

Digital technologies and work intensification among professionals in the digital economy: a case study of television news



Dr Valerie Antcliff

Centre for Enterprise

Manchester Metropolitan University Business School

Email v.antcliff@mmu.ac.uk

Tel: 0161 247 3829

Centre for Enterprise

Putting knowledge to work



ABSTRACT

As the UK's first commercial public service broadcaster Independent Television (ITV) has provided a regional television news service for almost six decades. Advances in broadcasting delivery systems, such as cable and satellite technology, together with a political and economic landscape favouring competition, have led to rapid expansion in the number of television channels and fragmentation of advertising revenue. This has made the obligation to provide news, and especially regional news, a costly commitment for commercial public service broadcasters. At the same time advances in television production technologies have allowed broadcasters to achieve efficiencies by shedding workers, replacing old divisions of labour with a leaner, multi skilled workforce. Social media technology has placed yet another layer of activity on newsroom staff by allowing them to interact with their audiences simultaneously across a variety of platforms.

The model of broadcast news that is emerging in the digital economy is said to be one of democratisation involving a 'conversation' between journalist and audience, representing a radical shift of control from news broadcasters to their audiences. This study takes a 'social constructivist' approach to understand how human agency can mitigate the effect of technological change and place limitations on a technologically determined 'democratised' model of news production. Using a single exploratory case study of an ITV regional newsroom it identifies how online and social media activity has increased workloads, but also allowed tasks to be completed more quickly and efficiently. Human agency is apparent in the distinct ways that individual staff reconstructed their working practices to accommodate these changes.

Individual human agency is also evident in the construction of individual social media identities and models of engagement with the audience. A passive and an active model of engagement are identified, reflecting differing levels of audience participation. While the audience are afforded a role in setting the news agenda under both models, the active model involves the audience in co-production to a greater extent than the passive model. This suggests that human agency can limit the effect of digital technologies in orchestrating a shift in power from news organisations to audiences.

Contents:

1. Introduction.....	4
2.The Political and Economic Context of Television News: the case of ITV	6
2.1 Origins of the Public Service Broadcasting Model	6
2.2 Independent Television	6
3. New Technology and Work: A Social Constructivist Perspective	9
3.1 New Technology and skills.....	9
3.2 New Technology and Human Agency	10
4. New Technology and Television News Production	11
5 The Case Study Organisation	12
5.1 Research Approach	13
6 Findings.....	14
6.1 The Era of Multi-Tasking: ‘when you think - that’s all they had to think about!.....	14
6.2 Multiskilling: a more democratic model of news production or making it ‘difficult to just be a journalist?’	15
6.2.1 Multi skilling in the Future.....	16
6.3 Feeding the Web Site: new opportunities to be creative?	16
6.4 Social media: ‘ still rather a new arena’?	18
6.5 The Pace of Work: ‘At the end of the day we all still go home at the same time’	19
6.6 Technology as an enabler : ‘no longer do we have to go digging out old tapes’	20
7. Discussion: Negotiating the Effects of Technological Change	21
7.1 New ways of Managing Time	22
7.2 Constructing an Identity	22
7.3 Setting the boundaries of a two way conversation.....	23
8. Conclusion.....	23
References	25

1. Introduction

The relationship between television broadcasting and news has never been simple. Unlike the printed word, the provision and quality of television news has always been accepted in the UK as a legitimate area for government intervention. The rationale for this lies in a combination of the inherent power of broadcasting to address large audiences simultaneously alongside, until recently, a limited number of television channels, a phenomenon known as spectrum scarcity. In the early days of television broadcasting, in order to protect the public interest, the UK Government chose to regulate access to channels through a system of licences that placed an obligation on broadcasters to uphold standards, including a requirement to supply a prescribed amount of news programming, the public service model of broadcasting (PSB).

A second strand to the PSB model concerned market failure. Market failure arguments for public intervention in the provision of television news hold that if the commercial broadcasting market is unregulated it will fail to satisfy viewers' demands for quality news in favour of programming designed to maximise audiences and advertising revenue.

When Independent Television (ITV) was established as the first UK commercial television broadcaster in 1955, regional franchises were awarded according to PSB principles, with franchise holders obliged to provide a quality regional news service. ITV has continued to provide regional news for almost sixty years, but fragmentation of television advertising across multiple channels and platforms has left the market for advertising revenue ever more competitive and made the obligation to provide news, and especially regional news, an increasingly costly burden. Ofcom's review of television news provision in 2007 suggested that the advertising revenue ITV received from news programming was half the cost of production (Ofcom, 2007). The implications for regional news provision are profound because of the disproportionate cost of producing unique output to be broadcast simultaneously in different regions (ibid p 6). During the latest round of franchise renewals ITV companies put forward suggestions to reduce the unique content of their 6 o'clock regional news broadcasts from 30 to 20 minutes, with the other 10 minutes made up from material that could be broadcast across a number of regions.

Against this backdrop of financial insecurity advances in digital technology have automated many of the processes of news production. Automated production processes have allowed broadcasters to eliminate a variety of technical jobs including camera operators and audio engineers. Journalists are increasingly required to 'self-shoot' which entails working alone to conduct an interview while recording both vision and sound, then editing the story for broadcast and posting it on the internet

Yet another change affecting regional news production concerns the relationship between broadcasters and their audiences. Traditional broadcasting technology restricted television news to a one-way medium. Communication with audiences was limited to a prescribed time slot in the television schedule during which broadcasters presented a series of news items, which they themselves had selected and formulated. Digital technologies present a major challenge to this model by allowing broadcasters to interact with their audiences simultaneously across a variety of social medium platforms. The model of broadcast news that is emerging in the digital economy is argued to be one of democratisation involving a 'conversation' between journalist and audience that represents a radical shift of control from news organisations to their audiences (Ekstrom, 2013, Newman, 2009). Under this model of production, journalists are required to embrace social media such as Twitter and Facebook, as an additional layer of activity requiring extra investment of time (Newman, 2009).

