise, newspaper management follow a parallel trajectory from the printer, the owner and the publisher–entrepreneur to the media mogul and the transnational media conglomerates. As some of the titles indicate, more than one function could be served initially either by the same person or by several persons; so in some respects the early history of the press is a story of how loosely organised collectives developed into a tightly knit division of labour. (2003: 453)

The transformation of the newspaper from something printers produced 'on the side' to a medium requiring a fairly sophisticated and large organization of many different kinds of labourers, of which specialized 'newswriters' or 'reporters' (i.e. journalists in the 'contemporary' sense described earlier) were one, is well known and has been described by a number of authors (e.g. Barnhurst and Nerone, 2001; Black, 1987; Briggs and Burke, 2002; Harris, 1996; Hart, 1970; Lee, 1976). As stated, this process was gradual: for example, Høyer points out that it took almost 250 years for the 'newsroom' to become an integrated part of the newspaper building – before that, news gathering and production was largely organized outside the print shop (2003: 451).

While differentiation and professional specialization within journalism based on subject area (or 'beat') is well documented (see for example Hadenius and Weibull, 2003: 313ff., on the rise of sports journalism and entertainment journalism), professional specialization along technological lines is both less studied and different from specialization based on subject area. New media technologies to some extent placed new demands on

journalists; for example, the importance of the voice as a professional tool for radio journalists (Engblom, 1998). However, just as it soon became unnecessary for news-gatherers to know anything about printing, so too has little weight traditionally been given to detailed proficiency in production technologies for radio and TV journalists. Within the profession, general journalistic competencies like good writing skills and information gathering skills historically have been viewed as more important than technical skills specific to the medium in which the journalist works (Huang, 2006; Singer, 2004). In fact, for most of the history of journalism, the most important technology to be skilled in has been the relatively simple technology of writing. The technical know-how necessary to the production of news has been the domain of a large and varied cadre of journalistic 'support staff', including but not limited to photographers, graphic designers, cameramen and sound engineers. In other words, *parts* of the labour involved in the organizing, producing and presenting of news have for most of the 20th century been differentiated from the labour of journalism, which has mostly been focused on the collection and collating of information, as well as providing the overall narrative structure of the news. This differentiation has been organized along technological lines – in other words, technical skills have largely been separated from journalism.

This is changing. Nowadays, journalists more and more are expected to have technical skills in computer-based and digital technologies of production (Cottle and Ashton, 1999; Liu, 2006; Lowery and Becker, 2001; Ursell, 2004). Marjoribanks' study (2000a) of technologically based workplace reorganization in Rupert Murdoch's News Corporation showed that the introduction of digital news production systems significantly altered the skills required of journalists – they were expected to become more technically proficient and computer literate. However, in what seems like an opposite development, Ursell notes that the British Press Agency (the oldest domestic news agency in Britain) now has sharply differentiated between their news-gathering operation and their news processing operation – news process employees, or 'production journalists', are tasked to convert gathered information into saleable news products, and are not required to have journalism training (but must have good writing skills and be proficient in digital production technologies) (Ursell, 2004: 45f.). In other words, news presentation has been even more strictly separated from news gathering.

Both Marjoribanks and Ursell make clear that these changes are linked to management needs of rationalization and control. Technology then becomes a tool that allows managers to implement organizational changes aimed at making journalistic labour more cost-effective and more easily controlled (Marjoribanks, 2000a: 191ff., 2000b: 590; Ursell, 2004: 44). This is achieved either by requiring journalists to take on labour previously performed by relatively expensive technical specialists, or by relieving journalists of work tasks that can be done by relatively inexpensive workers instead. That is to say, the changes to the differentiation and specialization of journalistic labour are not so much driven by technological necessity as by the capitalist necessity to reduce overall labour costs. The Wapping conflict in the UK can certainly be interpreted in this way (Marjoribanks, 2000a: 103ff.; Tunstall, 1996: 18ff.). As both Marjoribanks and Tunstall show, the introduction of new technologies rarely occurs without conflict. Journalists and other media professionals who resist technological change are often labelled Luddites and enemies of progress, a rhetoric based on a notion of technology as the servant of capitalism.

The use of technology and the discourse of speed

The new differentiation patterns within news production discussed in the previous section lead us to a further analysis of the use of technology to increase productivity and control. My argument in this section is that the introduction of new technologies in the news process has worked to establish a *discourse of speed* (a term derived from the work of Hampton, 2004) as the primary criterion by which journalistic labour is judged, and that existing journalistic work practices have grown out of a need to adapt labour to this use of speed as the main measure of competitive success in the news industry. This discourse of speed has only become stronger and more all-encompassing over time.

