



## Social Media in the Changing Ecology of News: The Fourth and Fifth Estates in Britain

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**Abstract:** This paper provides a case study of the changing patterns of news production and consumption in the UK that are being shaped by the Internet and related social media. Theoretically, this focus addresses concern over whether the Internet is undermining the Fourth Estate role of the press in liberal democratic societies. The case study draws from multiple methods, including survey research of individuals in Britain from 2003–2011, analysis of log files of journalistic sites, and interviews with journalists. Survey research shows a step-jump in the use of online news since 2003 but a levelling off since 2009. However, the apparent stability in news consumption masks the growing role of social network sites. The analyses show that the *Fourth Estate* – the institutional news media – is using social media to enhance their role in news production and dissemination. However, networked individuals have used social media to source and distribute their own information in ways that achieve a growing independence from the Fourth Estate journalism. As more information moves online and individuals become routinely linked to the Internet, an emerging *Fifth Estate*, built on the activities of networked individuals sourcing and distributing their own information, is developing a synergy with the Fourth Estate as each builds on and responds to the other in this new news ecology. Comparative data suggests that this phenomenon is likely to characterize the developing news ecology in other liberal democratic societies as well, but more comparative research is required to establish the validity of this model.

*Keywords:* Internet, social media, social network sites, news, Fourth Estate, Fifth Estate, democracy

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### Introduction

The Internet's increasing centrality to everyday life and work in network societies has raised many questions over its implications for the production and consumption of news (Alqudsi-ghabra, Al-Bannai, T., & Al-Bahrani, 2011; Mitchelstein & Boczkowski, 2010, in press). Much focus has been directed at whether online news will complement or substitute for, and displace, print newspapers (Ahlers, 2006; Althaus & Tewksbury, 2000; Dutta-Bergman, 2004; Gentzkow, 2007; Kaye & Johnson, 2003; Newell, Pilotta, & Thomas, 2008). Concern over displacement is often tied to the loss of the business models supporting high-quality journalism, which could lead to a decline in the quality and diversity of news coverage (Chyi & Lasorsa, 2002).

This raises political concern since quality journalism has been seen as a fundamental part of the Fourth Estate. This is the idea that the press and mass media hold other institutions to account by reporting on their activities, thereby

becoming a political force for more pluralistic governance. A necessary attribute of the Fourth Estate is its independence of other institutions, especially government, business and industry. For example, when the press is controlled by the state, it does not function as a Fourth Estate, but as part of the government. Independence allows it to investigate, report on, and bring to public attention the activity of the other institutions – including governments and politicians. It provides one vehicle by which popular opinion can be made manifest and converted into a political force. This is a source of political pressure, particularly when reporting on corruption, mismanagement or fraud. Has the Internet and related social media undermined the press and mass media, or have these institutions used the Internet to reinforce and enhance their role in society, and thereby the Fourth Estate, such as with the increasing use of live blogs by journalists (Thurman & Walters, in press)?

Other research has argued that the Internet provides a platform through which networked individuals can form a “Fifth Estate” (Dutton, 2009). Users can source their own information, independent of any single institution, using the capabilities provided by search and social media. Also users can create content in many forms – like blogs, email, tweets, comments on websites – that provide even greater independence from other institutions and offer a mechanism whereby public opinion can be directly expressed. This content can bypass or be amplified by the traditional mass media of the Fourth Estate, but in doing so it can fulfill many of the same functions of holding up the activities of government, business and other institutions to the light of a networked public. Thus the Fifth Estate is also a potentially potent political force, but without the centralized institutional foundations of the Fourth Estate. It is composed of the distributed activities of many individuals acting largely on their own in a more decentralized, networked fashion.<sup>1</sup> Whether the rise of a Fifth Estate reinforces or undermines the Fourth is a critical issue? But there is an equally important question over whether the appropriation of the Internet by the press will reinforce or undermine the emergence of a Fifth Estate.

A plausible risk of the substitution of the Fifth Estate for the Fourth Estate is the potential for audiences to be more selectively exposed to the news, unmediated by editors and professional journalists, in ways that could lead also to less diversity and the reinforcement of prejudices by creating Sunstein’s (2001) virtual “echo chambers” (Baum & Groeling, 2008; Stroud, 2008; Tewksbury & Rittenberg, 2009; Zillmann & Bryant, 1985). An echo chamber is created when individuals seek to find information and sources that support their viewpoints and filter out countervailing information. As they find added support for their views repeated online via such mechanisms as emails, blog posts, retweets, social media posts or links, possibly in a more extreme form, they become even more set in their views and less likely to seek countervailing opinions. The fear is that people tend to read others who share their political opinions, and without the mass media’s diversity and explicit attempt at balance, selective exposure will produce more set and extreme opinions. A number of studies have found evidence that tends to counter this thesis of selective exposure (Dutton, 2009; Garrett, 2009; Tewksbury, Weaver, & Maddex, 2001), suggesting that the Internet enables and leads to access to more diverse sources, but this issue is far from resolved by empirical research.

These considerations touch directly on the role of information, the media, and the news in democratic governance. The dramatic rise in the use of social media, such as Facebook, compounds these issues, by raising questions about whether and how social media might reinforce or transform developing patterns of substitution and exposure. For example, social media have implications for a variety of public services, reshaping patterns of communication with the public (Rolandsson & Björck, 2008). In the case of the news, social media might reinforce online news, and lead to a greater propensity for displacement of print media and the Fourth Estate. Alternatively, the use of social media for entertainment, for example, could substitute for more traditional uses of the Internet and Web, including searching for online news, exacerbating problems with print and online news provision and the business models supporting them (Donsbach, Rentsch, & Walter, 2011). Such an effect could create further risks for high-quality journalistic coverage and the decline of the Fourth Estate. Alternatively, the use of social media could lead users to find new and more diverse sources of information about the topics that interest them in ways that support quality journalism in local and global arenas and reinforce the Fourth and Fifth Estates.

Debate over whether the Internet might undermine the print newspaper has been a dominant issue around the social implications of the new media. But the issue is not whether the news is on paper or electronic, but whether the rise of the Internet and related information and communication technologies, such as social media, will undermine the Fourth Estate, an important institution in liberal democratic societies. The research described here provides some evidence that the Internet is supporting the Fourth and the Fifth Estate, which actually support one another in a new news ecology.

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<sup>1</sup>This does not mean that distributed networks are not unmanaged or unstructured, as the successful collaborative network organizations tend to be well managed in order to elicit and sustain the contributions of networked individuals (Dutton, 2008).

### **The case study approach: Combining social scientific and journalistic methods**

These research questions led us to empirically examine the role of the Internet and social media in changing patterns of the production and consumption of news, and their significance for the Fourth and Fifth Estates. We have used multiple methods to conduct an intensive study of the case in Britain, which we complement with more international sources to speculate on the uniqueness or generality of the British case. Nevertheless, any case study is limited in its generalizability, and further case studies in other nations would be required to further validate our findings.

A key source of information is survey research, based on the Oxford Internet Surveys (OxIS), which enables us to develop overtime indicators of trends in online news consumption, and the use of social media. OxIS research is designed to offer detailed insights into the influence of the Internet on everyday life in Britain. Launched in 2003 by the Oxford Internet Institute, OxIS is an authoritative source of information about Internet access, use and attitudes. Surveys have already been undertaken in 2003, 2005, 2007, 2009 and 2011 of nationally representative random samples of about 2000 people in the UK.<sup>2</sup> OxIS represents the UK's input into the World Internet Project (WIP), an international collaborative project that studies the social, economic and political implications of the Internet.<sup>3</sup> In this paper, we reference additional survey data from a study conducted by the Reuters Institute for the Study of Journalism, which has looked at the role of social media as part of a wider multiple country study of the use of digital news sources. We also draw on other available data, such as from the Office of Communications (Ofcom – the UK telecommunications regulatory body) to examine trends in the use of the Internet, online news and social media for consumption and distribution of the news in the UK context.

Secondly, we build on this descriptive data through in-depth interviews with journalists and managers of online news organizations in Britain, primarily at the leading news sites, including the BBC, Financial Times, the Guardian, and the Economist, as well as the Telegraph Media Group. Respondents were chosen from these organisations because they have been at the forefront of digital developments in the UK. Open-ended interviews sought the views of insiders on the role of the social media in the production of the news within each organization.

