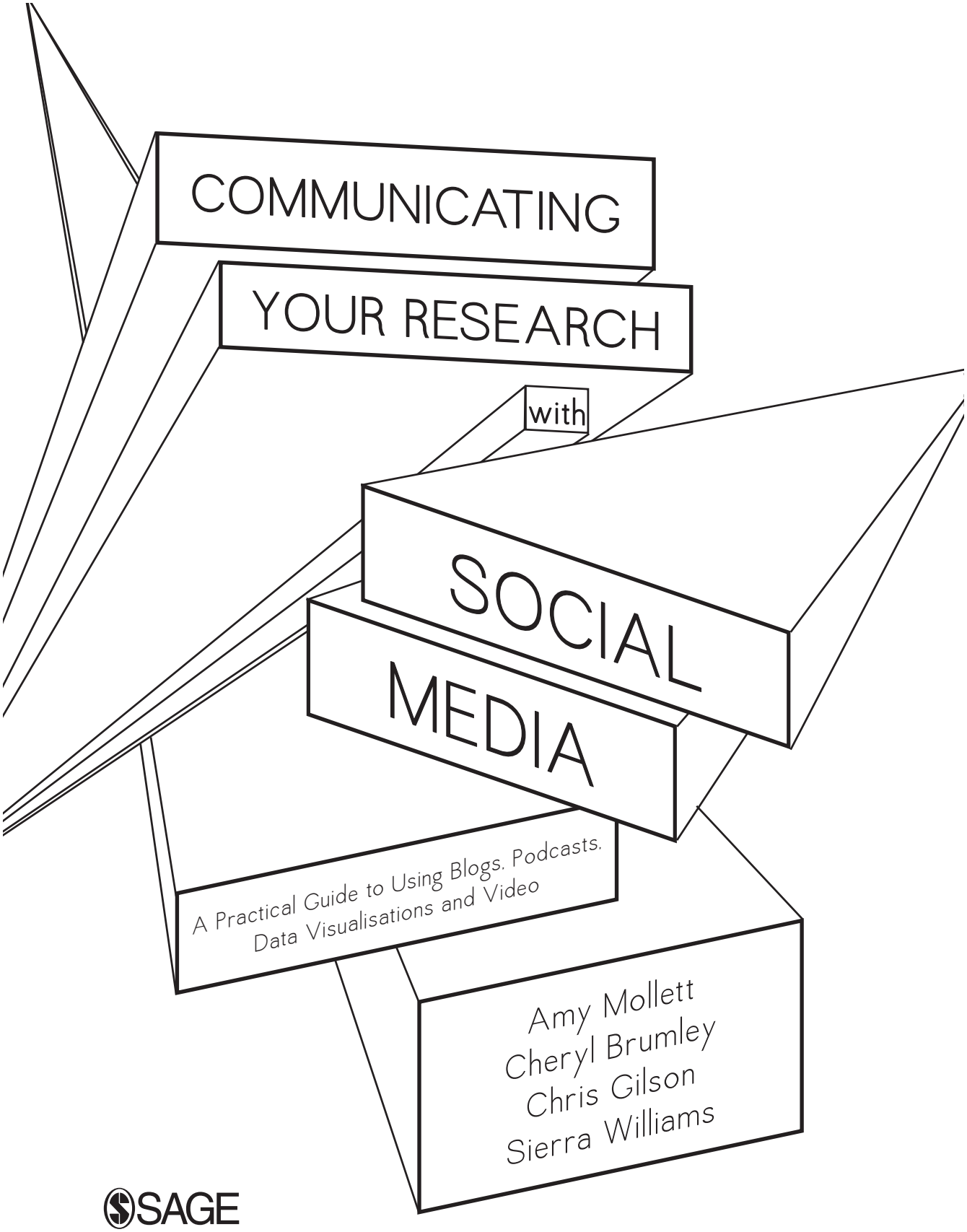


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# 1

# SOCIAL MEDIA: WHY THEY MATTER AND WHAT THEY CAN DO

There are now a billion social-media posts every two days ... which represent the largest increase in the capacity of the human race to express itself at any time in the history of the world.

– King, 2014

Monday 7am. Kira wakes up with her alarm. It was a long weekend of mostly writing – she's trying to get the revisions to a paper she's co-authoring back to the journal's editors this week. Checking her emails on her iPhone while she waits for her coffee to brew, Kira's excited to see an email pop up from the editor of a journal she submitted to late last year; her article is now available online! It won't be in the print edition for another six or maybe even nine months (there's a huge backlog, the editor says), but she now has the link for her piece. As she heads out the door, Kira posts a link to the article on her Twitter and Facebook accounts and to academia.edu. It's still night-time on the east coast of the US, but she knows that it's one of the first things they'll see in their feeds when they wake up.

