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Change and Continuity: Historicizing the emergence of online media
Scott Eldridge II

The emergence of online media is often framed in ahistorical terms. Observers have described the online and digital as “revolutions” (BBC 2010, Kaufman 2012), some going so far as to suggest that the Internet heralds change so radical that journalism may not “survive” (Hirst 2011). Such reactions frame the Internet and online media as either providing wholly new and exciting possibilities, or as unique challenges and even threats to established media. In these instances, accounts of online media and change favor the hyperbolic over the historic. When set in the context of media history, the adoption of online media begins to reflect something familiar, resonant with both the enthusiasm and the trepidation that has accompanied past technological changes. This chapter will look at key moments of media and technological emergence throughout British media history to contextualize the dynamics seen within online media.

To situate the adoption of Internet technologies in this broader view, this chapter explores media-technology relationships during the introduction of the steam press, the telegraph and early broadcast. These three techno-media junctures may well be able to ground our understandings of a fourth, the emergence of online media. Through looking at British news media’s adoption of technologies, the ‘radical change’ associated with the Internet can be placed in historical perspective. This chapter focuses on selected points of technological emergence and identifies key dynamics through an exploration of how news media embraced technological opportunities for boosting commercial strength
and elevating societal roles, and where in moments of change the roles of news media have adjusted. Whether focusing on a rise in the primacy of news in the era of the steam press, expanded and speedier coverage with the telegraph or new forms of news media with broadcasting, looking at news media’s history of engagement with technology, change seems constant. Within such flux, however, some attributes of the relationship between technology and media persist, even in the most radical of contemporary developments online.

**Technology and Media**

Whether speaking of an established format, such as print, or more recent innovations, as with the Internet, media are reliant on communicative technology to reach their audiences. This reliance can result in media change being viewed as *caused* by technological progress, or articulated in the lexicon of *revolution* where one change upends the other. “Media need technology”, writes Alan Bell, adding: “and technology needs technicians” (Bell, 1991: 12). Bell’s observation highlights a sometimes-awkward reality for media: reliant on technology for content to reach audiences, yet not fully in control of that relationship. With each of the technologies explored here, this has been the case to greater and lesser degrees. However, the technology-media relationship is more complex and, within Britain’s media history, changes made around technology have reflected a combination of economic, cultural, and political factors, on top of the technological (Briggs and Burke 2009: 19; Conboy 2004: 187; 2011). As Briggs and Burke write in reference to the rise of industrial printing:

> To speak of print as the agent of change is surely to place too much emphasis on the medium of communication at the expense of the writers,
printers and readers who used the new technology for their own different purposes (Briggs and Burke 2009: 19).

So while technology has a role to play, it is not singular in causing change. The steam press allowed newspapers in Britain to increase their volume but it was not until duties on paper and advertising were cut when that they began to fully realize their commercial potential (Curran 2010). Factors beyond technology affected the adoption of the telegraph and while wires criss-crossed major American cities, Britain saw a slower adoption of the new technology with greater emphasis placed on gathering news from abroad (Wiener 2011). While not ‘agents of change’, these technologies of the nineteenth century were a boon for news media, and offered the opportunity for news media to increase their commercial heft and secure a more prominent role in British society.

In the twentieth century, the media/technology relationship shifted once more. The emergence of broadcast technology did not empower existing news media so much as it ushered in new formats. Broadcast was perceived from the beginning as a threat to the existing order, its emergence restrained and its initial impact limited (Crisell 2012). Yet factors beyond technology contributed to an eventual strengthening of broadcast and the BBC came into its own as a news medium when national crisis loomed and again when war broke out (Scannell and Cardiff 1991). With the Internet, technology has provoked change yet again and while news media have used Internet technologies for decades, the emergence of online media has presented a unique set of challenges outside technology. To be certain, while the technologies of the Internet have allowed news media to communicate through genre-bending means, the tenor of that
change remains tied to previous techno-media junctures. Through that historical view, online media’s emergence can be grounded not as surprisingly new, but rather as reflective of the media and technological changes that came before it.

The *Times* and the steam press

The introduction of the König Bauer rotary steam press by the *Times* in 1814 signaled the start of an industrial age of printing. When, on November 29, the *Times* announced its latest edition was the result of this new press, the dynamics of change were framed as an opportunity for the new technology, the paper, and its readers:

“The reader of this paragraph now holds in his hand one of the many thousand impressions of the *Times* newspaper, which were taken off last night by a mechanical apparatus. A system of machinery almost organic has been devised and arranged, which, while it relieves the human frame of its most laborious efforts in printing, far exceeds all human powers in rapidity and despatch” (Andrews 1859: 80).