In addition to this series of face to face interviews, most of these organizations permitted us to examine log file data that enabled us to gain a perspective on such issues as the number of Internet users who come to selected stories from social media sites, such as Facebook or Twitter, as well as through search engines. Analysis of usage patterns, such as by Experian Hitwise and Tweetminster, are also incorporated into this analysis of actual user behavior.

This mixed method approach is unusual in its combination of social science and journalistic traditions to study the role of social media in the news. While relying on different practices of analysis and reporting, this combination opened up new insights into how the changing ecology of news production and consumption is being shaped by social media. Social scientific analyses were used to examine themes arising from the journalistic reporting, and vice versa, in a way that provided more credible and fuller explanations for the findings that emerged from any single tradition.

The paper begins with a discussion of general trends in Internet use, including the rise of social media. We then move to a discussion of how these trends are affecting the provision of public information and discourse. We explore whether these trends are narrowing the debate, creating an echo-chamber, leading to less understanding, more snacking, chasing popularity over depth or range. We look at alternative evidence that online and social media have led to a greater diversity of news being produced and consumed. We draw on our in-depth interviews within UK news organizations and analyses selected log files to help interpret the more general statistical trends in patterns of Internet use that we found, and bring them to bear on the implications for the Fourth and Fifth Estates in the UK.

### **Consumption trends around online news and social media**

On the basis of our 2011 OxIS survey findings, 73 percent of individuals in the UK use the Internet in one or more locations, but primarily from their households. This represents only an incremental increase in Internet users over time, from 70 percent in 2009. While the proportion of Internet users has not increased substantially, the use of the Internet has – with users spending more time online in more routine ways. The Internet is becoming an essential aspect of everyday life and work for an increasing proportion of users.

What is surprising is that, while there has been a growing use of the Internet from 2009 to 2011, this is not reflected in the consumption of online newspapers, as indicated by the proportion of users reading online news (Figure 1). We

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<sup>2</sup>Details on the sampling and survey methodology of OxIS is online at: <http://microsites.oii.ox.ac.uk/oxis/>

<sup>3</sup>For information about the World Internet Project, see: <http://www.worldinternetproject.net/#about>

asked respondents to OxIS whether they read a newspaper online. In 2007, about 30 percent indicated they did, and this jumped to 57 percent in 2009, as shown in Figure 1. However, this trend appears to have levelled off if not dropped somewhat since 2009, as only 55 percent said they read an online newspaper in 2011. Reading the news online is more prevalent among men than women and by students and employed, rather than retired people, or the unemployed (Figure 1), reflecting general patterns in levels of Internet use and media consumption (Bachmann, Kaufhold, Lewis, & Gil de Zúñiga, 2010).

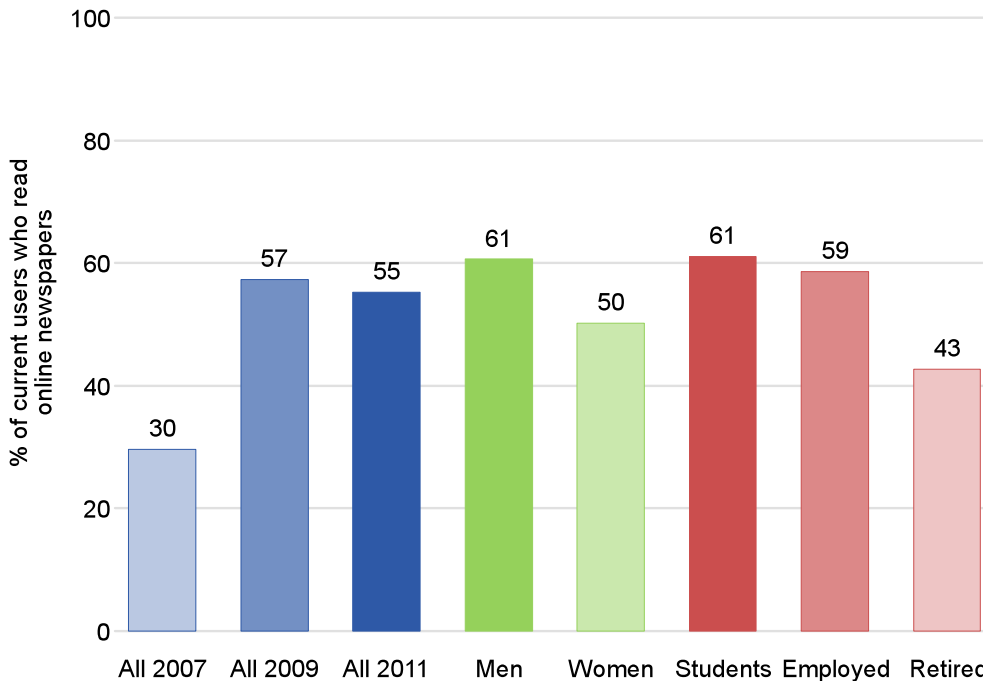


Figure 1. Percent of Internet users reading news online by gender and lifestage (current users OxIS: 2007  $N = 1,578$ , 2009  $N = 1,401$ , 2011  $N = 1,498$ ).

As in 2009, most individuals who read the news online, also read newspapers offline (Dutton & Blank, 2011). This reinforces the thesis that online news more often complements rather than substitutes for offline news sources (Vayas, Singh, & Bhabhra, 2007). While many news headlines emphasize drops in newspaper circulation, declines in the UK, for example, have been concentrated in the more tabloid press, such as *The Daily Mirror*, and not the more mainstream press, such as *The Daily Telegraph*, *Times*, *Independent*, or *The Guardian* in the UK (Greenslade, 2009).

There is no shortage of data charting the increased consumption of social media worldwide and in the UK. For example, over a single year, from 2011–2012, Facebook alone grew from 664 million to 836 million users.<sup>4</sup> However, far less is known about the relationship of social media use to news consumption. OxIS has tracked the rise of message boards and blogging in the early 2000s - and more recently the growth of social networks like Facebook and Twitter. Between 2007 and 2011 the number of people regularly managing profiles on social network sites rose dramatically, from 17% to 60% – as they connected with friends, posted comments and shared photographs – although the most substantial rise in the adoption of social media occurred between 2007 and 2009 (Figure 2).<sup>5</sup> That said, more time has shifted to social media, with UK Internet users spending around 30 minutes each day with Facebook, mirroring worldwide trends (Goad, 2010; Nielsenwire, 2010).

The increasing use of social media, and their relevance to news consumption, is apparent in a number of specific cases. For example, these networks played a significant role in news events such as the May 2010 general election in the UK such as with 154,342 tweets sent at 22.77 tweets per second during the third televised leadership debate, leading some call it the UK’s first “social media election” (Arthur, 2010). This level of interest in the election by networked individuals, expressed in the social media space, is significant and reinforced by the hundreds of thousands who engaged with the fan pages of the major political parties, or followed their local candidates on

<sup>4</sup>See World Internet Stats: <http://www.internetworldstats.com/facebook.htm>

<sup>5</sup>The figure for April 2011 is 54% according to the Ofcom’s UK Adults’ Media Literacy Report: <http://stakeholders.ofcom.org.uk/market-data-research/media-literacy/archive/medlitpub/medlitpubrss/adultmedialitreport11/>

Twitter. Just before the election, almost half a million people took part in a single Facebook poll on who should make up the next government (Allen, 2010).