Digital technology, then, has had a profound impact on the context and process of television news. While there are numerous factors that determine what information is broadcast, few academic studies have critically examined contemporary conditions of television news production, what goes on in the newsroom (Higgins-Dobney & Sussman, 2013). This study begins to address that gap by focusing on three key questions. Firstly, what possibilities and dilemmas are faced by individuals and broadcasters required to produce news content simultaneously across different platforms? How do broadcast news professionals react to these challenges? To what extent does the agency of television production workers in implementing advances in digital technologies act to enable or limit a 'democratised' model of television news production?

The study uses a single exploratory case study of a regional ITV newsroom, Newsroom X, to explore the interactions between new digital technologies and working practices. The focus of the study is the *process* of news production, and whether this acts to enable or limit the 'democratising effect of technology. It is possible that time pressures, concerns about upholding professional standards across different platforms or the practicalities of producing instantaneous news content may act as a limiting factor in a technologically determined shift to a 'democratic model' of television news production. The study therefore adopts a social constructivist approach that places the role of human agency at the centre of any explanation of how technological change affects working practices.

The report is organised as follows: firstly it presents an overview of the political and economic context of ITV regional news production; section 3 discusses theoretical perspectives regarding the impact of technological change on work and employment; this is followed by a description of the case study organisation and research approach; findings from the study are presented in section 6 and these are discussed in section 7; finally conclusions are set out in section 8.

2.The Political and Economic Context of Television News: the case of ITV

2.1 Origins of the Public Service Broadcasting Model

Before looking at the case study organisation itself it is useful to recall how the commercial PSBs arrived at the position they find themselves in today. Spectrum scarcity has certainly played a central role in shaping the UK television industry, and its legacy is evident in the structure and organisation of broadcasting today. The importance of spectrum scarcity was recognised by the Sykes Committee, the first broadcasting committee established by the Post office in 1923. Sykes argued that wavebands available to a country represent a valuable and limited public resource; therefore, their use should be subject to safeguards to protect the public interest. To this end, he recommended that a system of licences setting out the responsibilities of broadcasters should be issued by Government (Sykes, 1923). By linking access to wave bands with a duty to serve the public in this way, Sykes established the model of public service broadcasting (PSB) that remains a cornerstone of UK broadcasting policy to this day (Williams, 1990).

While Sykes introduced the concept of safeguarding the public interest, it was the first Director General of the BBC, John Reith, who expanded the notion of PSB to include his concern with high standards in broadcasting and a personal belief that broadcasters had a duty to entertain, inform and educate the public (Scannell, 1990).

The essence of the PSB model then, is that broadcasters receive public support in return for fulfilling a number of requirements, one of which has always been an obligation to broadcast prescribed amounts of news programming.

2.2 Independent Television .

The 1954 Television Act created the first UK commercial PSB, ITV, which began broadcasting on 22nd September 1955. By 1973 there were fifteen independent companies holding separate regional ITV franchises. The 1990 Broadcasting Act allowed for some consolidation, subject to restrictions on the percentage of the total audience covered by a single company. Two companies, Granada TV and Carlton emerged as principal players in the market, eventually owning eleven franchises between them. The 2003 Communications Act finally lifted the remaining restrictions on joint ownership, and Granada and Carlton merged in 2004 to form ITV plc. The remaining franchises are held by the STV Group in Scotland, and the UTV Group in Ulster.

The regulatory framework governing commercial PSB during the 1990s was provided by the 1990 and 1996 Broadcasting Acts. Section 31 of the Broadcasting Act 1990 (as amended by the 1996 Act) required regional ITV franchise holders

and Channel 5 to broadcast high quality national and international news at prescribed intervals and, in particular, at peak viewing time. On ITV these bulletins were to be presented live and broadcast simultaneously by all regional franchise holders.

In 1998, ITV applied to the regulator for permission to change the scheduling of their weekday news bulletins. The plan was to move the main evening bulletin to 6.30pm, with an additional bulletin at 11pm replacing the existing 5.40 and 10pm bulletins. This would allow them to broadcast films and drama during the 10pm peak viewing slot, and so attract increased advertising revenue.

Following a public consultation, the changes were initially approved by the regulator, on condition that a news headline service was broadcast around 10pm. But when the situation was reviewed after a year the regulator cited substantially reduced viewing figures across the two news bulletins as a cause for serious concern, and in 2000 issued a directive that ITV should restore the main evening bulletin to 10pm. ITV initially challenged the directive, but in 2001 reached an agreement with the regulator to reschedule News at Ten.

By 2002 the regulator, had begun to note challenges to the PSB model of news provision in an age when technology and market forces were reshaping the broadcasting landscape, although at this time public confusion over scheduling was identified as the major cause of reducing viewing figures. The job of identifying these challenges was left to the newly formed joint regulatory body Ofcom, which had been established under the 2003 Communications Act to bring together the Independent Television Commission, Broadcasting Complaints commission, Radio Authority, the Office of Telecommunications (Of tel) and the spectrum management sector regulator the Radiocommunications Agency.

The Communications Act placed a legal requirement on Ofcom to undertake a review of PSB every five years. When it published its second review in 2009 regional news provision was high on the agenda (Ofcom, 2009). Prior to the review Ofcom had published a discussion document that summed up the economic challenges to supplying high quality local news:

‘Whilst no form of television news in the UK currently pays its own way, the economics are particularly stark for nations/regions news and it will require regulatory intervention if its long-term presence is deemed important on commercial PSB’ (Ofcom 2009:7)

And for commercial PSBs in particular:

‘The combined cost to ITV of producing simultaneous programmes for 15 regions (or 27 including sub-regions) is very high compared to the low advertising revenue – although, of course, the provision of

specific PSB programmes was never expected to be profitable in isolation' .