The *Times* described the new printing press as a radical shift, “the practical result of the greatest improvement connected with printing since the discovery of the art itself” (Andrews 1859, quoting the *Times* announcement). With this announcement, the enthusiasm around technological change is reflected not only through the relationship with the audience, stakeholders in the *Times*’ new venture (Briggs and Burke 2009). Holding in their hands something new, rapidly printed and unmatched by human endeavor alone, the adoption of the steam press brought printing to an industrial scale. While in the eighteenth century newspapers were already contributing to a more literate and civic-minded public (Conboy 2004: 60), the industrial scale of printing acted to amplify this (Temple 1996: 22).
It was not technology alone that allowed newspapers to reach greater audiences or strengthen commercially. Instead, a complement of social and political decisions contributed key elements to the media changes seen during this period. Among these is the lifting of the "taxes on knowledge" (ibid.: 18), including advertising duties. These were reduced in 1833 and cut again in 1853. In the years that followed this second reduction, advertising in the British popular press growing by 50 percent. By the turn of the century, £20 million was being spent on advertising (Curran 2010: 29). Alongside the boost in advertising revenues, a reduction in stamp duties and a drop in the sales price of newsprint allowed newspapers to recoup more of their printing costs and in order to broaden their readership still further owners dropped their cover prices. In the early 1900s, newspapers with "bigger papers, more staff and the introduction of sale-or-return arrangements with distributors. It also helped to underwrite a further halving of the price of most popular papers to 1/2d. [half-penny]" (ibid.).

Amid these commercial, political and technological factors, editorial changes were also taking place. The Times’ decision to adopt a rotary steam press was quickly followed with editorial interventions by Thomas Barnes, who envisaged a newspaper that would act as a thought leader, drawing on public opinion and a network of correspondents (Conboy 2004: 114-115). As the tenor of coverage shifted towards news events and fact-based content, newspapers sought to establish themselves within civic and political discourses (Wiener 2011: 81). While the Times notably heralded its patriotic enlightenment, the move towards professionalism was not due to technology alone, rather a response to intense competition, an effort to bolster the credibility of its journalism separate from its
business activities and its history of receiving annual government subsidies in return for a favorable political stance (Conboy 2004: 114). In the end, as with the decision to embrace the steam press, making these changes sated its middle class readership's desire for independent journalism, and “the desire of advertisers to be associated with a newspaper with the ear of such an affluent and influential clientele” (ibid.).

The telegraph: Extending reach, enriching content
What the steam press made possible, the telegraph enhanced. Invented in 1844, it emerged as a point-to-point tool for transmitting business and commercial information, became a fixture of news reporting out of the Crimea in the 1850s (Wiener 2011: 81) and by the 1870s the was regularly used to transfer news digests (Chapman 2005: 59-60; Potter 2007). The adoption of the telegraph by British news media enhanced the primacy of news events in newspapers with an emphasis on reporting the latest information from abroad in London's newspapers, at speed. As Andrew Marr puts it, with the telegraph, “The era of sail and horses was elbowed aside” (2005: 331), though to suggest the telegraph changed everything radically or immediately would miss some key elements of change.

For British journalism, the use of the telegraph to report from abroad allowed newspapers to report news from the Crimea with immediacy and specifically saw the Times stake a claim as an “enlightened patriotic opinion” leader, with news that outpaced the government’s (Conboy 2004: 118). Further implanting the importance of reporting news speedily from abroad in newspapers like the
*Times*, the use of such technology was further enhanced as overland and undersea cables connected the UK (via Ireland) to the US in 1858, enabling quick coverage of the US Civil War, with further connections to Asia in 1872 and South America in 1874 (Temple 1996: 24).

While on the surface, the telegraph and its broad connections seem to signal a globalized style of news reporting, there were uniquely British attributes to its adoption. In contrast to their American colleagues, British journalists primarily sent information to the UK from abroad, rather than across Britain. Wiener sees this as the result of the country's main newspapers being concentrated on Fleet Street, whereas in the US news and politics extended across major metropolitan areas (Wiener 2011: 67). In London, the *Times* and *Daily News* enjoyed a comfortable hold on the print market and were unfazed by the regional press, outside of the “press and politics” axis of London. These newspapers continued to rely on the rail networks up until the Franco-Prussian war in 1870, when the telegraph was nationalized and Britain was more fully ‘wired’ (ibid.).

