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HAS THE INTERNET CHANGED NEWS FOR BETTER OR WORSE? 250 YEARS OF TECHNOLOGY

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Since internet news started in the 1990s, many claims, both positive and negative, have been made about its long-term impact.

For the first generation, whose views were largely utopian, the web was a technology that would free us from the bounds of traditional, hierarchical society. The monolithic and conservative 'main-stream media' would be replaced by a new kind of citizen journalism, free for all to both produce and consume online through interactive blogs where we could all have our say.

More recently, dystopian visions have predominated. Internet news is seen as a threat to our whole political process and social cohesion. Social media like Twitter and Facebook are rapidly spreading 'fake news', negatively influencing public opinion. Politics has become polarised, with individuals with different political views only talking to each other and existing in their own 'filter bubble'. There is no longer a common 'public sphere' where we can discuss politics sensibly and collectively. And the mainstream media are doomed, not by the rise of citizen journalists, but by the rise of Facebook and Google, who dominate advertising revenue on the web.

As someone who has both worked as a journalist on the BBC News website, and as an academic researcher studying news on social media, I believe that both claims are exaggerated.

To get a more balanced view, I think it would be helpful to turn to the history of how other technologies changed news in the past. This could help us understand how internet news might develop in the future.

I have come to three general conclusions.

Firstly, it is clear that technology itself does not determine how news developed then, and will develop now. Rather than technological determinism, what happened was path-dependent. The same technology resulted in different outcomes in different countries, depending on the political and economic decisions made early in its development.

Secondly, it is hard to separate the development of revolutionary new technologies in news from the general industrial revolutions they are associated with, which includes political, social and economic change as well as scientific knowledge and technical developments. And I would also argue that the more revolutionary and disruptive these social, economic and political changes were, the more profound their effects have been on news.

Thirdly, we have to understand that, although these changes are revolutionary, they are also evolutionary. New news formats did not arise in a vacuum. Each change in news production drew on previous experience of making the news, but modified it to fit new technologies.

History, although an imperfect guide to the future, can teach us many lessons. Some of those are predictions as to what is likely to happen, based on past experience; but, equally important, is the historical evidence that tells us what we can't predict. I hope this talk will help draw out both those lessons.



I am going to look at two very powerful changes in the nature of news since the first newspapers emerged more than 250 years ago. I will be mainly concentrating on development in the USA and the UK.

The first was the creation of the modern 'mass media', the mass-market metropolitan newspaper, which occurred roughly between 1880 and 1920.

The second was the broadcasting revolution, first radio and then television, which occurred between 1920 and 1950.

In both cases, there was a fundamental shift in all the elements of the news:

- How news was gathered and collected from outside sources and by whom (news gathering)
- How this information was put together and packaged as news (news production)
- How it was distributed and to what audience (news distribution)
- How it was paid for
- How it was regulated

We look at these in turn in the two cases under consideration. But to understand the revolutionary nature of these changes, we must first consider the early version of the newspaper.

The First Newspapers

The key technology that led to the creation of the newspaper was Gutenberg's invention of moveable type and the letter press printing press around 1450, which made the printing of books, pamphlets and newspapers in quantity feasible.

But it took more than 200 years for the first newspapers to appear. In the 1500s, the news being spread by printing was the Gospel, with Martin Luther as the most published author. He was a prolific writer of pamphlets in the vernacular attacking the church and calling for reforms. People who wanted news, such as governments and businessmen, relied on private networks.

The newspaper emerged as a product of the coffee house culture of London in the 1690s, where businessmen, politicians and writers gathered to swap information and gossip and read articles posted on their walls. The stock market, Lloyds of London and newspapers all sprang from the need for the wider distribution of such information.

The first daily newspaper in the UK was the Daily Courant, first published in March 1702. We would barely recognize it as a newspaper today. For one thing, it had very little news in it. Its front page was copied from a Vienna newspaper that was two weeks old (there were no copyright laws). The item mainly consisted of a list of generals in the Austrian army who were going to fight the Turks. Other articles were more opinion than news, or not about current affairs at all.

Printing on a hand-turned press was a slow process, limiting circulation to a few hundred copies of a 4-page paper. Very few people outside London managed to get a weekly by a slow coach. And therefore newspapers made very little money, and often didn't last very long.