By the time she gets to her shared desk in the department 45 minutes later – no roadworks means a quicker than normal commute on her bike – she's ready to put the rest of her plans to promote her article in motion. She first shoots an email off to the editor of a multi-author blog collective at a top university; after asking how his youngest is taking to school, she inquires if they would be keen for her to write a blog piece based on the article. The blog editor has a pretty quick turnaround, and she knows that there's a chance they might be able to get her blog post up by Wednesday or Thursday if she's quick. Kira also suggests that her publisher might be able to ungate the article for a month or two, so she can link her blog article to the piece. Maybe more than a couple of people might be able to find it and read it that way…

An email pings back from the blog's editor just after lunch. He's keen – when can she send something through? (And his son is doing great at school – though he did get in trouble last week for cutting someone else's hair with safety scissors!) She replies that she should be able to send through her 800-word piece by the end of tomorrow; can he resend the blog's style guide so that she can make sure that she formats the piece to reduce the amount of edits on the other side?

Kira puts together a 'hit list' over lunch of a dozen or so people she thinks will be interested in her new article – some are colleagues and past collaborators who work in universities, there are a couple who work in NGOs in Europe and the US, half a dozen are people working on similar topics that she's met on Twitter, and, if she's honest, there are at least two academic crushes on the list as well. It would be great if everyone could be connected with a tweet, but it's not that simple. Max at Oxfam has given up Facebook for Lent, Shosh at Wisconsin-Madison hasn't managed to get on to Twitter yet, and her adviser's mailbox is bouncing again because it's full. Ted's on a bit of an Instagram binge at the moment – she introduced him to it last month and he's been posting two or three times a day. Thinking for a moment, Kira pulls up free online infographic-maker Infogram and plugs in some of her headline findings. A few minutes later she shares the new infographic on her Instagram, adding the #dataviz hashtag; Ted's seen it and replied within a few minutes. She adds a few more tweets and Facebook updates aimed at those remaining in her Buffer social media scheduling account. Checking her Instagram post,

Kira sees that it's already had a like from *The Guardian's* dataviz team – brilliant! She hopes that they might showcase it on their Data blog. But now, back to those revisions.

Kira spends the rest of the day in the library, finishing off her revisions for her new journal piece. Back at home, she cooks dinner while listening to a podcast hosted by a couple of academics who work in her discipline. The episode is only a week old, so she sends a tweet to the podcast and to the hosts' Twitter accounts suggesting that they check out her new paper. She's hoping that they ask her to be a guest interviewee. After dinner she heads out to meet some friends for a drink locally. Checking her phone on the bus, she sees that one of her previous co-authors – who she did her Master's with and is now at Uppsala – has tweeted her back. She's keen to talk more about her findings, and suggests they take the talk offline. Kira pops her a quick email suggesting a Skype chat Tuesday morning. She knows that talking over the main points of her article will be a great way to get ready to write her blog piece in the afternoon – if she can get her article revisions finished off by then!

*****

We're not all Kira, but if you're a researcher, academic or scientist, then there's a chance you might recognise something from her day as an academic who's plugged into social media. What links all the media and dissemination activities she was involved with in the tale we constructed is that they are all social media, or they show the kinds of opportunities social media can bring to academics and researchers in general.

In this chapter, we'll look at some definitions of social media, including what they are and what they are not; explore their history and how that relates to how social media are used today; and how knowledge organisations have been using social media, and where things now stand. This chapter aims to show any reader – no matter how much or little you use and know about social media – that social media matter, and that they can be incredibly important to your work and career as a knowledge worker. We'll also be giving you an overview of the growth and influence of social media in many different areas of society as a lead in to the discussions in the rest of this book. This book as a whole aims to inspire and energise you as a knowledge worker to do more with social media to share and promote your work, and to use it in accordance with your research lifecycle, much as Kira does in our imaginary example above.

Given the title of this book, the relationship between social media and researchers and knowledge workers is perhaps the most important to us – and to you. Here, rather than box ourselves in, we use the term 'knowledge workers', which loosely means anyone working on research in an organisation. This can include academics in universities, researchers in NGOs, nonprofits and civil society organisations and think tanks, journalists and independent scholars. Social media can be of great benefit for knowledge workers who are also educators, and for how they do research and how this research is promoted.