Change was not just the result of technology, but rather, “the combination of news agencies and the invention of the telegraph [which] brought a much more reliable and economical supply of steady information” (Conboy 2004: 125). With the arrival of the Reuters news agency in 1851, “authoritative and up-to-date foreign and national news was now readily available, and essential to a newspaper’s credibility and commercial success” (Temple 1996: 24). Originally founded to convey financial information out of London, “Reuters developed a reputation for probity, reliability and, with the introduction of transatlantic
cables, speed” (ibid.) that extended beyond the British capital. In the years and decades following, Reuters was able to break transatlantic news in the UK, such as the assassination of U.S. president Abraham Lincoln in 1865, and the role of wire services as quick arbiters of information became established as invaluable to communication processes.

By 1870, US journalists working out of London were using telegraphy extensively to cover the Franco-Prussian war (Marr 2005: 331). This technique was picked up by the Daily News and Tribune, which saw the speed of their reporting outpace that of the Times (ibid.). To many, including Marr (2005), the incorporation of the telegraph in news content also signaled a shift in writing style, as the expense of technology forced reporters to focus their prose and develop a more direct writing style to convey news, rather than commentary (Marr 2005: 331). This has led to some mythologizing about the telegraph as the ‘cause’ of increased objectivity and of the adoption of the inverted pyramid in reporting (Pöttker 2003), something Maras (2013) sees as overly deterministic. For Wiener (2011: 70), the alignment of the telegraph and objectivity is a development tied to Reuters, which adopted objectivity in its reporting, favoring speed and tight language to maximize the commercial appeal of its content on both ends of the transatlantic cable.

**Resonant fears: the emergence of broadcast**

While newspapers’ adoption of the steam press has been correlated to a rise in the importance of news and the societal role of newspapers, and the telegraph as enhancing that primacy and an increased emphasis on speed, broadcast news
media expand both aspects. However, the differences accompanying the technological change within broadcasting are stark and its emergence was met with far more trepidation than enthusiasm. Broadcast’s eventual adoption as a medium for news conversely benefited from that early resistance and it provides a unique case that has shaped the adoption of public service broadcasting in Britain which continues to resonate with online media.

As broadcast technology emerged in the twentieth century, it gave rise to a new medium, radio:

It was to add a completely new reach and status to journalism’s repertoire and it was to do this, in the first instance in Britain at least, protected from the economic pressures for profitability that defined the activities of most other areas of journalism. (Conboy 2004: 188)

Conboy (2004; 2011) points to the technologies of broadcast radio and later television as embedded within the media/technological junctures of the 19th and early 20th centuries. In the early regulatory frameworks around radio, this is direct. As radio emerged first as a technology for wireless telegraphy, it fell under the Telegraphy Acts of 1869 and 1904. As its more familiar spoken format developed, this too grew within the same regulatory frameworks. Early broadcast technologies of radio came under the control of the Post Office (ibid. 188), and it was secured as a public corporation again in 1925, and by royal charter in 1927. This becomes a key characteristic of its emergence as news medium, as this regulatory history is compounded by the trepidation of both government and newspapers.

Already government-regulated, the emerging medium of radio was immediately perceived as a threat to the newspapers’ hold on news reportage and newspaper
proprietors successfully lobbied to restrict broadcast of news to 30 minutes daily. Further minimizing its emergence by not covering broadcast schedules, the BBC and the emergence of broadcasting for news media was slowed, but not halted (Williams 2010: 12; 2006), and two key events in the BBC's early years saw the BBC establish a place for itself in the news media landscape. First, in 1926, the BBC came into its own as a news medium when, during the general strike that halted newspaper presses, broadcasting was able to maintain coverage of the strike and to relay government information as part of its public mandate. This proved to be the first turning point in its staggered emergence. With the newspapers unable to do the same, or to resist its status as news medium, the BBC broadcast five bulletins a day. As Conboy relays, the national emergency around the general strike allowed BBC general manager John Reith to further establish the broadcaster as he envisioned: an independent communicator of news, around which a British nation could cohere, “thus playing a part in the construction of a reinvigorated sense of mediated national community” (Conboy 2004: 190). This, says Briggs (1995: 7), allowed Reith to develop the BBC as a national conscience and moral voice.