Newspapers were printed, published, written, edited and distributed by the same person. One of the most famous of them was Benjamin Franklin, one of the authors of the Declaration of Independence. He got his start in life working for his brother, who had launched one of the first daily papers in the USA, the New England Courant. His business acumen soon made his printing business a success – but he didn't make his money from his paper, but by printing his highly successful yearly Poor Richard's Almanac, a popular blend of homilies and detailed information for farmers on seasons, crops and weather. In fact his newspaper was shut down by the British



government for supporting American rebels planning to dump tea in Boston harbor to protest taxation without representation.

Government interference was one of the key limiting factors in the growth of newspapers. Newspapers required licenses to operate and were highly taxed. Government subsidies could also be a key source of income, with little advertising and low circulation. During the Napoleonic Wars, the British government, believing newspapers might be a threat to public order, adopted a more direct approach: it simply directly purchased all of the press at a going rate of £600 per newspaper. And hidden political subsidies to British newspapers remained a key way that the UK press was funded before the emergence of mass-market newspapers.

Franklin's experience bore fruit when he became postmaster general in the new American government. Under his tutelage, the US Post Office heavily subsidized weekly newspapers by creating a very cheap printed matter rate, which greatly increased the number and circulation of US newspapers in a largely agrarian society.

The Creation of the Mass Media: The Mass Market Newspaper

By the 1850s, a group of new technologies were emerging that were to transform news production. These included:

- the rotary, steam driven press, which could print millions rather than thousands of copies a day of a 16, 32, or 48-page paper, wrap and fold them;
- the linotype machine, which replaced hand setting of type with a mechanical hot-metal system, dramatically increasing the amount of text that could be quickly go to press;
- the invention of photography and lithography and processes, which allowed it to be reproduced in print
- an increased supply of high-quality paper, replacing rag

Separately, another dramatic new technology – the telegraph – emerged to transform newsgathering. As the telegraph network stretched around the world by the 1880s, newspapers established or subsidised wire service companies like Reuters and AP to collect and distribute the news to their papers.

The new, bigger newspapers had new formats, with specialized sections such as comics, sports, business and arts. These appealed to a wider section of the public and newspapers also benefited from new means of distribution, with newsagents and newsboys springing up in metropolitan centres, while trains and trucks brought newspapers to outlying cities, towns and suburbs. In Britain this soon led to the dominance of London papers, who soon came to be known as the 'nationals'.

Growing newspaper circulation paralleled the growth of large consumer businesses and department stores who needed to advertise to the public. Newspapers became enormously profitable, cutting their cover price to increase readership even further.

This new type of newspaper required new, more specialist roles – especially that of the beat reporter who covered a particular area, such as crime or politics. Reporters were now part of a team working with editors, subs, compositors and copytakers to work with.

And there was also a new approach to journalism, based on the ideal of objectively reporting the facts, not just giving opinions. Interviews became recognized as a key part of newsgathering.

There was also a new strand of first person, investigative journalism – based on first-person accounts of terrible conditions in urban slums, mental asylums, and 'white slavery' – which attracted more readers. In the UK, this was pioneered by W.T Stead, whose Pall Mall Gazette published shocking revelations of the conditions in Britain's slums and claimed that there was a flourishing 'white slave trade' forcing young girls into prostitution. In the US, Joseph Pulitzer's New York World sent reporter Nelly Bly undercover to expose the terrible conditions in New York's notorious mental asylum on Blacks (now Rikers) Island.



The big press barons, freed of the need for political subsidies, also felt free to express their political opinions too. These were often jingoistic and pro-war – what came in the US to be called ‘yellow journalism.’

In 1898 the rival New York Journal, owned by William Randolph Hearst, agitated for war against Spain to seize Cuba, after claiming that it was Spanish treachery that blew up the US battleship Maine in Havana harbor. ‘You furnish the pictures, and I will furnish the war,’ he reportedly wired his Havana correspondent who told him there would be no war.

In the UK, the press barons, Lord Rothermere, owner of the Daily Mail, and Lord Beaverbrook, owner of the Daily Express, used their tabloid newspapers to vigorously express their political views, from vigorous prosecution of the war on Germany during World War I to the abandonment of free trade to support for appeasement.

The power of the press barons worried politicians. They had “power with responsibility, the prerogative of the harlot throughout the ages,” warned Conservative leader Stanley Baldwin in the 1930s.

The Broadcast Revolution

By the early 1900s, a new and even more revolutionary technology was emerging. Wireless radio communication had first been developed on a commercial basis by Marconi. By 1912 he had perfected long-distance transmission, allowing the ocean liner Titanic to call for help after being hit by an iceberg.

The technology also proved critically important in World War I both for navies and the newly created airforces.