ITV responded by submitting a proposal to the Ofcom's PSB review proposing to reduce the number of ITV regional news services from 17 to nine in a bid to save between £35m and £40m a year. (Holmwood & Kiss, 2007). Ofcom supported the proposal and the subsequent restructuring of ITV regional news in 2009 sought to make substantial savings by concentrating news production in centres of high population such as London and Manchester. It led to the closure of small regional newsrooms, such as the former Border TV newsroom in Carlisle and resulted in a major round of redundancies at ITV News in 2008, with around 430 staff made redundant from regional newsrooms, leaving only around 600 workers. The broadcasting union BECTU estimate that there have been around forty redundancies since then, mainly among technical staff and camera operators under a voluntary redundancy programme (Hollander, 2013)

ITV franchises were due to be renewed at the end of 2014 and in its submission to Ofcom's consultation on licence renewal ITV proposed further cuts in weekday evening regional news programming. Twenty minutes of regional news was proposed with a further ten minutes of aggregate output of interest to viewers across a number of regions. In July 2013 Ofcom approved these proposals in all except the two largest regions, London and North West England, which would continue to show thirty minutes of regional content. Alongside this lunchtime, late evening and weekend bulletins would be reduced in length and the existing eight regional news areas would be increased to fourteen. According to Ofcom these changes '*are intended to help secure sustainable levels of regional programming*' and in February 2014 it announced that it will renew the ITV licence for ten years from 2015.

The story of ITV regional news in recent years is one of trying to do more with less. The PSB model expects high production values and journalistic standards to be maintained while costs are lowered and efficiency increased. These pressures alone could be argued to lead to higher workloads and work intensification yet the process is exacerbated by rapid technological change resulting in new divisions of labour alongside increased use of social media technology, which itself can serve to intensify and speed up the pace of work (Bittman et al., 2009).

This scenario is consistent with technologically determinist arguments that view technology itself as neutral and the outcomes of technological change as predictable and assured. However, in critical academic circles some scholars argue that technology is not an independent entity, but rather is socially constructed and context specific. (Orlikowski & Barley, 2001; Orlikowski & Scott, 2008; Mahler & Liang, 2012). As a consequence the outcomes of technological change are shaped by the practices and norms that develop as new technology becomes embedded in a specific context.

3. New Technology and Work: A Social Constructivist Perspective

3.1 New Technology and skills

The effect of technological change on work and employment began to attract the attention of academics in the 1960s, with the automation of industrial processes and developments in computer technology (Rolfe, 1986). Early studies in the field of concerned themselves with the effect of new computer technologies on skills. A technological deterministic model was advanced stating that as technology becomes more complex, semi-skilled manual work declines while knowledge-based white collar and professional work increases (Rolfe, 1986). Drawing on Becker's theory of human capital (Becker, 1964), technology is assumed to need higher levels of education among the workforce, and so lead to a general upskilling of workers. Technology itself was viewed as both deterministic and neutral, thus the social context of work was neglected (Rolfe, 1986:37)

Publication of Braverman's seminal work 'Labor and Monopoly Capitalism' in 1974 challenged the technological deterministic paradigm, with a class-based analysis of technology in the workplace. According to Braverman, technology represented a means to reduce work previously performed by skilled artisans to a series of unskilled and routinized tasks permitting managers high levels of supervision and control over workers (Braverman, 1974). In short Braverman argued that, all else being equal, technological advances would result in managers adopting new ways of working that separate cognition from execution and then relegate the latter tasks to workers (Orlikowski & Barley, 2001), the 'deskilling' approach.

By the mid 1980s advances in information technology were such that an 'IT revolution' was said to be taking place. Indeed by the end of the twentieth century there was a growing consensus that information technology was transforming ways of living and working on a scale similar to the industrial revolution (Orlikowski & Barley, 2001). Despite high levels of unemployment a new optimism began to emerge around the deskilling/upskilling debate (Carey, 2007). Post fordist theories of flexible working stressed the need for multi-skilled workers with a degree of autonomy and discretion if sophisticated technology was to be used effectively. The idea of the 'portfolio worker', rich in knowledge and skills, who could respond quickly to the changing demands of the new information economy began to gain traction. Viewed for this perspective work intensification is not necessarily disliked by workers when it involves other changes, such as greater involvement, autonomy and increased job satisfaction (Ichniowski et al., 1996).

Little and Innes offer an appealing analysis of decades since the 1950s as a time when the pendulum of the deskilling/upskilling debate has swung to and fro across the academic generations (Little & Innes, 2003). Today these two dominant

paradigms are evident in studies that either stress the significance of 'knowledge capitalism' or the 'knowledge economy' in generating demand for highly skilled and educated workers, or a Bravermanesque interpretation that highlights the expansion of low paid, unskilled insecure jobs, especially in the service sectors (Carey, 2007)

3.2 New Technology and Human Agency

The upskilling/deskilling debate suggests that there are skill biases associated with technological change, but retains the legacy of technological determinism. For example, in Braverman's account of deskilling, while managers exercised some choice in the deployment of technology in the workplace, it was assumed that the anticipated effects would follow pretty much automatically (Orlikowski & Barley, 2001). Technologically deterministic accounts largely ignore the idea that workers might have agency. Technologies are viewed as physical artefacts and how agency shapes the way that technology influences work practices remains unexplored.

Recent interest in the 'social construction of technology' (SCOT) represents a useful attempt to bring human agency into explanations of technological change. Following the seminal work of Pinch and Bijker, advocates of SCOT argue that human agency has a key role in determining the design and uses of technology (Pinch & Bijker, 1984). From this perspective technology is viewed as a social object and it is 'stakeholders', including those who use technologies, that determine how that technology develops. Because technologies can be used in multiple ways, how they are integrated in a particular social setting, and practices that emerge in relation to their use, are shaped by users themselves.