The second key point of change came during the Second World War, when the BBC was able to define its role as an independent news source, supplanting the newspapers whose capabilities were again limited, though this time by rationing and depleted advertising revenue (Conboy 2004: 194). The Second World War saw the BBC demonstrating both its strength both in relaying news and the viability of broadcast as news media but also its ability to weather the challenges that wartime can bring to other means of mass communication (Crisell 2012). As
points through which the BBC could define its public service mandate, these two moments in the early twentieth century also allowed broadcast to define its autonomy in relation to its regulatory framework. The BBC has largely continued to balance its independence in reporting from the constraints of profit-making and this cultural identity has continued to resonate as online technologies have emerged.

As Scannell and Cardiff (1991) point out, the emergence of the BBC and of broadcast in Britain around the BBC is less a story of technology than one of the founding of the idea of public service broadcasting. Where the steam press allowed newspapers to empower their commercial ambitions, and the telegraph contributed further to that, broadcasting led to the emergence of a publicly-regulated, but simultaneously independent, BBC. Ironically, the establishment of the BBC as a public service broadcaster and the reactions by commercial newspapers to its arrival, linger in the way news media in Britain have moved online, a transition where the BBC has played an outsized role.

The Internet: Breaking boundaries, diffusing genres
This final section will compare the rise of online media and the embrace of Internet technologies against the three previous techno-media junctures. This highlights moments of continuity amid change; the eager embrace of online media to enhance content and to broaden reach. In addition, it points to moments of trepidation in the perceived threat of a diffuse media landscape and the real threat of a fractured commercial model.
As much as this chapter advocates a long view of media and technology, it would be naïve to say there has not been tremendous change in the most recent of technological shifts. Online technology and online media have been unique in terms of scale and speed but also in their upending of the commercial model of newspapers, especially removing the ability to profit from advertising (Siles and Boczkowski 2012). Media have encountered changes to how audiences access their content and how media access audiences in ways that reflect history, but remain uniquely contemporary. Nationally, media are multi-modal and global, boundaries have diffused so to now speak of British news media without recognizing a global audience would be myopic. Still, there are uniquely British attributes that have shaped the rise of online media, the result of past interactions between media and technology within the UK, particularly with regard to the BBC. Whether in instances where change has been resisted, or embraced, these add understanding to the technological opportunities faced presently.

**Online news media**
The Internet, as a technology, emerged out of a 1969 US military project, ARPANET (Advanced Research Project Agency Network), that connected the computer systems first of US military bases and then corporations and universities (Curran 2012). By the late 1980s it had spread across the US and by 1993, a more full-bodied Internet capable of transmitting both text and images had reached Europe and the UK (Deuze 1999). As user-friendly software wrapped the online infrastructure in GUIs (Graphical User Interfaces), the
Internet as a network grew to offer a new means, online, for print and broadcast media to engage with new means of content distribution.

In terms of news media, the Internet’s infrastructure and technologies provided alternative and flexible means of reaching audiences (Curran 2002: 135). These were seized upon enthusiastically at first, and in the mid-1990s and early 2000s, newspapers in the US and UK were beginning to experiment with putting their content online (Allan 2006; Boczkowski 2004: 33). For print media, the dynamism of online media technologies offered the chance to publish their content beyond the page, and for broadcasters to extend beyond set audio-visual delivery and broadcast schedules (Deuze 1999). However, the change would prove to be more than just expansive and within the dynamics of change there has been a diffusion of both genres and of profit-making capabilities. In exploring this diffusion, the BBC’s online presence offers a clear demonstration of one way of embracing these challenges.

While a textually dominant online news media environment in those early years ostensibly favored the press over audio-visual broadcasting, online media has seen such distinctions dissolve (Livingstone 2004). The BBC has been online since 1994, with the advent of the BBC networking club. However, it was the introduction of its news site in 1997, and its reconfigurations in 1999 and the early 2000s that allowed it to develop a more distinctive presence. In its shift from broadcast only to online-also, the BBC made use of teletext technology that ferried texts prepared from broadcast reports directly to the website (Deuze 1999: 375). As the infrastructure of the Internet at the time lacked robust
capabilities for video, sound and images, the BBC's use of such software allowed it to develop a textual form online outside its familiar broadcast structures from an early point and accelerated its move from a distinctly broadcast character to an identifiably multimedia environment.