## 1.1 WHAT ARE SOCIAL MEDIA?

### 1.1.1 Defining social media

Ask anyone who works in social media what they actually are and they will probably give you a different definition. There isn't a formal definition, and given the relatively disaggregated nature of online life, there isn't one person or organisation who could legitimately set out a definition that would be universally agreed on in any case. Definitions tend to be based on the centrality of online communities – groups of people interacting online to communicate and share information and ideas. Kietzmann et al. (2011: 241) write that 'Social media employ mobile and web-based technologies to create highly interactive platforms via which individuals and communities share, co-create, discuss, and modify user-generated content'. Similarly, Safko (2009: 6) states that social media 'refers to activities, practices, and behaviors among communities of people who gather online to share information, knowledge, and opinions using conversational media', while Xiang and Gretzel (2010: 180) take more of a consumer-based view that social media 'can be generally understood as Internet-based applications that carry consumer-generated content'. Baym and boyd (2012: 321) argue that, compared to more traditional forms of media, a key feature of social media is its scale:

> It is thus not the ability to use technology toward these objectives that is new with social media, but the scale at which people who never had access to broadcast media are now doing so on an everyday basis and the conscious strategic appropriation of media tools in this process.

Couldry and van Dijck (2015: 2) simply state that 'we side with those who look to resist the redefinition of the social as simply whatever happens "on" social media platforms'. We will be returning to these concepts and exploring the specific characteristics of social media and what they mean for the Research Lifecycle in Chapter 2.

We should also note at this point that throughout this book we will be using the term 'social media' as a shorthand for other digital media, including podcasts, photo- and video-driven platforms such as Instagram, Pinterest, YouTube and Vimeo. The fact that these media are digital means that they can be easily shared and at scale in ways that were only available to professional broadcast media in past decades. Without content, social media networks don't exist – they require text, video and images in order to function as social media – digital media can be this content.

With the definitions of social media appearing to sprawl, in the spirit of Marshall McLuhan's (1994) commentary that the 'medium is the message', it's helpful to go to two of the internet's well recognised – and crowdsourced – spaces for definitions. Wikipedia says that social media are 'computer-mediated tools that allow people or companies to create, share, or exchange information, career interests, ideas, and pictures/videos in

virtual communities and networks' (Wikipedia, 2016). *Urban Dictionary*, a popular dictionary of online slang, says that it is 'Your electronic Second Life' (Urban Dictionary, 2016). While the latter definition is a bit facetious, it dovetails well with Wikipedia's. In this book, we see social media as being the ways in which the traditional methods of knowledge exchange have been able to colonise digital infrastructure. Recognising this also means that we can see social media as acting alongside – not instead of – more traditional ways of communicating information. Social media just take them further – expanding their reach and bandwidth. Where knowledge workers could once only exchange ideas through the spoken word, by letter and printed article, now they also have the options of the podcast, the tweet and the blog post.

### 1.1.2 What social media are

At this point, it's also important to outline some of the main social media tools, focusing on those that we'll be discussing more in depth later in this book. Xiang and Gretzel (2010: 180) write that social media includes 'a variety of applications in the technical sense which allow consumers to "post", "tag", "digg", or "blog", and so forth, on the Internet'. As this quote illustrates, there are a large number of social media tools available, and an even greater number of actions that go with them; two of the four terms that they refer to are actions that can be performed as well as types of content. We'll focus on the content rather than the actions for now – though we'll also be going through the actions as we talk through each type of social media. Figure 1.1 shows some of the examples of social media we'll be discussing throughout this book. Others, such as Thompson (2013), have suggested typologies of social media, dividing social media into the public/private and permanent/ephemeral typologies, but for this stage, we don't need our framework to be quite this complex (and we'd actually disagree that such clear distinctions can be made – more on this in Chapter 7).

We divide each of the social media tools in Figure 1.1 into three categories: content, platforms and tools for collaboration. The *y* axis refers to the potential audience size that each form of social media can reach, while the *x* axis shows how easily shared each element is. Tools on the leftmost section are by their nature one-to-one, one-to-few or few-to-few, with tools approaching 'native' or inbuilt shareability as we move to the right.