Many historians of news and journalism have observed this obsession with time and speed. In his history of Reuters, Read notes that the news agency and its competitors among the London newspapers were constantly racing to be the first to publish exclusive news, and that the technologies of the time (steam ships and a private telegraph line built by Reuters, for example) played an important role in this competitive process (1994: 34f.). There are many more cases of technologies being employed to gain competitive advantage through speed: Rydén and Gustafsson note how a Swedish local newspaper adapted its publication schedule to fit with local train times (to make distribution speedier), hired railway employees as newsgatherers and invested in a subscription to news agency material via telegraph (2001: 182). 'Productivity' in the case of news is taken to be synonymous with 'more news faster' or even preferably 'more news first'. The constant need for speed quickly became naturalized as a technological factor outside the control of individual journalists (Hampton, 2004, refers to this as the 'epistemology of speed'), but definitely under the control of capital.

The telegraph was of course a key element in this discourse of speed. Winston comments on how the commodity of news is itself transformed through this process: 'No longer, as in the eighteenth century, was it possible to scoop a rival with "late intelligences"; now, the telegraph rendered news, like soft fruit, perishable – useless if delayed' (1998: 28). News becomes a daily rather than weekly or monthly commodity. Sommerville argues that the increased periodicity of the press in the 17th and 18th centuries was in accordance with new liberal values of change, movement and progress – 'A "news culture" will tilt steeply in the direction of change for its own sake and maintain a periodical tempo that is literally mindless' (1996: 10).

This link between news, periodicity and speed only became more marked in the interplay between technology and liberal capitalism that was the industrial revolution (Blondheim, 1994; Turner, 2002), more marked still with the emergence of broadcasting (Schlesinger, 1987: 84, refers to it as 'stopwatch culture') and accelerated even further with the introduction of online news provision (Avilés et al., 2004). Sanders and Bale (2000) describe the new 24-hour news cycle as one where time has always run out and everything must be broadcast immediately. In short, the discourse of speed, understood as at heart a capitalist logic of competition and use of technology to increase productivity, has become a wholly naturalized element of journalism and forms a template for how journalists understand new technologies. The prime function of any new technology is to speed up the news process.

Parallel with the need for speed, there also emerged a need for *brevity* – also linked to the logic of competition created by the industrialization of the press. The perceived necessity of speed made provision of news via telegraph important, and that in turn gave rise to a style of writing adapted to the particular economic organization of that medium (i.e. that the cost of sending messages was based on their word count): the 'inverted pyramid' with its emphasis on brevity and listing of facts in order of journalistically determined importance (Schudson, 1978). While Schudson is perhaps the best-known analyst of how the technology of the telegraph was allowed to dictate style, other scholars have made the same observation (Kielbowicz, 1987; Risley, 2001; Schiller, 1981). Schiller's work is of particular interest in this regard as he places technology within the broader context of the naturalization of a commercial logic in the field of journalism (see also Baldasty, 1992).

Technologies whose primary function was transcending space made journalists less mobile. Thanks to the telegraph, and later the telephone and the teletype machine, journalists did not need to leave their desks to get the news (Pavlik, 2000: 229f.). Based on Boyer's (2004) study of the role of the typewriter in the mechanization and 'Taylorization' of office work, primarily by spatially linking the office worker to his/her desk, one can speculate that the typewriter might have been used for similar purposes in newsrooms. Indeed, MacGregor attributes exactly this function to the computer, making journalists into 'mouse monkeys', bound to their computers and tasked with repackaging incoming information into a variety of multimedia content in a way that undermines their autonomy and gives more power to editors (1997). Deuze and Paulussen note that online journalists studied in the Netherlands and Belgium spend most of their time in front of their computers and rarely leave the newsroom (2002: 243).

Technology and skill: deskilling, upskilling, reskilling?

We should be sceptical of claims of a thorough deskilling of the journalistic profession *à la* Braverman (Bromley, 1997, and Liu, 2006, both present strong versions of the deskilling argument, for example). After all, do not the new demands on journalists to be able to use digital production technologies and to produce content for different media indicate processes of *upskilling* or *reskilling* rather than deskilling? British data clearly indicate that the general trend across all occupations is toward upskilling (Ashton et al., 1999; Gallie et al., 1998) – this trend is likely not limited to Britain but applies to most of the industrialized world. More extensive empirical study (including careful definition of the concept of skill) is thus needed before we can say anything about how journalists as an occupational group fit this general trend. However, concerns over the declining importance of investigative skills do exist among journalists, and there seems to be some partial evidence that wholesale upskilling among journalists is no more likely to occur than wholesale deskilling. This final section of the analysis draws together some recent research that problematizes the relationship between technology and skill in journalism. The object is not to argue for downright deskilling, but merely to point out that the dynamic of skills change within an occupation is complex, and that upskilling in some fields and deskilling in others are not mutually exclusive.