SCOT marks an important shift away from technological determinism to an agency-centred approach in the study of technology and work. However, some commentators argue that social constructivists can go too far in the opposite direction and ignore the physical possibilities and limitations of a technology therefore :

'Technologies are simultaneously social and physical artifacts. Consequently, neither a strictly constructionist or a strictly materialist stance are adequate for studying technologies in the workplace'
(Orlikowski & Barley, 2001):149

Most theories of technological change and employment have conceptualised technology as a physical artefact and treated it deterministically, largely ignoring the role of human agency in shaping either the design or the use of technology (Orlikowski & Barley, 2001). Including human agency in a model of technological change permits greater insight into *how* technology shapes working practices. This opens up the possibility of exploring how new digital technologies have the capability to open up a democratic and interactive model of television news, but also how that

technologically determined model may be limited by the mitigating effect of human agency, especially when workers are faced with unanticipated consequences of technological change such as work intensification.

4. New Technology and Television News Production

How then has technological change affected television news production? Despite the growth in internet and mobile technologies, television remains by far the most popular source of national and regional news in the UK, although recent research by Ofcom suggests that web sites and apps are becoming increasingly important (Ofcom, 2013). Latest figures indicate that 78% of adults use television as a source of news compared to 40% who use print media and 32% who use the internet (ibid:5). However, relatively few people (33%) rely on a single platform. Television is also the most widely used platform for accessing regional and local news, with 80% of adults watching this at least once a week. However, the use of online media sources to access local news has risen over the past two years, with almost half of respondents (49%) claiming increased use of the internet for local news and information. In addition around 40% indicate that they are using local news websites and apps (ibid:9)

When asked how important local media sources were to them, more than half of respondents (56%) rated regional and local news on television as most important for local news and information, with the internet in second place (ibid:9).

Figures from Ofcom support the view that new platforms, mostly internet related are changing the landscape of news consumption and production. Many of these new outlets have emerged within traditional media companies, necessitating a radical change in the way journalists and broadcast technicians work (Witschge & Nygren, 2009). Alongside producing additional content for websites, news organisations have responded to a wave of participatory and social media, driven by advances in connectivity, mobile technology and user-friendly applications, by increasingly involving the public in the process of news production. For television news broadcasters social media can act as an important driver of traffic to their website and broadcast news content and so they are keen to invest resources in order to exploit social networks (Newman, 2009), but for those who work in television newsrooms new digital technologies are said to have fundamentally changed the way news is produced (Witschge & Nygren, 2009).

Recent commentary points to two competing interpretations of the effect of technological change on news production. An essentially 'negative' stance with echoes of Braverman's deskilling thesis is summed up in the work of (Witschge &

Nygren, 2009). Based on their study of journalists in England and Sweden they conclude that the division of labour has become less clear, with journalists required to perform more and different tasks, including technical aspects of production. While the multi skilled journalist may have control over more processes, they have less time. This leads the authors to conclude that multi skilling acts as a way to increase efficiency, but because journalists are integrated increasingly into the news organisation and subject to planned production processes they are afforded less time to think creatively. Therefore, technological change has the effect of de-professionalising journalism. (Witschge & Nygren, 2009) Writing about regional news production in the USA (Higgins-Dobney & Sussman, 2013) present a similarly bleak picture of technological change in regional news production . A series of case studies of regional newsrooms in Oregon suggested that formerly distinct roles and functions had been integrated resulting in '*multitasked news staff forced to provide fast-turnaround for multiple platforms*' (ibid: 847).

A more positive account of technological change can be found in the work of Newman (2009). Newman sets out to explore how news organisations in the UK and USA are responding to social networking technology. Themes of integration and multi skilling are echoed in his account, but rather than a loss of control Newman argues the journalists are 'beginning to embrace social media tools like Twitter, Blogs and Facebook, but very much on their own terms. '*Same values, new tools*' sums up the approach in most mainstream organisations' (ibid:2). According to this perspective technological change opens up new possibilities for journalists to engage in creative storytelling. Moreover, as new technology compresses the timeframe of news production, there is even greater demand for journalistic skills in verifying news stories and identifying the key facts for audiences (Newman, 2009).

5 The Case Study Organisation

Newsroom X is an ITV regional newsroom employing 53 permanent staff. It also regularly uses freelance camera operators and employs student journalists to maintain the web site when in house journalists are required elsewhere. It has recently moved to new premises and at the time of the move a substantial investment was made in advanced newsroom production technology. Newsroom X is now a large, open plan space and bulletins are broadcast from a 'glass box' studio within the newsroom. The new working space is in stark contrast to the old newsroom, where segregated offices and production facilities reflected old divisions of labour. For example, editors worked in a separate editing suite, technical staff worked separately from journalists and managers had individual offices.

Under the terms of the 2014 franchise agreement weekday, regional news lunchtime bulletins have been reduced from 6.5 minutes to 3 minutes, and late evening bulletins from 10 minutes to 5 minutes. The two daily regional news bulletins at weekends have also been reduced from 10 to 5 minutes. Newsroom X also maintains a web site. Unlike most news websites Newsroom X's site was designed to mimic social media platforms. The format is principally a live feed, very much like a Facebook news feed with news streamed in chronological order. A system that is relatively simple to use was chosen to operate the site, meaning that all journalists can be trained to update and maintain the newsfeed. Journalists are encouraged to send back material and photographs to 'feed the web site' while they are out reporting. Within the web site there is a separate page for weather, that is maintained and updated by one of three people in the weather department. All production journalists and correspondents have individual social media accounts and are encouraged to engage with social media, especially Twitter, as a routine part of their journalistic role.

5.1 Research Approach

The project draws on data from a single case study. Case studies provide a useful tool to explore individual actors and decision – making processes within an historical and social context (George & Bennett, 2005). However, a single case study can fall prey to issues of selection bias and a lack of generalizability. George and Bennett propose that a single, exploratory case study can be useful as a preliminary step in investigating a relatively under-researched area of inquiry (George & Bennett, 2005). It is within that tradition that this case study is located.