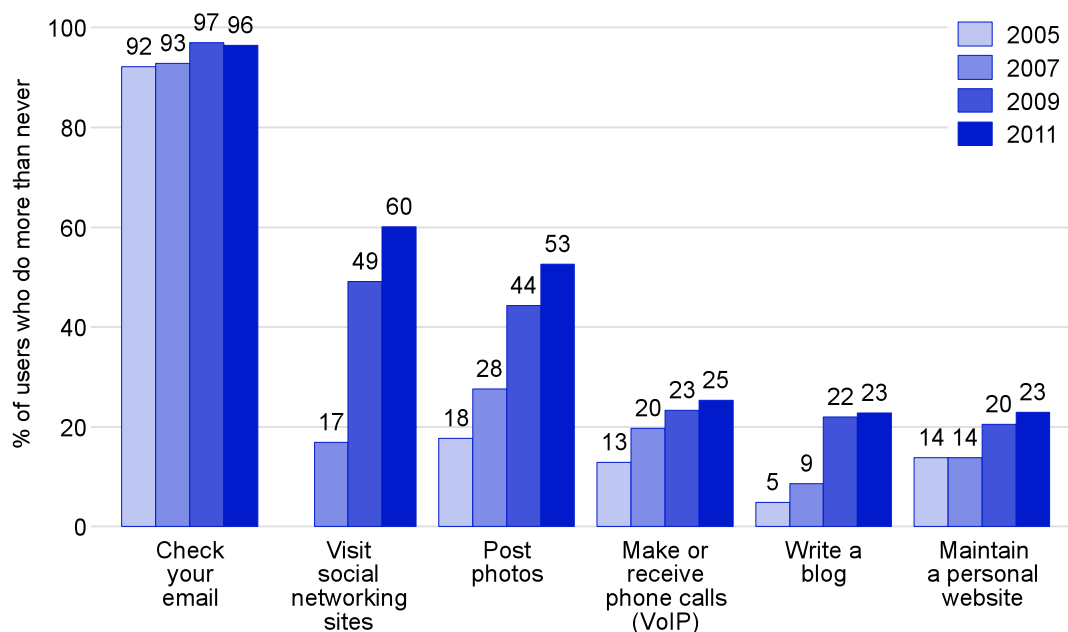


Figure 2. UK trends in the use of social media.

The use of social media during the election struck a particular chord with young people (Coleman, 2011). One in four posted election related comments through social networking sites. 81 percent said they felt engaged in the election, the highest of any demographic group. A much higher than expected turnout amongst 18-24 year olds, was partly attributed to the use and engagement of social media, although the first live televised debates among the Prime Ministerial candidates in Britain also played a role in the engagement of youth (Dutton & Shipley, 2011), and television remained by far the most prominent news source during the election (Coleman, 2011). A positive role of online engagement translating into political engagement has been tracked in other studies, although not always extending to offline participation (Puig-i-Abril & Rojas, 2007), and it is not possible to separate the effects of online and mass media engagement in this election, but both appear positively associated with political engagement as indicated by turnout.

More generally, mainstream media has not been marginalised by the rise of online and digital media. Overall, audiences for the main television bulletins in the UK have remained unchanged since 2004 (Ofcom, 2010). Although newspaper circulation has fallen consistently and profit margins have plummeted, it is the websites of traditional print publishers and broadcasters that continue to dominate news online in the UK. In fact, the strength of the national newspaper and broadcaster brands in the UK, the competitiveness of the market, and the way they have embraced new media techniques like blogging has made it difficult for new players to emerge and capture a significant audience.

This is reflected in the increasingly close relationship between mainstream media and social media. There is a clear trend of Internet users coming to the news through referrals from social media. Based on our analysis of log file data at the BBC, Financial Times, Guardian and the Economist, since 2009, mainstream media companies have seen a sharp rise in the number of referrals from Facebook, Twitter and other social networks.<sup>6</sup> Traffic to the BBC from Facebook and Twitter has more than tripled between 2009 and 2011 (see Figure 3) and other publishers are reporting similar or higher growth trends – as popular news stories are shared by friendship groups on social networks.

On average, according to traffic flows monitored by Experian Hitwise, UK news websites in March 2011 rely on Facebook for 7.5 percent of their visits. This is up from only 2% in 2008 and on Twitter for a further 0.4%<sup>7</sup>.

<sup>6</sup>Log data from four news organisations (BBC, Financial Times, Guardian, and the Economist) was analysed as part of research for the Oxford Internet Institute and the Reuters Institute for the Study of Journalism.

<sup>7</sup>Data sourced from Experian/Hitwise March 2011, and used by permission.

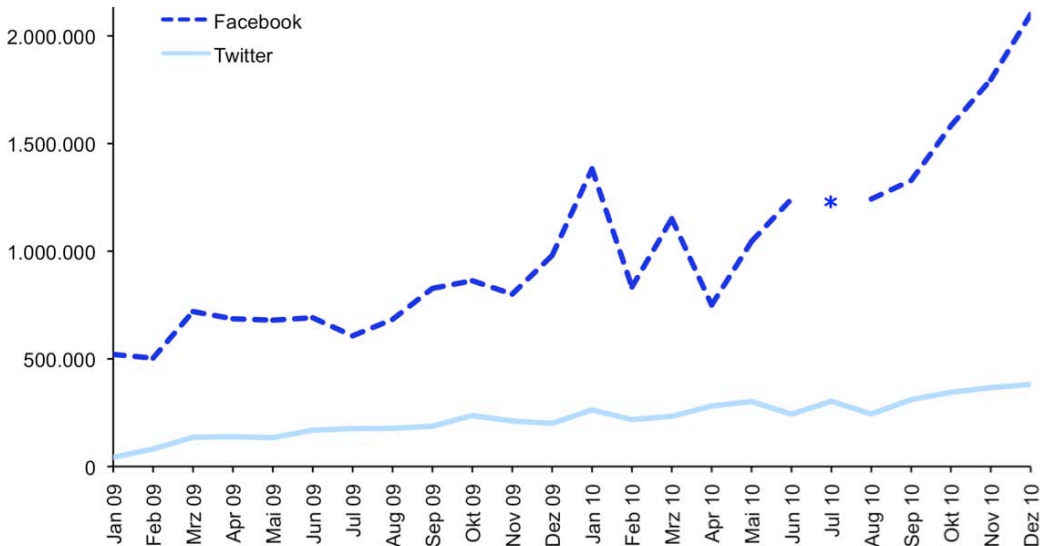


Figure 3. Numbers of referrals from Facebook and Twitter to BBC News Website overtime (source: BBC logfiles). Note: No Facebook data for July 2010.

The role of social media can be particularly significant around breaking news events. Some of the first and most compelling reports of the March 2011 Japanese earthquake emerged on Twitter, but within a few hours there was also significant sharing of mainstream media content. Compared to a normal day, referrals to the BBC news site from social media rose by a factor of five on the day of the quake (March 11<sup>th</sup>) with social media contributing a far larger share of overall page views than on a normal day.

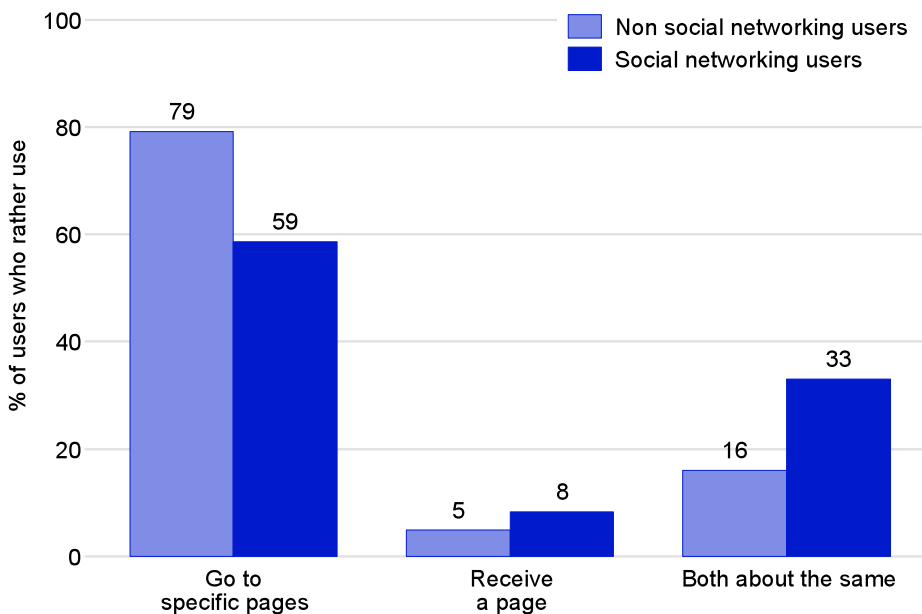


Figure 4. Tendency to go to specific Web pages by social network users and non-users (current users OxIS 2011:  $N = 1,498$ ; SNS users:  $N = 988$ ).