**Content**. This is the 'stuff' that you're trying to gain an audience for. It comes first, because it's really central to the whole thing. Content is made up of your thoughts, ideas, reflections and insights. This includes blog posts, discrete chunks of text based on a specific blog platform (of which more in Chapter 3), podcasts (Chapter 5), infographics and data visualisations (Chapter 4), and images and video (Chapter 6). These are all things which will more often than not need to be leveraged by social media platforms in order to get an audience, hence their position midway on the 'shareability' index.

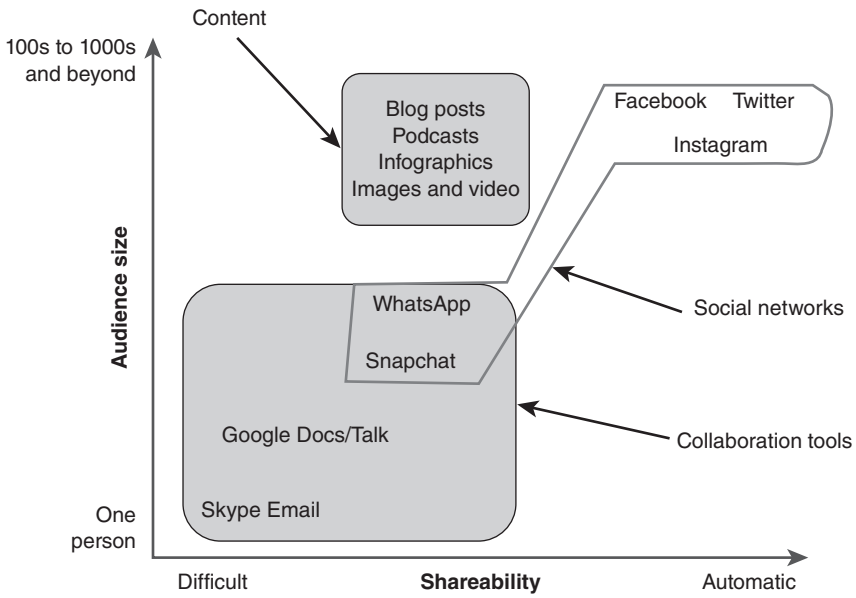


**Figure 1.1** Social media shareability and potential audience size

**Social networks**. These are the platforms that help you get your content to an audience, which can also include your desired audience – though they are not always one and the same. The social networks shown are connective by default – it's their main function and purpose. While their usefulness will obviously vary depending on how linked they have become with others who also use the same network, they facilitate content sharing far more easily than the tools in the bottom left of Figure 1.1. In terms of their potential audience, the sky is really the limit. Follower numbers vary from tens and hundreds to the thousands or even millions.

**Collaboration tools**. These are the tools of what could be termed the 'old' web. Skype was first released in 2003, and email can be traced back to the earliest days of the internet and was in fairly wide use by the mid-late 1990s. WhatsApp is a mere youngster by comparison, but its antecedents include Google Talk (2005) and even the humble text message, which is also a survivor from the 1990s. The key point about collaboration tools is that they are person-to-person rather than person-to-many. Even tools such as Google Documents only really involve tens or (at most) low hundreds in terms of collaborator numbers.

As you can see from Figure 1.1, there is some degree of category breakdown, and many of these formats are porous and interlinking with some of the others. As well as being useful for collaborative work, WhatsApp and Snapchat are increasingly being used as social networks to distribute content (Morrison, 2016). Most content platforms also have ways

of self-distribution – in the case of podcasts, SoundCloud, for example, has its own native distribution network, as does Apple's iTunes. Social networks can also be content. Twitter is famously regarded as a 'micro-blogging' site, and Facebook certainly allows for posts of several hundred words or so.

### 1.1.3 Social media platforms and their popularity

Now that we've looked at what social media platforms are and how they operate, it's helpful to look at how popular each platform is and where recent growth has been occurring. Table 1.1 gives an idea of just how popular social networks and social media have become.

**Table 1.1** Social networks and active users in 2015/2016

| Social network | Active users |
|---|---|
| Facebook | 1.65 billion |
| Tumblr | 555 million (Jan 2016) (Statista, 2016) |
| Instagram | 400 million |
| Twitter | 310 million |
| Google + | 300 million (Feb 2016) (Smith, 2016) |
| Sina Weibo | 222 million (Q3 2015) (China, 2015) |
| Snapchat | 100 million (May, 2015) (Tweney, 2015) |
| LinkedIn | 100 million |
| Pinterest | 100 million |

*Note*: Audience figures are from Walters (2016) unless otherwise indicated

### 1.1.4 What social media are not

The answer to the question of what isn't covered by the term social media is actually very little. While email and Skype aren't traditionally thought of as being forms of 'social' media, they are still ways of sharing information and enabling collaboration with others. In this way they are social – it's just that they speak to a much smaller audience. For us, the important distinction is between social media and social networks (even though the latter are actually a subset of the former). Social networks were created and built around the idea of sharing content with an audience; it's their prime function.