Data collection at Newsroom X took place over a single day. Face-to-face unstructured interviews were carried out in the newsroom with two production journalists, one correspondent, one member of the weather department, one broadcast engineer and a student journalist. A further face-to-face interview was carried out later with a semi-retired television director who had worked in Newsroom X prior to the 2008 restructuring of ITV regional news and subsequent technological changes.

Unstructured interviews do not rely on a predetermined list of questions, hence the researcher is free to deal with the topics of interest in any order, and to phrase their questions as they think best (Nichols, 1991). This type of interview can resemble a chat, during which interviewees may even forget that they are being interviewed. A key element of this approach is that interviewees are seen to have their own agency and are allowed to tell personal stories in their own way. Any questions asked by the researcher tend to flow from the immediate context. Data collected in this way is

concerned with acquiring knowledge of people's life experiences and the meanings they attach to them (Gubrium & Holstein, 2001) and so is consistent with the tenets of the social construction of technology framework.

6 Findings

From this brief exploratory case study of a single commercial television newsroom it is possible to conceptualise ways in which technology is changing the working lives of newsroom staff across two separate axes. Along the first axis is an extraordinary expansion in the number and range of tasks performed on a daily basis. A second theme running in parallel concerned a quickening of the pace of work. Along the second axis is the enabling effect of technology. The case study suggests that while the amount and pace of work had increased, technology had made many tasks easier and less time consuming. Participants viewed each of these changes in terms of possibilities to enhance their own working lives, to engage with their audience and to provide the audience with an improved service. But they also pointed to a number of dilemmas concerning professional standards both now and in the future.

These strands are closely interwoven but in the interest of clarity, each will be addressed here separately.

6.1 The Era of Multi-Tasking: 'when you think - that's all they had to think about!

Advances in news production technology have left many former behind the scenes roles redundant. Those who had worked in television news for a number of years recalled a time when the newsroom was staffed with '*banks of researchers*'. Correspondents were accompanied by camera operators and sound engineers when they were out in the field and editors prepared the material for broadcast. The evening bulletin itself had been an hour long and provided work for a sizeable crew of camera operators, sound engineers, floor managers and technicians .

The practice of 'self shooting' has, to a large extent, eliminated the need for journalists to be accompanied by camera operators and sound engineers. The extent of the change was summed up succinctly by one journalist :

'Demands on television journalists have changed so much over the last decade – I mean I film my own stuff, I'll put it on a tripod, I'll talk to it, I'll then come back and edit it myself – so in producing a television package you're doing the work of three people, your sound man, your reporter, your cameraman, your producer – four even...'

As one young production journalist remarked, talking about the days before self shooting ‘ *when you think, that’s all they had to think about!*’.

Social media and the web site had imposed an extra layer of activity on top of self shooting. Journalists felt that there was a certain obligation to provide content for social media platforms and the website:

‘There’s an expectation that if you’re out on a job as well as doing a shoot, some interviews and stuff you’ll take some stills if there’s anything worth taking pictures of for the website, you’ll tweet stuff, if you have time you’ll write a short article [for the website] when you get back but there isn’t too much pressure on us to do that. But if you’re out on a job they do want you to break some news on Twitter and send some stills back to keep feeding the website.’

6.2 Multiskilling: a more democratic model of news production or making it ‘difficult to just be a journalist?’

The expectation that journalists should increasingly perform technical roles was viewed generally in a positive light. This perspective was grounded in a notion of television news as a ‘team sport’. Performing different roles clearly had the effect of integrating journalists within the organisation (Witschge & Nygren, 2009) but was interpreted as an opportunity to become more aware of the complexities of broadcasting rather than management subjecting them to planned production processes. This positive interpretation of integration was summed up by one journalist:

‘.....doing technical roles, cameras, lights, you know, I don’t think as a television journalist that can be considered deskilling, I think it’s actually useful, I understand more about the process – I’m closer to the process’

There was a feeling that because ‘*most people can do most jobs so everyone can take a turn*’ the process of news production itself was becoming more democratic. But at the same time expectations to provide web and social media content while self- shooting were leading journalists to question whether it was possible to uphold professional standards. This included presenting a professional face to the outside world and producing material of a professional standard. The ‘professional face’ argument was articulated in terms of appearing ‘distracted’:

‘Doing all these extra things does make it difficult to just be a journalist You’re setting up your tripod, you’re tweeting that you’re about to do this interview, or you’re sending a

picture of a crime scene or whatever back for the website, it's difficult to do what a journalist used to do and put the subject at ease, you know you do come across as distracted'

The impact of new working practices on producing written material was principally related to quickening pace of work. Again the notion of 'being a journalist' was used to articulate the difference between past and present working practices

'in the old days I would spend two or three hours working on a good script nowadays there isn't time because you have to crack on with your edit, you know the pressure is on you to make the deadline. So there's more time spent on editing than on being a journalist – I think that's the big change'

6.2.1 Multi skilling in the Future

Newsroom X staff firmly believed that to get a job in the future one would need to be an 'all-rounder'. This raised concerns that there would be too much emphasis on technical skills and not enough on creativity and journalistic values. Speaking about those studying journalism today one journalist remarked that:

'They come in and they are brilliant camera operators. They can go out, do a shoot, they come back in the picture quality is superb, they can sit down and even edit some of it together because they've used Avid systems before, but they can't write for toffee – and I find that quite worrying for the future of journalism.'

6.3 Feeding the Web Site: new opportunities to be creative?

One member of Newsroom X explained how initially the 'news section of the website was set up so that the same couple of people were always be on the web' but this led to problems at the weekend when 'certain journalist would be on and they'd say 'well I don't know how to do it''. To avoid this all journalists are now trained to maintain the web site. Staff do a stint on updating the web site on a rota basis. This was widely seen as fair and democratic:

I think it's unfair that people who've demonstrated that they're very skilled at it should end up always doing it, so it's fair that it's shared around I think'

There was a great sense of pride in the website. A shift on the web site was described as 'a fun shift' or a 'nice shift to do'. Far from being routine, a shift on the

web site was seen as offering potential for job satisfaction because *'it's satisfying when you see how you've put things together and you see stories progressing'* it also meant that – *'you can solely focus on doing the web, you're not distracted by doing other things'*.