A recent study by Avilés et al. (2004) of Spanish and British TV journalists in digital newsrooms offers some insight into the phenomenon of multi-skilling, i.e. that journalists increasingly also have to know about technical production. First and foremost, they note that in both countries, 'The new digital system was accepted by journalists as a tool that helps the job to be done more easily, rather than something that hinders their work or the quality of news output' (Avilés et al., 2004: 91). However, they later conclude:

> Digitisation seems to have an ambivalent impact on journalism. Multi-skilling leaves journalists less time to fulfil traditional journalistic practices, such as double-checking of sources and finding contextual information. The newly established routines tend to emphasise the importance of speed, which sometimes raises concern about the quality of output. In addition, the fact that technology allows for faster processing of news increases the pressure to be first with the story and to provide more on-the-spot, instantaneous live news, which leaves very little chance to explain context. (2004: 99)

Very similar results are found in a recent Swedish study by Nygren (2008): reskilling, multi-skilling and deskilling are occurring simultaneously. More working time is taken up dealing with technical problems, and journalists are becoming more skilled at doing technical tasks. Multi-skilled journalists work with all the segments of the news-gathering process from investigation to production (and thus have to have a broader skill base), but production takes more time and journalists find less need for skills associated with actively seeking out and investigating news (Nygren, 2008: 164ff.). As journalists become more skilled in digital production techniques, they may find less use for their news-gathering and collating skills.

Combined with Ursell's findings about the British Press Association's division between news gathering and news processing, it does seem that journalism is in some ways returning to its 17th-century roots. Høyer reminds us that 'compiling' was a common activity for freelance writers in the 17th and 18th centuries, and that there were no 'journalists' per se, just writers for different types of publications and of different types of content (2003: 454). Just 'gathering news' was not considered a very skilled occupation (Chalaby, 1998; Örnebring, 2007; Salcetti, 1995), particularly since neither printer not editor took any responsibility for the origin and veracity of the contents of their publications (Smith, 1978: 159).

Despite some journalists' claims that technology is increasing the pressures on newswork and leaving less time for fact-finding and checking, other authors highlight historical continuity rather than change. For example, Cottle and Ashton state that when asked about the potential of news technologies to change the nature of news output, most journalists either did not understand the question, or responded (without much reflection) that technology could be used to provide even more immediate live coverage of news events (1999: 40). They then continue: 'despite the professional turmoil generated by the pressures and new working practices of multi-skilled, multi-media production, the news appears pretty much business as usual' (1999: 41). Journalists are required to do more work in less time, but this is generally viewed as the natural state of things, lending weight to Hardt's assertion that technology has been used in news organizations to

increase control of the news production process – a *proletarization* of journalism (1990, 1995; also see Salcetti, 1995).

However, there is evidence to suggest that rather than a wholesale proletarization of journalism, what is going on is a *polarization* of journalism as a profession. In the UK, average salaries of journalists have fallen since the 1980s compared to professions with similar educational requirements, and have not kept pace with inflation (Dear, 2004). On the other hand, there are a select few journalistic 'stars' (most frequently TV news presenters, but some newspaper columnists have also acquired 'star' status) who command both high pay and public recognition (Ursell, 2004: 48f.).

Multi-skilling is clearly going on in journalism, in particular with respect to digital production technology, but these new skills are not always highly valued (in the strict monetary sense). Some studies indicate that the importance of investigative and news-gathering skills that require spatial mobility are decreasing (Davies, 2008, writes about the decline of investigative reporting, for example). This kind of journalism takes time (and an expenses account), and is therefore both costly and contrary to the discourse of speed. Managers are less inclined to pay for the rules-bound aspects of journalistic labour (i.e. news gathering according to principles of verification, ethical clarity, and depth). As we have also seen, the information-gathering aspect of journalistic labour is increasingly separated from the information-processing aspect, whereas journalists are taking on more labour that was previously done by technical support staff (thus increasing cost-efficiency for managers). This process exemplified very clearly Braverman's character-ization of the deskilling process (1974: 294ff.; cf. Greenbaum, 1996).

Concluding remarks

Pavlik is of course not entirely wrong when he states that 'Journalism has always been shaped by technology' (2000: 229). However, technology is not a force 'in itself'. It is adapted and implemented according to already existing value systems, and these value systems have cultural, social and economic roots. In this article I have used the concept of labour as a lens through which to see and understand the relationship between journal-ism and technology, because journalism in the modern sense is a product of the industrial revolution and its linking of technology to the capitalist system. Journalism in the mod-ern sense was born out of the medium of the mass newspaper, and the mass newspaper is a medium born out of industrialization. The patterns of journalism established in the mid to late 19th century still influence how we think about journalism today, and how journalists think about themselves.

Among journalists, it is a rarely reflected-upon truth that technology drives journal-ism and that changes to journalistic content and journalism as a profession are inevitable adaptations to a technological development that goes on largely 'outside' journalism. However, if journalists today complain that they do not have much control over the news process and not enough time to engage in investigation and contextualization, this does not represent a qualitative change in journalism but merely a continued extension of processes that have been going on since the early days of journalism. Many contempo-rary developments in journalism can be viewed as a continuation of the subordination of journalism to technology that the discourse of speed creates. For example, a recent study

on mobile television shows that media conglomerates view news as the 'killer app' for mobile TV, as the news genre is viewed as perfectly suited for so-called 'content snacking', i.e. consumption of very short items of media content (Orgad, 2006: 6, 8). New technologies are adapted according to existing patterns, and these patterns are in turn shaped by a long historical process that has served to naturalize the dominance of technology over journalism.

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