It was so important, in fact, that the US Navy planned to take control of all patents relating to radio in the US to ensure that the military controlled this technology.

No one suspected that radio signals would be broadcast to millions of people over networks spanning continents.

By the 1920s, encouraged by radio manufacturers and rapid spread of amateur radio hams, both the UK and the US began to explore the possibilities of broadcast radio transmission. But they followed very different paths.

The UK centralized the control of all radio transmission in a single body, the British Broadcasting Company, which was given a Royal Charter in 1927. In the US a welter of private and voluntary sector radio stations emerged, but legislation to limit access to the radio spectrum to larger stations led to the creation of powerful, commercially successful regional stations that joined forces to form two national networks (later called CBS and NBC).

But news got short shrift on early radio both in the US and the UK, with entertainment, drama and talks dominating.

The newspaper industry, which controlled the wire services, refused to allow them to provide news to radio stations except under certain limited conditions and at certain times.

In the UK, the BBC signed an agreement in 1922 with the newspaper publishers. It stated that the BBC would only be allowed broadcast new copy supplied to it by the wire services, and would have to acknowledge on air that it was copyrighted and supplied by these agencies. The BBC was also limited in the number, length and time of any news bulletins it broadcast, which could only be transmitted after 7pm to avoid conflict with newspaper sales.

Not surprisingly, less than 5% of BBC content was news in the 1920s.

In the US, radio stations, who also relied on the wire services, were even more restricted in the length of their bulletins and were required to tell viewers that if they wanted more detailed news, they should buy a newspaper.



What changed everything was the advent of World War II.

The BBC's news department had only two reporters and two editors when it was finally created in 1934. But it – and the overseas news service - were massively expanded during the war. Radio also realized the importance of live broadcasts of speeches and events. In the US, the first live news broadcast from abroad was coverage of the Munich crisis in 1938. During the war, live broadcasts from London during the Blitz by CBS News reporter Edward R Murrow swung public sympathy in the US to the British cause.

Radio created a new and even bigger audience for news, as it attracted even bigger audiences for its entertainment, sport and drama offerings. Bulletins became longer and more frequent, but news was still a sideshow. It also took a while before newsreaders become public figures, and the BBC resisted having their TV news presenters in vision until ITV adopted this format in the 1950s.

Radio and TV changed the way we consumed news, from individual readers to a family or group sitting around a radio or television set – or listening in their cars. Cable TV news allowed for 24-hour news channels and put pressure on politicians for immediate reaction to events. They also had to be good *on* television. Just as FDR dominated the radio with his reassuring 'Fireside Chats' in the 1930s, Richard Nixon may well have lost the 1960 Presidential Election to John F Kennedy because of how he appeared in the first televised Presidential debate.

The immediacy of radio, and the ability to hear (and then see) the people and events making the news as it happened vastly increased their impact. Further developments in television technology allowed live outside broadcasts of major state events such as the Coronation, live links across the Atlantic, and finally satellite uplinks from around the world.

The production of news also changed, especially with the emergence of TV. It was much more expensive, and a much more elaborate process, involving reporters, cameramen, video editors, studio operators, producers, directors, presenters and editors. There was also a big capital investment needed in equipment such as studios, which limited entry. Television scripts had to be written to pictures, resulting in what one observer called 'a bias against understanding.'

But television was hugely successful in attracting advertising for its other programmes, allowing it to heavily cross-subsidize news – something it was required to do by regulators both in the US and the UK (where public service broadcasting rules were applied to both the BBC and ITV).

However, the nature of political television diverged fundamentally in the US and the UK. The UK tightened regulation of political broadcasting, insisted on strict impartiality during election campaigns and banning TV ads for political parties. In the US, a similar requirement for 'fair and balanced reporting' introduced by the 1924 FCC act was overturned by the US Supreme Court as incompatible with the free speech clause of the Constitution in the 1980s. This led to a polarised broadcast news sector, with the emergence of right-wing 'shock-jocks' on radio in the 1980s and the creation of a right-wing cable news network, Fox in the 1990s.

Here is an important example of path dependence, where decisions made in the 1920s had long-ranging consequences for the development of this medium and its role in society.