The increasing centrality of social media referrals are supported by our survey results. OxIS found that social network users have a greater propensity than non-users of social media to go to Web pages via links they have received from others over the Internet (Figure 4). Whilst the raw numbers are still relatively low compared to traffic driven by search, Figure 5 shows that there appears to have been a detectable impact on the propensity to use search tools, such as Google. For the first time since 2003, the tendency to rely on search engines for information has dropped slightly, from 64% in 2009 to 61% in 2011 (Figure 5). This could be explained by the rise in referrals from social media sites and the increasing time spent on social media sites. These trends are leading mainstream media companies to take social media activity increasingly into account. Many have appointed digital marketing specialists to manage the messages and interactions with these audiences and to raise awareness with staff.

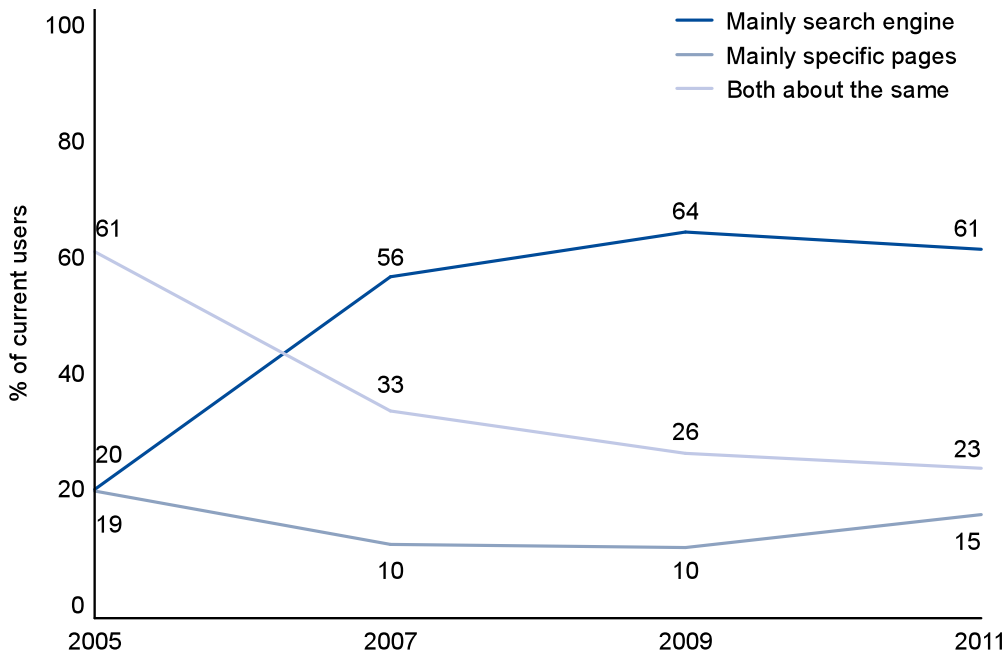


Figure 5. Use a search engine vs. go to a specific page (current users OxIS: 2005  $N = 1,309$ ; 2007  $N = 1,578$ ; 2009  $N = 1,401$ ; 2011  $N = 1,498$ ). Note: Question changed in 2007.

In the UK, most of the efforts of mainstream media organizations are being directed at Facebook and Twitter, which have increasingly squeezed out some of the earliest news sharing and aggregating communities like Digg and Reddit. A 2012 online survey for the Reuters Institute for the Study of Journalism showed that 14% of a UK sample of Internet users shared news stories every week via social networks – a level of activity similar to three other European countries (France 20%, Germany 12% and Denmark 18%).<sup>8</sup> Of these Facebook and Twitter were by far the most important social networks for sharing news (Figure 6).

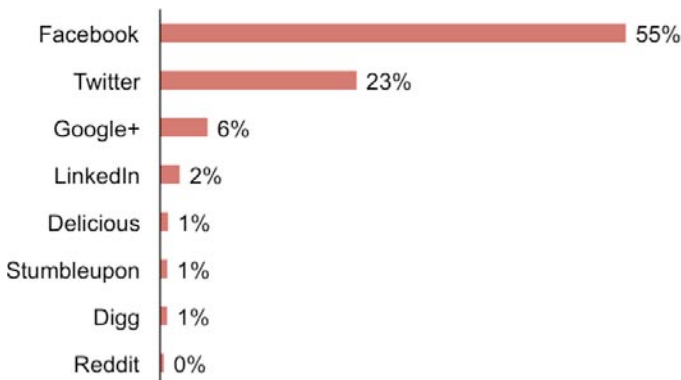


Figure 6. Top social networks for sharing news links in UK.

While Facebook has emerged as a mass network for sharing news, most academic and media study has focussed on Twitter because of the openness of its platform, which has allowed easy access to data for analysis. A recent study in the UK showed that 73 percent of links sent through Twitter were stories published by the mainstream media<sup>9</sup>. The study looked at over five million tweets in the first 100 days of the new Coalition government of 2010 in the UK and calculated a mix of frequency and reach to come up with a measure of influence. A large number of stories were shared – from a diverse range of sources including blogs and academic institutions – but the overall agenda turned out to be remarkably similar to that pursued by the mainstream media. For example, the key influencers identified on Twitter shows a familiar mix of traditional publishers and prominent political commentators (Table 1). These individuals frequently appear on mainstream news programmes like Channel 4 News and the BBC’s Newsnight, but

<sup>8</sup>Reuters Institute Digital News Report 2012 included survey evidence from five countries conducted by polling organisation YouGov <http://reutersinstitute.politics.ox.ac.uk/publications/risj-digital-report.html>

<sup>9</sup>Coalition government 100 days on Twitter published by Tweetminster an independent monitor of political data on Twitter. <http://tweetminster.co.uk/100days>

have also gained a direct and unmediated channel to audiences through social media – often using Twitter in combination with blogs or personal websites.

But even if mainstream media and mainstream commentators provide the context for much discussion of news in social networks, the range of discussions online are far broader than in the mass media and the range of participants is as well. During each of the televised leadership debates during the 2010 election more than 30,000 people sent Twitter messages at an average rate of 27 per second, with a total number of tweets for the three debates reaching 480,000.<sup>10</sup>

Table 1.

*Top Influencers Calculated by Tweetminster by Comparing Levels of Activity, Mentions and Retweets*

Rank	Top influencer
1	BBC News
2	Guardian Newspaper
3	Reuters
4	Alistair Campbell (Labour supporting commentator)
5	The Economist
6	India Knight (author and journalist)
7	Krishnan Guru-Murthy (Channel 4)
8	Sky News
9	Iain Dale (Conservative supporting blogger)
10	BBC Question Time (weekly debate format)

*Note.* The top 20 also included Conservative bloggers Tim Montgomerie and Guido Fawkes and left leaning comedian Armando Iannucci. Adapted from “The Coalition Government: 100 days on Twitter”, published on Tweetminster blog, September 2010, see <http://tweetminster.co.uk/100days>.

For instance, on election night itself, reports of difficulties voting at a number of polling stations emerged first through videos on YouTube and messages on Twitter and Facebook. On both occasions there was a clear emergence of a Fifth Estate role as news organisations were monitoring the comments and views of ordinary people and reflecting these back to a mainstream audience via television and radio. In this way the relationship between social and mainstream media in the UK has become increasingly symbiotic as each refers to and feeds off the other.

### The impact of social media on the production of news

The growth of social networks and the emergence of simple tools – such as provided by YouTube, Flickr, Facebook and Twitter – for enabling the publishing of “personal media” has led to a rebalancing of the traditional relationship between news producers and consumers. Paul Saffo (2005) has reflected on this change:

The Mass Media revolution 50 years ago delivered the world to our TVs, but it was a one-way trip – all we could do was press our nose against the glass and watch. In contrast, Personal Media is a two-way trip and we not only can, but also expect to be able to answer back.

Some of the earliest manifestations of this two-way relationship were the commenting and message boards around news websites, but in the early days there was very little connection or integration into wider mainstream coverage. In Britain, this changed during the Asian Tsunami of December 2004 and the London bombings of July 2005, with footage shot on digital cameras and mobile phones – from networked individuals of the Fifth Estate – incorporated into prime time television coverage for the first time. Within hours of the explosions on the London underground and bus network on the 7<sup>th</sup> July 2005, the BBC had received more than 1,000 photographs, 20 pieces of amateur video, 4,000 text messages, and 20,000 e-mails. According to the BBC’s Head of News at the time, Richard Sambrook, this led to a rethink of how news organisations needed to think about audiences:

When major events occur, the public can offer us as much new information as we are able to broadcast to them. From now on news coverage is a partnership (Sambrook, 2005)

One result of this partnership was the formation of new production teams the BBC, Sky News, and others to manage and filter this new wave of User Generated Content (or UGC) and to distribute the best material to output teams. For example, the BBC’s user generated hub is a team of around 20 people monitoring and filtering UGC and engaging in social networks.