Sharing maintenance of the web site, along with the chronological streaming format has arguably helped to avoid a Bravermanesque deskilling effect. In not separating technical aspects of uploading material to the site from creative aspects of storytelling and professional judgement in verifying sources, updating the web site has opened up new possibilities for creativity. There was also a recognition that a division of labour in this way was more efficient because *'if someone is on the web page it allows the other reporters to get on with what they're doing'*.

For the weather department the situation was slightly different. There was only one person on duty at a time and he or she had to maintain a page within the web site alongside preparing and presenting weather bulletins. This led one weather person to comment that :

'I do feel sometimes I'm managing a web page within ITV regional news, that that's part of my job, that should be part of my job description'

However, she was also quick to point out that this wasn't necessarily a negative thing:

'I don't want to moan about it because I think we're doing something really great here at NewsroomX, we're really trying to make it look like something, but it obviously does take a chunk out of what was your day, so you just have to manage your day differently'

Managing the day differently in this context meant a shift in emphasis between the web content and bulletin, driven partly by a belief that audiences expect to be able to access weather information when they need it rather than waiting for a scheduled bulletin, and partly by commercial concerns:

'The level of importance between preparing for bulletin and keeping web pages up to date hasn't exactly switched but it's changed - it was always that's what we do and this was something else - we put the weather on and stream it, but now it's become a page, it'll be sponsored eventually, so this becomes much, much more important'

6.4 Social media: 'still rather a new arena'?

Social media, and especially Twitter was so embedded in the daily routines and practices of the newsroom that it was described in terms of something that '*just becomes part of what you do*'. Even those who were initially sceptical about its place in journalism were willing to concede that they had changed their minds:

'I was a bit bah humbug with the twitter, I'm not going to use it I don't need to do it... it's just a distraction - whereas if you follow the right people it's an amazing tool to make your job – to make you more knowledgeable in your subject – so I have changed my mind about twitter quite a lot'

There was clear evidence that social media was associated with an increase in the number of tasks newsroom staff performed. Feeding social media platforms was something that had to be done over and above producing material for bulletins and the web site. In terms of the opportunities that Twitter offers, the most frequently mentioned was its role as a tool for sourcing stories, this is discussed in Section 6.5. The potential to engage audiences in a two-way conversation was less widely discussed. However, the different ways in which individuals rationalised their use of Twitter points to an important role for individual human agency in assessing the impact of technology on newsroom professionals.

Journalists in Newsroom X were still finding new ways to manage activities in order to engage audiences in a meaningful way in what is '*still rather a new arena*' (Ekstrom, 2013). On one level there was a feeling that social media offered an opportunity to '*put out a fishing net*' that enabled you to reach out to people. Posing a question on Twitter, for example, allowed members of the public to participate and when interesting and relevant information was returned journalists were able to '*follow that hook*' and develop the story, engaging in a form of co production (Ekstrom, 2013). Local photos sent in by viewers allowed for an element of co production in weather bulletins and web content.

For some tweeting generated a real feeling of connection with their audience. To an extent this feeling of connection could compensate for the extra layer of activities and risk of appearing 'distracted' while self-shooting

'Whether that contribution can be off set , you know tweeting, of serving all those different platforms I think maybe it's more important to serve your audiences on the platforms in which they exist than maybe the feelings of an individual who sees you as distracted'

But there was also a sense that *'on twitter you just find yourself getting engaged with people you wouldn't normally get involved in exchanges with'*. Examples of this included sports stories where the inherent partisan nature of fans meant that accusations of bias were inevitable, or personal comments about on screen presenters appearance, as one participant put it *'they don't realise – you've just put what you were thinking in your head out there for thousands of people to read!'*.

Journalists were still working out issues surrounding their identity on social media. Some saw it as an opportunity to engage on their own terms, with a personal audience:

'When I'm tweeting, when I'm serving that platform really I'm serving my own personal audience, as opposed to the company.... Really I'm cultivating my personal following'

Others felt uncomfortable with the notion of self-promotion and rationalised their identity on Twitter in terms of representing the company, so it becomes just:

'Me representing ITV, just an extension of my job I'm really not comfortable about marketing myself'.

Social media presence was also rationalised in terms of driving viewers to the evening bulletins

'If I break something on Twitter I'm always interested to see if it generates more retweets or followers But I like to break news on behalf of [name of evening news programme] usually when I break something I'll say see the report on [name of evening news programme] I use it as an opportunity to promote the programme to generate more viewers than followers really'

6.5 The Pace of Work: *'At the end of the day we all still go home at the same time'*

One member of Newsroom X staff estimated that multi-tasking, self shooting and engaging with social media meant that the pace of work in recent years had increased five-fold. Another remarked that *'you don't have a minute to spare, let alone feed a web site'*. Deadlines are not a new phenomenon in television news. They have the effect of compressing work within a fixed timeframe. Therefore more tasks result in an increased pace of work as the length of the working day cannot expand to accommodate them. The ability of Newsroom X to meet the six o'clock deadline was taken as an indication that the pace of work remained manageable

'The deadline's 6 o'clock – until we all start missing that deadline- it obviously can all be done'

In fact, not only was it regarded as manageable, but for most it was viewed as an positive enhancement to the working day:

'At the end of the day we all still go home at the same time – it just makes the working day a bit more manic, but I don't mind that, it makes it a more exciting, gets the adrenalin pumping'

What is it about staff in Newsroom X that makes them respond in this way? The answer, in part at least seems to lie in an acceptance that technology is fundamentally changing the world of broadcast news and there is no way of going back. The onus, therefore, is on workers to find new working practices, and to establish new norms that allow them to adapt to technological change on their own terms. This philosophy was summed up in terms of a new era of journalism