Rapidly becoming a multi-modal media entity with stakes in broadcast and online, the BBC's web presence benefited from the recognition its offline media garnered globally, with nearly two-thirds of its traffic from outside the UK (ALEXA.com 2013a). But the BBC has also forced the issue of the cost and access to news content online that has continued to shape the way media go online, and its early online positioning has allowed it to dominate in that environment. As its online content became more focused following the 2004 Graf report, the BBC has played a role in how other British news media have contended with change online (BBC 2004). Tied to its public service mandate, the BBC's online news has always been free and accessible to all. Put simply, within Britain this means there will always be a source of UK news for anyone online, so audiences need not pay to access news content (Siles and Boczkowski 2012; Thorsen 2001: 224). For many news media in Britain, and specifically print news media, the presence of a free BBC news site renders the idea of subscription plans and paywalls redundant (Herbert and Thurman 2007: 213), confounding efforts to develop and maintain sustainable business models online (Myllylahti 2013). While this struggle for commercial stability has seen nearly all British news media struggle, it has also spurred media to seek broader audiences online and outside the UK.

New opportunities: Beyond boundaries
During the height of media adoption of the telegraph, newspapers broadened their international content and coverage, embraced industrial and early electronic advancements, all the while remaining largely national in terms of distribution and audience. Similarly, with the exception of its World Service, the BBC’s broadcast reach was limited by transmission power, public mandates and national regulations. Online, these boundaries have become permeable and it is impossible to speak of British media without acknowledging their global reach.

To illustrate this point, the *Daily Mail* boasts the most visited English language newspaper site globally (Durrani 2013) and the *Guardian* has not only moved online, but has established unique US and Australian operations and, as of December 2013, can claim the overwhelming majority of its web traffic from overseas visitors (ALEXA.com 2013b; Sawers 2013).

Furthermore, news media are extending their content beyond familiar formats and while bereft of historical context, new developments ranging from Twitter to blogs to mobile news apps have offered new discourses of revolutionary change (Kahn and Kellner 2004; Vis 2013). Traditional forms have also seen new life online. Long-form journalism, building on traditions of magazine and literary reporting styles and genres of the 1900s, has also seen a reinvigorated presence online (Campbell 2013). In the early twenty first century there has also been a rise in in-depth reporting, benefited by online content and data journalism (Marshall 2011), while “contextual journalism has emerged as a powerful and prevalent companion to conventional reporting” (Fink and Schudson 2013, 16).

To claim any of these as trends rather than merely data points, however, would be historically naïve, even as they reflect the elements of change and continuity
across media history. Furthermore, even as the online and traditional media relationship sometimes appears harmonious, the trepidation that met broadcast can still be found as new entities that purport to adopt journalistic roles are met with hesitance or are explicitly rebuffed (Eldridge 2013).

**Conclusion**

With online media, change has seemed radical and in some ways it has been. News media have seen a fracturing of previously distinct genres, of established models of commercialization and profitability, and in how audiences are approached. Yet this chapter has shown how news media’s history of technological change is reflected in the online environment. It has suggested that we may be better advised to compare the seemingly unparalleled contemporary changes with the older enthusiasms and commercial empowerment which greeted the steam press and telegraph, while at the same time contrasting this with the more cautious reaction to broadcasting. When set against this history, online media present both enthusiasm and trepidation, and have allowed media empowerment, alongside the diffusion of influence.

Emerging out of traditional media structures, expanding audiences and distribution models have allowed online media to be increasingly treated as borderless products. As Internet technologies reach audiences in a dramatically faster manner, these shifts amplify the expansive and networked space within which online media can engage. Yet the changes associated with online media reflect the bevy of factors that have textured the media-technology relationship through the past centuries. Whether it was the cost of paper and the politics of
taxes alongside the steam press (Curran 2010), or the commercial factors
compounding the expanse of the telegraph (Wiener 2011: 70), or the trepidation
that greeted broadcast established under a public service mandate (Conboy
2004: 191), media and technological change is influenced by an array of factors
that color the specific ways in which news media have embraced technology.
These same factors have set the stage for how British media have adopted online
media and continue to shape their engagement with the Internet.

Further Reading
This chapter has benefitted tremendously from Martin Conboy's Journalism: A
Critical History and Journalism in Britain: A historical introduction. Joel Wiener's
The Americanization of the British Press, 1830s-1914 provides a further
exploration of the comparative differences in how news media have embraced
technology. To focus on the online era, Pablo Boczkowski's Digitizing the News:
Innovation in Online Newspapers and the historical overviews provided by James
Curran in his, Natalie Fenton's, and Des Freedman's Misunderstanding the
Internet provide useful context to the changes news media have encountered
online.

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