<sup>10</sup>These figures screen automatic senders and were provided by Tweetminster an independent provider of analytics.



However, these developments only went so far. They did not change the way most journalists worked or got involved in social interactions with audiences. The real change happened with the adoption of blogs and later Twitter by mainstream journalists (Thurman and Walters in press). These short form formats brought the views of journalists together with the views of the general public on a single web page – in what often became an ongoing conversation around a major story.

The BBC Business Editor Robert Peston began his blog as a tool for communicating to the wider BBC business team, but it soon became required reading for a broader public during the unfolding banking crisis and economic turmoil that followed (Newman, 2009). Speaking at the Edinburgh TV festival, Robert Peston explained his motivations:

For me, the blog is at the core of everything I do ... The discipline of doing it shapes my thoughts. It disseminates to a wider world the stories and themes that I think matter ... and connects me to the audience in a very important way (Peston speech to Edinburgh TV Festival 2009).

The scepticism around blogs and social media by journalists and managers in mainstream media has been well documented (Keen 2007). Early blogs were seen as brash and outspoken – incompatible with the more measured and balanced tone in many broadsheet newspapers and broadcasters. The informal style and conversational nature of a blog did not always sit comfortably with some traditional journalists whilst the frequent updates made it hard to apply the normal second level checks around publication of updates.

Underlying these trends was a deeper concern, that in an era where anybody could publish an opinion or become a “citizen journalist”, the value of sifting and checking facts was being diminished, creating the so-called “cult of the amateur” (Keen, 2007). The role of mainstream media itself as a gatekeeper was being called into question. The Editor of the Guardian Newspaper, Alan Rusbridger, tackled this issue in a series of interviews and talks in early 2010. “We have to get over this journalistic arrogance that journalists are the only people who are the figures of authority in the world,” said Rusbridger who espoused the need for a new more inclusive form of news organisation for the 21st Century:

If you can open your site up, and allow other voices in, you get something that’s more engaged, more involved – and actually, I think, journalistically better. (Rusbridger, 2010)

This captures the idea of modularizing tasks in ways that create the opportunities for many people to make small contributions to solving a major problem, such as reporting on an event, by creating a “collaborative network organization” (Dutton, 2008). The notion of “five- or twenty-minute activism” enabled online captures the potential of small contributions by networked individuals adding up to a collective impact (Earl & Kimport, 2011), which is one potential resource of the Fifth Estate.

Specific examples of this more mutualised approach in action were the Guardian’s “Comment is Free” website and the emergence of a new form of Live Blogging, where major news organisations hosted a live conversation around a big story incorporating breaking news and verified facts with eyewitness material and audience opinion from social media channels like Twitter and Facebook. A celebrated case study has been the work of Guardian journalist Andrew Sparrow who live blogged the UK election drawing audiences of up to 300,000 users a day (Newman, 2010). Janine Gibson, Editor of guardian.co.uk reported that since the election, this format had been adopted by most major newspapers and broadcasters, which devote significant resources to staffing these pages, sometimes round the clock (personal communication, April 2011). The Guardian reported that in March 2011 live blogging accounted for 9% of the total number of unique users to the entire website (Wells, 2011).

Live blogs are just one example of how both the content and format of social media has infiltrated and changed the practice of mainstream journalism on a daily basis. Another example comes from the Telegraph Media Group, where during the 2010 UK election, journalists were encouraged to use Twitter rather than their own production tools to send rapid updates from the campaign trail which were then incorporated back on the newspaper website. In this way, Twitter helped Digital Editor Ed Roussel get correspondents to file copy more regularly throughout the day.

It has great immediacy ... the way it forces people to condense their views into 140 characters is quite brilliant. It forces people to cut right to the chase. It is a fantastic journalistic tool. (Personal communication June 2010)

But not all news organisations are able to fully realize the benefits of social media. Organisations like the Financial Times, the Economist and the Times Newspaper have chosen to place at least some of their content behind a “paywall” in search of a more sustainable business model. However, this strategy automatically limits the potential

to build credibility in these networks and making it harder for correspondents to be part of the global conversation. As of 2012, no British newspaper has followed the example of *The New York Times*, which has unlocked its paywall for traffic from social networks – but many are actively looking at other ways of making sure they don't miss out on traffic from existing social networks, as well as potential traffic from new social newsreaders, like Flipboard and Pulse.<sup>11</sup>

Overall, attitudes in the UK towards social media have been transformed in the period 2009–2011. Newspapers and broadcasters have normalised their use of social media as source material, filtering the best for a mass audience – and developing new skills and roles for curated or “networked journalism” in the process. News organisations have gradually worked through the dilemmas associated with social media, and have published guidelines and undertaken training programmes on how to embrace these new formats whilst protecting their principles and brands.

For example, many news companies have turned their community editors into social media editors and have developed strategies for distributing content in social networks and for using social data to drive improved navigation experiences on their own websites. In the process, both the practice of journalism and the resulting output has become more open and more iterative – with many more opportunities for dialogue with audiences.

### **Social media and the Fifth Estate**

As these examples and trends illustrate, mainstream media may still be powerful, but they no longer have a monopoly of the means of production or distribution. Both the authoring and distribution networks offered by social media have enabled more political parties, voluntary groups and individuals to enhance their “communicative power” – using digital technologies strategically to form their own online networks. The enhancement of communicative power is achieved by affording individuals opportunities to source their own information, with less dependence on any particular news outlet, and network with each other across the globe, for example through Web sites, social networking sites like YouTube and MySpace, via email, instant message and other avenues. Similar connections are also made within and across organisational and institutional boundaries in ways that create opportunities for individuals to provide content of value to the mass media, and further enhance their communicative power.

In the 18<sup>th</sup> Century, Edmund Burke reportedly identified the press as a Fourth Estate (Carlyle, 1904/1849, p. 349–350), arguing: “there were Three Estates in Parliament; but, in the Reporters’ Gallery yonder, there sat a Fourth Estate more important far than they all.” The notion of a Fifth Estate builds on the idea in feudal societies of “estates of the realm”, originally conceived as the clergy, nobility and commons, but which have modern day equivalents in the including the public intellectual (clergy), business and economic elites (nobility), and governments (commons). In the US, the estates have most often been derived from Montesquieu’s (1748/1989) *tri-partite system* of the courts, monarch and parliament to be linked to the separation of powers in legislative, executive and judicial branches of government. Since these early conceptions, radio, television and other mass media have joined the press in the Fourth Estate, which has become an influential independent force in liberal, pluralist democracies.

In similar ways, the current use of the Internet and other digital information and communication technologies (ICTs) is establishing the potential for another independent source of accountability – what has been called a *Fifth Estate* (Dutton, 2009). Just as the press can be controlled by the state or commercial interests, and cease to be an independent source of accountability, so the Fifth Estate depends on a level of independence from control by other estates of the Internet realm. It has characteristics similar to the Fourth Estate, such as offering information not controlled by the state, but is sufficiently distinctive, such as by being anchored in networked individuals and their collaborative networks, rather than the press and other institutions, to warrant its recognition as a new estate.

The diversity of ways through which the Fifth Estate might improve accountability in politics can be illustrated by several social network sites: Mumsnet, Straight Choice, Vote Match, and MyDavidCameron.com. Mumsnet is a discussion and information site for parents founded in 2000 by sports journalist Justine Roberts and TV producer Carrie Longton. Today it has over 1.25m unique users every month and users post around 20,000 contributions every day (Henderson, 2011; Daily Telegraph, 2010). Longton argues that sharing information and experience digitally has become the fastest and most effective way to get help on parenting issues: “In the old days, you probably got your advice from a few people. Now if you've got a child with special needs you can talk to someone else on Mumsnet who has a child with special needs” (Scotsman, 2011).

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<sup>11</sup>Background interviews with a number of UK mainstream media companies March and April 2010.