THE DIGITAL REVOLUTION AND INTERNET NEWS

The first internet news sites were established in 1995 by CNN in the United States and the *Daily Telegraph* in the UK. Their creation depended on the introduction of one critical part of the ecology of the internet – the browser, which was introduced in 1994 by Mosaic (later Netscape). It was this – plus the introduction of search tools such as Google - which created a mass market for internet news. Two other technological changes – the introduction of broadband and then Wi-Fi, and the launch of the Apple iPhone in 2007 – allowed internet news to be accessed



more widely, with richer content – giving a boost to its adoption by the public. More recently, social media sites like Facebook and Twitter have played a significant role in the distribution of internet news.

Of course it had taken 50 years of technological innovation to reach this point – from the first computers in the 1940s to the invention of the microchip in the 1950s to mainframe computers and programming language in the 1960s to the creation of Arpanet and internet protocols in the 1970s and 1980s.

The early pioneers of internet news were uncertain of the nature of the product they were producing. The newspaper sites reproduced their print copy, while the broadcast sites struggled to adopt to print and (at first) to find a technology that allowed them to supply video news to their viewers.

The BBC, for example, initially thought that it could just publish existing radio scripts to supply the copy for its internet news site – a notion soon abandoned. But news organizations varied in how much they were prepared to invest in internet news – Rupert Murdoch famously declined to get involved at first. They also struggled to decide how internet news would be organized within the news department. The most successful sites were those that allowed relative autonomy of their internet teams to work out – with in-house developers – how to adopt the news to the new medium. New roles emerged, as pictures, graphics and video became an important part of news content. User-generated stories, especially eyewitness accounts of disasters, also became important.

The internet's biggest impact on news was to change how it was distributed and consumed. Its reach was now international, and for many news organisations online circulation overtook print circulation; and even for television news, an increasing number of viewers were accessing it online. People found news stories through search and social media as much as by going directly to the front pages of news websites. Young people in particular abandoned newspapers for short, frequent news bites on mobile phones. But the changes in audience of consumption of news need to be put in context. Most people had multiple sources of news, from print to the internet to television and (in the UK) radio. Only 2% relied solely on news from social media, according to the Reuters Institute Digital News Report in 2018.

And if anything, the emergence of online news strengthened the biggest news organisations at the expense of smaller ones. Of the top 10 US news sites in 2018, only one was a new venture (Huffington Post), although several were 'accumulator sites' which amalgamated news from many sources. Nor did Facebook and Twitter change the predominance of large news organization in their news feeds.

What had been changed was who controlled these distribution networks and how they were monetarised. While some newspapers succeeded in having subscription-only websites, the majority found that they had lost most of the advertising revenue to Google and Facebook who were distributing their products to users for free.

Another issue that grew in importance was 'trust'. The main news websites stayed dominant partly due the first-mover and network effects, but also because they were more trusted by viewers than other sources of news on the internet – although trust in all news media has been declining since the 1990s. Recently, after criticism of the proliferation of 'fake news' on social media sites, news outlets and other organisations, including Facebook, have intensified efforts to identify and question the factual basis of some online news stories – an inevitably tricky and laborious process which also raises issues of censorship.

Another issue with long-term implications is 'net neutrality'. With the rise of streaming services, internet bandwidth has again become an issue, and companies like HBO and Disney want their content to have priority over others when the internet gets clogged up. This would strengthen the power of the media conglomerates, which are consolidating their control by acquiring both web content and distribution systems, as well as owning news channels in both radio and television.

The Lessons of History



What can we conclude from this potted history of news over the last 250 years.

We have seen the vast changes that have taken place in the way news is gathered, produced, delivered and paid for.

In my view these past changes have been more profound than anything we are seeing today in the introduction of internet news – just as the first two industrial revolutions had have a more powerful and wide-ranging transformational effect on the development of the economy and society than the digital revolution – despite its undoubtedly major impact on many sectors of the economy.

What is clear is that technological revolutions in news also always involve evolution. New ways of doing news inevitably incorporate rather than discard the old ways. This is particularly true of internet news, which has incorporated large elements of both print and broadcast news.

But what is probably most important is what we learned about what we *can't* predict.

We cannot predict from looking at the technology alone, either the speed of its adoption, its ultimate direction, or its effect on society and politics.

But while history leads us to question technological determinism, it also gives another insight: path dependence

This suggests that the choices that society makes early on in adapting to technological change have long-lasting effects that cannot be easily reversed later.

This view presents us with both a challenge and an opportunity. What are the choices we have made so far about how the new revolution in news should proceed, and how permanent might they be?

But there is also an opportunity if the future is not pre-ordained. We all still have the chance to influence the way future news will develop. Let's not waste that window of opportunity, and I hope we will all strive to use our choices wisely for the benefit of society.

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