'You have to move with the times – you either accept it or find another job, it's not just here that things are changing it's across the world you either embrace the new technology and the changing of an era of journalism or you do something else'

Working out how to manage the increased pace of work is not yet complete, but for most it was viewed as *'something that just becomes part of what you do'* and to date at least it remained *'realistic'* and *'manageable'*. For staff at Newsroom X the issue had become not how to reduce the pace of work, but rather how to manage their time differently. Here technology had a key role to play in enabling staff to work more effectively and efficiently

6.6 Technology as an enabler: 'no longer do we have to go digging out old tapes'

While the variety and number of tasks had increased, and the pace of work had quickened, the effect on working lives was mitigated by the possibilities that technology offered when embraced as a tool. As one journalist noted *'the workload has increased but the methods, the systems we're working with are better.'*

Technology allowed many tasks to be completed more quickly. One broadcast engineer explained how she had previously spent her time phoning the BT tower in London and speaking to *'an actual human being'* when she needed to book lines. The process was now handled online and could be completed in a fraction of the time. For journalists, taking over the task of editing their own work represented an increased workload but advances in digital technology made this manageable:

'You can do things a lot quicker - to edit a package now with an Avid you can do it in half the time you did with tape and stuff like that'

Digital technology also enabled material to be stored and retrieved more efficiently than tape-based systems. This speeded up the process of putting a news bulletin together:

'We've got a system now where everything we shoot lives in this computer system, no longer do we have to go digging out old tapes it's just this huge memory and it does make the job a lot easier'

Servicing social media placed an extra layer of activity on top of an already heavy workload, but this was offset by its value as a source of news stories.

'.....for finding stories – it always breaks on there before it's officially announced anywhere else. You obviously wouldn't broadcast something based on twitter rumour but that alerts you to the fact that something's going on.... It means you can get wheels in motion, ready , prepare the team who're working on the late bulletin, say beware 'cos this might happen in the next 20 minutes...'

As Newman (2009:2) points out *'News organisations are already abandoning attempts to be first for breaking news, focusing instead on being the best at verifying and curating it.'* The quotation from a Newsroom X journalist above suggests that Newsroom X are beginning to use Twitter in this way.

7. Discussion: Negotiating the Effects of Technological Change

Staff at Newsroom X were in the process of making sense of technological change. In working out how to reconstruct their individual roles three themes emerged from the case study data. The first is essentially practical and involved working out new ways of managing their time, achieving a balance between the new demands placed on them and new possibilities to work more effectively and efficiently that technology offers. The second is concerned with constructing an individual identity. Here staff at Newsroom X were embracing social media, but as Newman (2009) found *'very much on their own terms'*. Finally staff at Newsroom X were beginning to set their own boundaries around the 'two-way conversation' that some commentators suggest will result from increased use of social media in broadcast news (Ekstrom, 2013; Newman, 2009).

7.1 New ways of Managing Time

There was some evidence that replacing old divisions of labour with multi skilling has reduced the amount of time journalists at Newsroom X have to '*just be journalists*'. Rather than seeing this as a threat to creativity and professionalism (Witschge & Nygren, 2009) journalists were working out how to reconstruct their working day in order to manage competing pressures for quality online and broadcast material. While technology was understood as a cause of increased workloads and an accelerated pace of work, equally it was embraced as a solution, a tool that had the potential to render the multi-skilled, multitasking environment manageable. For most, not only did technology make workloads manageable, the fast pace of work was exhilarating and added to the sense of satisfaction at the end of the day. Where concerns about the potential of technology to deskill were articulated it was in terms of a future generation of journalists for whom technological skill might become more important than journalistic content.

The nature of television news meant that broadcast material had to take priority, a deadline for transmission is not negotiable. However, there was evidence of a growing pride in the content and appearance of the web site, and a concern for what users of the site would expect to find there. Use of social media had become so commonplace that Newsroom X staff regarded its use an integral part of television journalism in the twenty first century, something that had to be embraced if one was to be part of the profession

7.2 Constructing an Identity

At one level then staff at Newsroom X were negotiating an individual path through technological change, working out their own priorities and reconstructing their working day to accommodate increased demands. Yet at a second level, multi skilling and multi-tasking were creating a shared identity in the newsroom based on new fluid divisions of labour.

An interesting effect of multi skilling in Newsroom X was a perception that it had made the workplace more democratic. Multi skilling gave staff a better understanding and appreciation of the process of news production. The rota system for maintaining the web site was seen as a fair way to allocate the additional workload. Overall, this appeared to enhance the sense of a common identity and a shared pride in producing online as well as broadcast content.

At the same time Newsroom X staff were in the process of constructing individual 'social media' identities. These remained fluid, but journalists were beginning to rationalise their social media presence in terms of either a personal or a corporate identity. In doing so they were constructing boundaries around their engagement with the audience.

7.3 Setting the boundaries of a two way conversation

The extent to which journalists in Newsroom X used social media, especially Twitter to develop a two way conversation with their audience was, to a large extent, related to the identity they created for themselves. For those who adopted a 'corporate' identity, engaging with the audience was arranged around two principal activities. Firstly, the audience provided a source of material by posting stories and events on social media. Engagement on this level was largely passive, journalists used social media as a source and followed this up using journalistic skills to verify information and identify key facts (Newman, 2009). Feeding information back to the audience focused on directing traffic to the web site or evening news bulletin. While this could be argued to provide a two-way conversation on one level, the extent to which it represents a democratisation of the process of news production appears limited. The audience certainly play a role in setting the news agenda, but their role in developing the story is limited.

Where journalists adopted a 'personal' social media identity there was a willingness to engage more directly with the audience. Here, in addition to passive use of social media as a source, journalists initiated stories by posing questions on social media and encouraging audience response. Journalists were able to follow this up and engage to some extent at least in a form of co-production (Ekstrom, 2013).