At first glance the site does not seem political, but it has gained influence by organising national campaigns on parenting issues, by syndicating the best of its discussion forums to national newspapers and by inviting politicians to interact with its community. During the 2010 UK election, all three major party political leaders – including the then Prime Minister Gordon Brown – took part in webchats with members and these encounters were widely reported in the mainstream media. Since the 2010 election, Mumsnet has been instrumental in focusing the attention of the government on the issue of “phone hacking”, due to what appeared to be phone hacking by the tabloid press into the phone messages of a young woman who had disappeared and was later found to have been murdered. A collaborative network organized to support professional women can instantly become a source of political empowerment.

Also during the election, there were several successful independent initiatives, not orchestrated by news organizations, to try to use digital and social media to increase transparency and democracy. The Straight Choice was an independent initiative to digitise local election leaflets – so the statements within them could be more visible and permanently accessible. Over 4000 leaflets were uploaded by volunteers around the country co-ordinated by software engineer and democracy campaigner Julian Todd who says the value of this activity would grow over time: “These spent shells of the campaign were never meant to be seen online. We’ve left our cameras running, and (now) we can show the newsreel of the ground war” (Todd, 2010).

Vote Match was an online blind test survey of the policies of all the political parties – part of an initiative by voluntary group Unlock Democracy to raise turnout and political awareness. The initiative was supported by academic institutions and used statements submitted by the political parties themselves. Overall more than 1 million people completed the Vote Match survey, with a quarter taking part in the final two days of the campaign<sup>12</sup>. The application was focused on 18–35 year olds, and included a strong tie-in with Facebook, which integrated it into their Democracy UK portal. Additional interest was driven through a partnership with the Daily Telegraph newspaper and its website.

A more spontaneous example came at the start of the 2010 campaign with the unexpected success of a spoof website *MyDavidCameron.com* – created by a left-leaning graphic designer Clifford Singer. This site created a number of posters satirising the official Conservative Party poster campaigns but took off when Singer posted a raw template – allowing others to create their own. Overall, the site received 3000 posters before and during the campaign, of which about 5% were used on the website. Singer believed that social media sites like Twitter and Facebook helped the site to go viral (Newman 2010)

In these social network sites we see varying forms of involvement in politics by networked individuals of the Fifth Estate. Sites like Mumsnet are so large that their audiences alone attract the attention of vote-seeking politicians. Focussed on a single topic, they have an interest in political issues related to that topic. Straight Choice shows how a single website can create a historical record and make it available. Vote Match illustrates the way an independent website can become involved in non-partisan political issues like voter registration, a straw poll, and links to traditional media, thereby raising awareness and enthusiasm. MyDavidCameron is a partisan site, built on user-created content that attracted attention and involvement when people became aware of it through social network sites. The diversity of these sites indicates some of the complexity of the three-way relationship between politics, traditional journalism and social media. Note that we have not even discussed the official social media sites run by the political parties and their social media campaigns. It could be very difficult generalize about “typical” social media influence on traditional journalism or politics, but in all of these cases, networked individuals were able to use social media to enhance the significance of their messages with the traditional media and the networked public.

Away from straight politics, there are other examples where digital and social media are helping to widen the amount and range of news available: Hyper-local websites and niche websites. Hyper-local websites have emerged, often staffed by volunteers and using cheap or free blogging technology. A local site in East London, as one example, offered a regular mix of news, aggregated live transport and weather information, reviews of shops and restaurants, stories about local history and pictures of nearby beauty spots. Twitter is used to aggregate comments and source stories, while Facebook and email have become the main forms of distribution and marketing.<sup>13</sup>

Another local example is a site based in the city of Lincoln run by three students who struggled to find work after leaving university. Less than a year after launching in May 2010, the *lincolnite.co.uk* gained a readership of 15,000 and launched an iPhone application.<sup>14</sup> With a focus on immediacy and user generated content, these hyper-local sites

<sup>12</sup>1,014,028 completed surveys between 31 March and polling day, 6 May 2010 (Matthew Oliver interview with Nic Newman).

<sup>13</sup><http://www.wansteadium.com/> Wansteadium website is one of thousands of sites listed on the Openly Local directory which lists some of the best, see: [http://openlylocal.com/hyperlocal\\_sites](http://openlylocal.com/hyperlocal_sites)

<sup>14</sup><http://thelincolnite.co.uk/>

are often providing a complementary service to local newspapers – which necessarily need to take a wider view and focus their limited resources on the biggest news stories in their patch.

In such ways, blogs and related social media are emerging as a source for niche content in other areas too. Former Olympic Swimmer Karen Pickering will regularly tweet the results of international swimming competitions via her Twitter feed, but also enjoys learning about other Olympic sports by following the feeds of other specialist experts and journalists.<sup>15</sup> Likewise, Oxford rowing results were once published in newspapers, today they are as likely to be curated and distributed by passionate individuals, such as Rachel Quarrel, an Oxford college lecturer who has produced live blog coverage of boat races, The Rowing Service, for over a decade.<sup>16</sup>

As noted above, the emergence of such Fifth Estate information provision has not been without its critics (e.g., Keen 2007). The quality and reliability of information is inevitably varied and the numbers viewing these sites and channels remain relatively small – but as the examples in this section demonstrate the influence can be significant and complementary, rather than an alternative – especially where the stories or comments are picked up and amplified by the mainstream media, and vice versa. And as described here, there are many instances in which the Fifth Estate has filled niches not being served by the traditional news media, such as in hyper-local news, or held the traditional press to account for their practices.

### The changing ecology of individual and institutional news networks

The emergence of digital and social media needs to move beyond simple models of substitutions versus complementarities, as they have created a much more complex ecosystem for the creation and distribution of news. Similarly, any simple view of competition versus substitution of the Fourth and Fifth Estates needs to be refined to encompass this more inter-related ecology. Both draw from and contribute to the strength of the other, while holding each more accountable, such as when Mumsnet attacked phone hacking by the tabloid press. Increasingly, professional journalists rub shoulders with bloggers, citizen journalists, academics, pressure groups, part-time and semi-professional writers and personal media – and vice versa – in an increasingly transparent and connected world. This is the new ecology of news production and consumption.

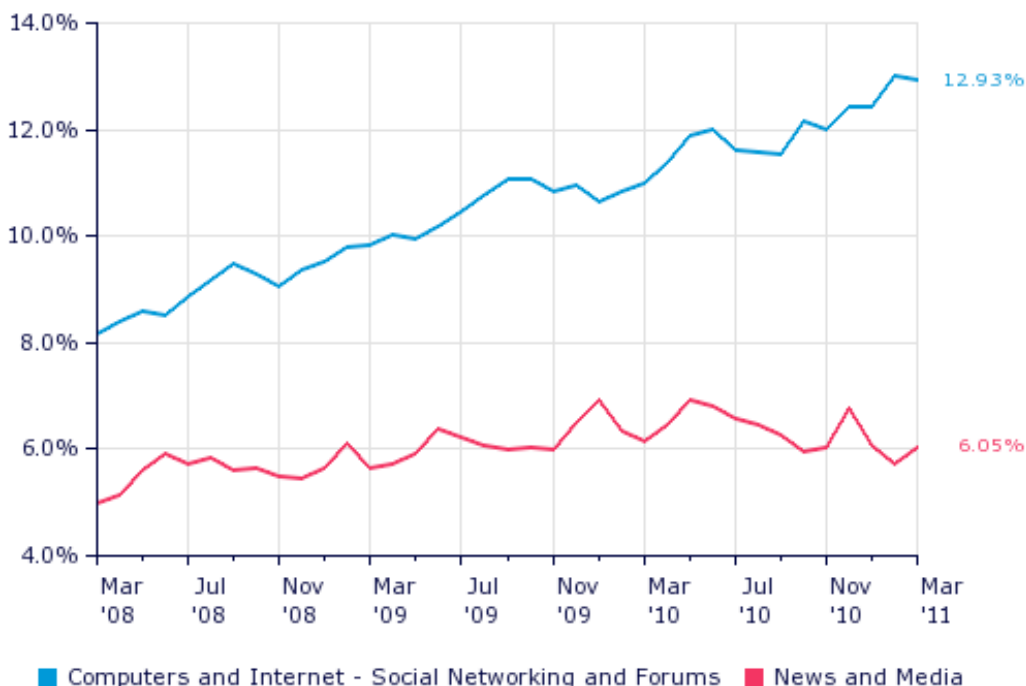


Figure 7. Social Media Driving Visits to News Media (with thanks to Experian Hitwise for permission to reproduce in this paper).

<sup>15</sup>Karen Pickering speaking at Social Media week event in London February 2011, see: [http://www.theuksportsnetwork.com/smwldn\\_sport-event-roundup-and-video](http://www.theuksportsnetwork.com/smwldn_sport-event-roundup-and-video)

<sup>16</sup><http://users.ox.ac.uk/~quarrell/>

But the relationship with mainstream media is complex. In some cases these voices have been brought into the mainstream umbrella – part of the Fourth Estate – with sites like the Guardian’s Comment is Free and the Birmingham Mail’s experiment to host content from hyper-local blogs.<sup>17</sup> In other cases, blogs and Twitter accounts by networked individuals are used by the mainstream media as a source of stories or opinions to be checked, validated and then brought to the attention of a mass audience. But the overall story of social media does not indicate that these new sources are replacing traditional sources, rather they live side by side as an additional layer of information and comment, and in some cases, possibly displacing search as a portal to the news.

Market research company Experian Hitwise tracked the data for visits to news stories between 2008 and 2011, a period that coincided with the fastest growth of social networks like Facebook and Twitter. During that time, the share of visits to traditional news sites in the UK increased slightly, whilst visits to social media sites have grown by 58 percent (Figure 7). Far from cannibalising news and media traffic, social media has helped drive traffic to news sites.<sup>18</sup> Cross-national research reinforces the general dominance of news sites in the online world (Segev, 2010).

More widely, the rapid growth in time spent with social networking is hard to reconcile with the figures that show continued strength of live television and radio broadcasts. One possible explanation is the complementarity of the media. Another explanation compatible with the first comes from UK media regulator Ofcom, which reports that 20% of time spent with media each day is now spent using two or more forms of media simultaneously, that number rising dramatically to 30% amongst younger age groups. This data is backed up by spikes of social media activity during live television events such as the UK elections, current affairs debates, such as Question Time, and sporting events, and by OxIS, which finds multitasking to be increasingly prominent among younger Internet users, finding more than 90 percent of students saying they multitask (Dutton, Helsper, & Gerber, 2009, p. 37).

It has been suggested that such concurrent use has encouraged media snacking rather than deeper understanding, what Nicholas Carr (2010) has labelled the “shallows” – but it is interesting to note that data from news organisations suggests time spent with news and media websites has increased slightly over the period. Overall, it appears that – for at least some people interested in the news – snippets of information in social networks are stimulating further interest in news events and encouraging further exploration.

Another aspect of the complementary nature of social media has been the changes in attitudes within media companies and the growth of formats, such as live, curated blogging, that integrate audience opinions into mainstream coverage. For media companies, this can give them a competitive edge in newsgathering in addition to increasing a sense of belonging and engagement. Social media are particularly interesting for the commercial development of news sites because audiences referred in this way are more likely to sign up for other services.<sup>19</sup>

Social media formats have also begun to influence the nature of news journalism itself. Twitter hashtags and Facebook comments have become part of the daily currency of news output, the blog and micro-blog format has been widely adopted as a way of providing regular short updates on a story through the day and news journalists have begun to have more regular contact with audiences on a daily basis. Yet, this is clearly a snapshot of a rapidly evolving ecology of news production and consumption, illustrated by the trends described in Britain.

## **Conclusion**

This case study of Britain combined social scientific and journalistic approaches to examine multiple sources of evidence related to dominant debates in the study of online news: Is online news replacing or complementing traditional journalism? Is information consumption becoming narrowed or more diverse? How has the introduction of social media altered evolving patterns in news production and consumption?

Conceptually, we have argued that it is useful to shift the focus away from a strict dichotomy of media to the actors, focusing on the use of the Internet and other media by the press in contrast to their use by networked individuals of the Fifth Estate. The press and mass media are using the Internet strategically to maintain and enhance their communicative power, but networked individuals are using the Internet to source their own information, more independent of the press and other estates, and to network with other individuals in ways that enhance their communicative power. However, they are not simply competing or substituting for one another, but involved in an ecology of media that is also enabling the two estates to be mutually complementary and reinforcing.

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<sup>17</sup><http://wallblog.co.uk/2010/08/13/birmingham-mail-partners-with-local-bloggers-for-hyperlocal-project/>

<sup>18</sup>Data and conversations with Hitwise UK market analysts.

<sup>19</sup>Interviews with media companies April 2011.

Our analysis of overtime trends indicates that there may be some significant moves away from trends that appeared to have gained momentum over the last decade. For example, a shift to reading the news online has not continued an upward swing. Trends toward the use of search engines as a means to find key information are being reduced by the rise of social media as a portal to news and other information. There is clearly a need to track patterns of media use, including the Internet and related social media, overtime, given the likelihood of further new developments reshaping this rapidly evolving news ecology.

The significance of online news and social media are being reflected in the practices of mainstream news organizations of the Fourth Estate, as well as the practices of networked individuals of the Fifth Estate. Both are using the Internet to enhance their communicative power in an increasingly complex ecology of news production and consumption. The interaction and possible synergies among these actors is possibly the most engaging aspect of these developments. These observations led us to suggest the need to move beyond the dominant questions about the up-take of online news and the displacement of traditional media, to look more closely at the rapidly evolving ecology of news production and consumption in the online world. This will require more systematic research on the actual practices of journalists, networked news organizations, and networked individuals overtime and across an extended range of countries.

#### Author note

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#### References

- Ahlers, D. (2006). News consumption and the new electronic media. *Harvard International Journal of Press-Politics*, 11(1), 29–52.
- Allen, R. (2010, May 5). Democracy in the UK: Results of the Social Media Election. Retrieved from <http://www.facebook.com/blog/blog.php?post=387348402130>
- Alqudsi-ghabra, T. M., Al-Bannai, T., & Al-Bahrani, M. (2011). The Internet in the Arab Gulf Cooperation Council (AGCC): Vehicle of Change. *International Journal of Internet Science*, 6(1), 44–67.
- Althaus, S., & Tewksbury, D. (2000). Patterns of Internet and traditional news media use in a networked community. *Political Communication*, 17(1), 21–45.
- Arthur, C. (2010, May 3). The first social media election, *The Guardian*. Retrieved from <http://www.guardian.co.uk/media/2010/apr/30/social-media-election-2010>
- Bachmann, I., Kaufhold, K., Lewis, S., & Gil de Zúñiga, H. (2010). News platform preference: Advancing the effects of age and media consumption on political participation. *International Journal of Internet Science*, 5(1), 34–47.
- Baum, M., & Groeling, T. (2008). New media and the polarization of American political discourse. *Political Communication*, 25(4), 345–365.
- Carlyle, T., (1904), On heroes: Hero worship and the heroic in history. In H. R. Allenson (Ed.), *London, 1905* (pp. 349–350). London: H. R. Allenson. (Original work published 1840)
- Carr, N. (2010). *The shallows: What the Internet is doing to our brains*. New York: W. W. Norton.
- Chyi, H. I., & Lasorsa, D. L. (2002). An explorative study on the market relation between online and print newspapers. *Journal of Media Economics*, 15(2), 91–106.
- Coleman, S. (Ed.). (2011). *Leaders in the living room: The prime ministerial debates of 2010*. Oxford, UK: Reuter's Institute for the Study of Journalism, University of Oxford.