8. Conclusion

This single exploratory case study set out to investigate the impact of new digital technologies on work in a regional ITV newsroom. As a commercial PSB broadcaster Newsroom X operates in a complex political and economic environment that requires them to continue supplying quality news programming with limited financial resources. Newsroom X had recently had its PSB licence renewed for 10 years and had moved to new premises with state of the art news production technology. Although the total amount of regional news programming Newsroom X was obliged to supply under its PSB licence had reduced, online content and social media activity had increased.

Advances in technology had replaced old divisions of labour with a multi-skilled, multi-tasking workforce but there was little evidence to support the argument that this could lead to a sense of de professionalization (Witschge & Nygren, 2009). Online and social media activity had clearly led to increased workloads, but the effects of this were mitigated by advances in technology and connectivity that allowed tasks to be completed quickly and efficiently. The role of human agency in shaping how technology affected the process of news production was apparent in the variety of individual strategies for balancing increased demands that were beginning to emerge.

At the same time multi-skilling appeared to be creating a sense of shared identity and democratisation of the workplace, as staff became fully integrated in the process of news production.

Alongside this staff were in the process of constructing their own social media identity and working out how best to engage with the audience. Two models of engagement were apparent: a passive approach where social media were used as tools to source stories and prepare for imminently breaking news; an active approach that initiated engagement with the audience by posing questions and following up responses. Within Newsroom X the capacity of social media technology to generate a 'democratic' model of news production based on a two-way conversation with the audience was mitigated, therefore, by the individual human agency of journalists. While social media afforded the audience a role in setting the news agenda, the extent to which this represented a shift of control from news organisation to audience was limited by individual agency in constructing an online identity and model of engagement.

As a single, exploratory case study the experiences of Newsroom X provide a useful preliminary step in investigating an under-researched area (George & Bennett, 2005). The study provides valuable insight into the role of *individual* human agency in shaping the effect of technological change within a single news organisation. Future research could take a comparative approach to include inter-organisational differences in the capacity of human agency to mitigate technologically determined change. This might include a comparison of PSBs and those with no public sector requirement to supply quality regional news programming.

References

- Becker, S. (1964) *Human Capital: A Theoretical and Empirical Analysis*. Chicago: University of Chicago Press.
- Bittman, M., Brown, J. E. and Wajcman, J. (2009) 'The mobile phone, perpetual contact and time pressure.' *Work Employment and Society*,, 23(4) pp. 673-691.
- Braverman, H. (1974) *Labor and Monopoly Capital: the Degradation of Work in the Twentieth Century*. New York: Monthly Review Press).
- Carey, M. (2007) 'White-Collar Proletariat?: Braverman, the Deskilling/Upskilling of Social Work and the Paradoxical Life of the Agency Care Manager.' *Journal of Social Work*, 7(1) pp. 93 - 114.
- Ekstrom, L. (2013) 'Live Co-produced News: emerging forms of news production and presentation on the web' ' *Media Culture and Society*, 35(2) pp. 620 -639.
- George, A. and Bennett, a. (2005) *Case Studies and Theory Development in the Social Sciences*. London: MIT Press.
- Gubrium, J. and Holstein, J. (Eds.). (2001). *Handbook of interview research*. London: Sage.
- Higgins-Dobney, C. and Sussman, G. (2013) 'The growth of TV news, the demise of the journalism profession.' *Media Culture and Society*, 35(7) pp. 847-863.
- Hollander, G. (2013) 'ITV Accused of Creating 'Two Speed' Regional News landscape after 2015.' *Press Gazette*. 29th July, 2013.
- Holmwood, L. and Kiss, J. (2007) 'Unions slam ITV regional cuts.' *Media Guardian* 12th Sept 2007.
- Ichniowski, C., Kochan, T., Levine, D., Olson, C. and Strauss, G. (1996) 'What works at work: overview and assessment.' *Industrial Relations*, 35(3) pp. 299-333.
- Littler, C. R. and Innes, P. (2003) 'Downsizing and Deknowledging the Firm.' *Work Employment and Society*,, 17(1) pp. 73-100.
- Mahler, J., H and Liang (2012) 'Information technology change, work complexity and service jobs: a contingent perspective.' *New Technology, Work and Employment*, 27(2) pp. 133-146.
- Newman, N. (2009) *The Rise of Social Media and its Impact on Mainstream Journalism*:. Oxford: Reuters Institute for the Study of Journalism.
- Nichols, P. (1991) *Social Survey Methods: A field Guide for Development Workers*. Oxford: Oxfam.

Ofcom. (2007) *News News, Future News: the challenges for television news after digital switch over*. London: Office of Communications.

Ofcom. (2009) *Second Public Service Broadcasting Review: Putting Viewers First*. London: Ofcom.

Ofcom. (2013) *News Consumption in the UK 2013 Report*. London: Office of Communication.

Orlikowski, W. J. and Barley, S. R. (2001) 'Technology and Institutions: What Can Research on Information Technology and Research on Organizations Learn from Each Other?' *MIS Quarterly*, 24(2) pp. 145-165.

Orlikowski, W. J. and Scott, S. (2008) 'Sociomateriality: Challenging the Separation of Technology, Work and Organization.' *Academy of Management Annals*, 2 pp. 433-474.

Pinch, T. and Bijker, W. (1984) 'The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other.' *Social Studies of Science* 14 p. 399.

Rolfe, H. (1986) 'Skill, deskilling and new technology in the non-manual labour process.' *New Technology, Work and Employment*, 1(1) pp. 37-49.

Scannell, P. (1990) 'Public Service Broadcasting: the History of a Concept.' In Whannel, G. (ed.) *Understanding Television*. London: Routledge,

Sykes (1923) *Broadcasting Report 1923*. Cmnd. Cmnd 1951 (Sykes Report).

Williams, R. (1990) *Television Technology and Cultural Form* 2nd Edition ed., London: Routledge.

Witschge, T. and Nygren, G. (2009) 'Journalism: A Profession Under Pressure?'. *Journal of Media Business Studies*, 6(1) pp. 37-59.