- Daily Telegraph. (2010, March 3). Power of MumsNet grows as Gordon Brown hails it as a “great British institution”. *Daily Telegraph*. Retrieved from <http://www.telegraph.co.uk/family/7354971/Power-of-MumsNet-grows-as-Gordon-Brown-hails-it-as-a-great-British-institution.html>
- Donsbach, W., Rentsch, M., & Walter, C. (2011, May). *Social media as news sources: Empirical evidence from four countries*. Paper presented at the 61<sup>st</sup> annual Conference of the International Communication Association, Boston, MA.
- Dutta-Bergman, M. (2004). Complementarity in consumption of news types across traditional and new media. *Journal of Broadcasting & Electronic Media*, 48(1), 41–60.
- Dutton, W. H. (2008). The Wisdom of collaborative network organizations: Capturing the value of networked individuals. *Prometheus*, 26(3), 211–230.
- Dutton, W. H. (2009). The Fifth Estate emerging through the network of networks. *Prometheus*, 27(1), 1–15.
- Dutton, W. H., & Blank, G. (2011). *Next generation users: The Internet in Britain 2011*, *Oxford Internet Survey Report*. Oxford: Oxford Internet Institute, University of Oxford.
- Dutton, W. H., Helsper, E. J., & Gerber, M. M. (2009), *The Internet in Britain 2009*. Oxford: Oxford Internet Institute, University of Oxford.
- Dutton, W. H., & Shipley, A. (2011). The role of the televised leadership debates in Britain, 2010: Shaping political engagement. In Coleman, S. (Ed.), *Leaders in the Living Room: the Prime Ministerial Debates of 2010* (Appendix). Oxford: Reuter's Institute for the Study of Journalism, University of Oxford.
- Earl, J. & Kimport, K. (2011). *Digitally enabled social change: Activism in the Internet age*. Cambridge, MA: MIT Press.
- Garrett, R. K. (2009). Echo chambers online? Politically motivated selective exposure among Internet news users. *Journal of Computer-Mediated Communication*, 14(2), 265–285.
- Gentzkow, M. (2007). Valuing new goods in a model with complementarity: Online newspapers. *American Economic Review*, 97(3), 713–744.
- Goad, Robin. (2010, October 12). 10 Things you need to know about Facebook. Retrieved from [http://weblogs.hitwise.com/robin-goad/2010/10/10\\_things\\_you\\_need\\_to\\_know\\_abo.html](http://weblogs.hitwise.com/robin-goad/2010/10/10_things_you_need_to_know_abo.html)
- Greenslade, R. (2009, December 14). Newspaper sales plunge over the decade. *The Guardian*. Retrieved from <http://www.guardian.co.uk/media/2009/dec/14/national-newspapers-sales-decade>
- Henderson, N. (2011, January 20). *When Mumsnet speaks, politicians listen*. Retrieved from <http://www.bbc.co.uk/news/uk-12238447>.
- Kaye, B. K., & Johnson, T. J. (2003). From here to obscurity? Media substitution theory and traditional media in an on-line world. *Journal of the American Society for Information Science and Technology*, 54(3), 260–273.
- Keen, A. (2007). *The cult of the amateur: How today's Internet is killing our culture*. New York: Doubleday.
- Mitchelstein, E., & Boczkowski, P. J. (2010). Online news consumption research: An assessment of past work and an Agenda for the Future. *New Media & Society*, 12(7), 1085–1102. doi:10.1177/1461444809350193
- Mitchelstein, E., & Boczkowski, P. J. (in press). Tradition and transformation in online news production and consumption, In Dutton, W. H. (Ed.), *The Oxford handbook of Internet studies*. Oxford: Oxford University Press.
- Montesquieu (1989). *Spirit of the laws*. Cambridge: Cambridge University Press. (Original work published 1748)
- Newell, J., Pilotta, J., & Thomas, J. (2008). Mass media displacement and saturation. *International Journal on Media Management*, 10(4), 131–138.

- Newman, N. (2009). *The rise of social media and its impact on mainstream media* (working paper). Oxford: Reuters Institute for the Study of Journalism. Retrieved from [http://reutersinstitute.politics.ox.ac.uk/fileadmin/documents/Publications/The\\_rise\\_of\\_social\\_media\\_and\\_its\\_impact\\_on\\_mainstream\\_journalism.pdf](http://reutersinstitute.politics.ox.ac.uk/fileadmin/documents/Publications/The_rise_of_social_media_and_its_impact_on_mainstream_journalism.pdf)
- Newman, N. (2010). *#UKElection2010, Mainstream Media and the Role of the Internet: How Social and Digital Media Affected the Business of Politics and Journalism*. Oxford: Reuters Institute for the Study of Journalism, Oxford University.
- Nielsenwire (2010, January 22). *Led by Facebook, Twitter, global time spent on social media sites up 82% year over year* [Web log post]. Retrieved from <http://blog.nielsen.com/nielsenwire/global/led-by-facebook-twitter-global-time-spent-on-social-media-sites-up-82-year-over-year/>
- Ofcom (2010, June 30). *Halt in decline of flagship TV news programmes* [Web log post]. message posted on <http://media.ofcom.org.uk/2010/06/30/halt-in-decline-of-flagship-tv-news-programmes/>.
- Puig-i-Abril, E., & Rojas, H. (2007). Being early on the curve: Online practices and expressive political participation. *International Journal of Internet Science*, 2(1), 28–44.
- Rolandsson, B., & Björck, U. (2008). Being an efficient or dialogue-oriented rural municipality on the net: Framing civil servants' confidence in e-services. *International Journal of Internet Science*, 3(1), 55–67.
- Rusbridger, A. (2010, April 23). Interview with Charlie Rose in Current Affairs. *BBC*. Retrieved from <http://www.charlierose.com/view/interview/10978>
- Saffo, P. (2005, December). Farewell information, it's a media age [Web log post]. Retrieved from [http://saffo.com/wp-content/uploads/2012/01/essay\\_farewellinfo.pdf](http://saffo.com/wp-content/uploads/2012/01/essay_farewellinfo.pdf)
- Sambrook, R. (2005) *Citizen journalism and the BBC*. Harvard: Nieman Foundation for Journalism at Harvard University. Retrieved from <http://www.nieman.harvard.edu/reportsitem.aspx?id=100542>
- Scotsman. (2011, February 20). Interview: Justine Roberts and Carrie Longton, Mumsnet founders. *Scotsman*. Retrieved from <http://www.scotsman.com/features/Interview-Justine-Roberts-and-Carrie.6721403.jp>
- Segev, E. (2010). Mapping the international: Global and local salience and news-links between countries in popular news sites worldwide. *International Journal of Internet Science*, 5(1), 48–71.
- Stroud, N. (2008). Media use and political predispositions: Revisiting the concept of selective exposure. *Political Behavior*, 30(3), 341–366.
- Sunstein, C. (2001). *Republic.com*. Princeton, NJ: Princeton University Press.
- Tewksbury, D., & Rittenberg, J. (2009). Online news creation and consumption implications for modern democracies. In A. Chadwick (Ed.), *Handbook of Internet Politics* (pp. 186-200). New York: Routledge.
- Tewksbury, D., Weaver, A., & Maddex, B. (2001). Accidentally informed: Incidental news exposure on the World Wide Web. *Journalism & Mass Communication Quarterly*, 78(3), 533–554.
- Thurman, N., and Walters, A. (in press). Live Blogging – Digital Journalism's Pivotal Platform? *Digital Journalism*.
- Todd, J. (2010, April 30). *How dirty was the election ground war?* [Web log post]. Retrieved from <http://blog.thestraightchoice.org/author/goatchurch>
- Vayas, R. S., Singh, N. P. & Bhabhra, S. (2007). Media Displacement Effect: Investigating the Impact of Internet on Newspaper Reading Habits of Consumers. *Vision: The Journal of Business Perspective*, 11(2), 29–40.
- Wells, M. (2011, March 28). How live blogging has transformed journalism. *The Guardian*. Retrieved from <http://www.guardian.co.uk/media/2011/mar/28/live-blogging-transforms-journalism>.
- Zillmann, D., & Bryant, J. (1985). Selective-exposure phenomena. In D. Zillmann & J. Bryant (Eds.), *Selective exposure to communication* (pp. 1–10). Hillsdale, NJ: Lawrence Erlbaum.



**Appendix**  
**Text of question wording by figure**

Figure 1

Reading newspapers, QC24b,: How frequently do you read any newspaper or news service on the Internet?

Figure 2

Email, QC9a: On average how often do you check your email?  
Phone calls, QC9e: On average how often do you make or receive phone calls over the Internet?

Blog, QC9g: On average how often do you write a web-log or blog?  
Website, QC9h: On average how often do you maintain a personal website?  
Photos, QC9j: On average how often do you post pictures or photos on the Internet?  
Social network site, QC9l: On average how often do you check or update your profile on a social networking site?

Figure 4

Going to a specific web page, QC23: When you go to a specific page is it mostly a page you found yourself, or mostly a page you received via an email, blog, or social networking site, or do you do both about the same?

Figure 5

Use of search engines, QC22: In general, when you look for information on the Internet, do you go to specific pages, use a search engine, such as Google or Yahoo!, or do you do both about the same?"