That said, traditional tools like instant messaging applications are becoming more social. Slack, which is a relatively new application, combines the collaborative functionality of an internet messaging service with social network-like functions of mentions and likes. Some websites go even further, publishing their Slack chats as social media content (FiveThirtyEight, 2016).

## 1.2 THE HISTORY OF SOCIAL MEDIA

To uncover how social media can be useful and important to researchers and knowledge workers, it is useful to spend some time delving into its origins.

### 1.2.1 From ARPANET to the World Wide Web

Perhaps surprisingly, social media's origins begin with the beginnings of the internet – or what became the internet. In 1958, the US government created the Advanced Projects Research Agency (ARPA) in an effort to counter the Soviet Union's perceived technological superiority following the launch of Sputnik in October 1957 (Hauben and Hauben, 1998). By 1962, the young agency was researching the usefulness of computers in defence and the advancement of technology, an effort which was being led by Dr Joseph Licklider of the Massachusetts Institute of Technology. At this point Licklider actually put forward the idea of an 'Intergalactic Network' – interconnected communities sharing computing resources.

This move towards a community of computing grew at ARPA, leading to the creation of a computer network, ARPANET, in 1969. The network was initially composed of Interface Message Processors (IMPs), located at UCLA, Stanford, the University of California, Santa Barbara, and the University of Utah, but grew relatively quickly, reaching 24 sites by 1972 and 111 in 1977 (Stewart, 2000). Hauben and Hauben (1998) note the close feeling of collaboration among the graduate students who made up the Network Working Group and the military component of ARPA. Robert Braden, who connected the first supercomputer to ARPANET, later stated of his efforts in creating the network: 'The result was to create a community of network researchers who believed strongly that collaboration is more powerful than …. competition among researchers. I don't think any other model would have gotten us where we are today' (Malkin, 1992). The collaborative nature and sharing ethos that characterised the modern world of social media and social networks can be traced back to this early point.

It was with collaboration in mind that email was first introduced into the nascent network in 1972 (Leiner et al., 1997). Email was followed by Listservers in 1975, which allowed users to post 'threads' of comments in response to topics (Preece et al., 2003). Bulletin board systems followed in the late 1970s, allowing early users of home computers to access messages, trade software and play games with people in their town or city (Rafaeli, 1984). In describing the first bulletin board system in 1978, Christensen and Suess (1978: 151) wrote:

> People who left messages saying they had some information of interest and those who said they needed information discovered that other people using the system contacted them. We were pleased to find the system working this way, because that was one of its purposes.

The following decade saw the continued popularity of email, the introduction of Internet Relay Chat (the grandparent of modern messaging systems like WhatsApp) and, in 1991, the birth of the World Wide Web (Preece et al., 2003).

At this point, in the early to mid-1990s the World Wide Web was made up of services like email and newsgroups which users could join and build, but would not actively or automatically connect you with other users. Websites were also mostly one way – information was published with little possibility for interactivity or back and forth.

### 1.2.2 Web 2.0

The late 1990s saw the beginnings of a movement towards services with user-based and user-created content, with the creation of the earliest social network sites such as Sixdegrees.com and LiveJournal (boyd and Ellison, 2007). These types of service, and the social networks which followed in the early to mid-2000s, became known as Web 2.0 (Van Dijck, 2013). This period saw the rise and fall of a number of social networks, notably Friendster (2002) and MySpace (2003), and most importantly Facebook a year later (boyd and Ellison, 2007). These social networks had the aim of connecting users socially, allowing messages and conversations between users, as well as the posting of updates and photos.

Launched in 2004 on US university campuses, once it became more widely available, Facebook succeeded where earlier social networks had not. This success has been variously attributed to its relatively minimalist approach (compared to MySpace's cluttered anarchy), an initial lack of advertising and the early targeting of college campuses, which had traditionally not been sources of MySpace or Friendster users (Kelleher, 2010; Tsotsis, 2016).

The other major social network that has achieved widespread long-term success, Twitter, was founded in 2006, and actually began as a group text messaging system as an outgrowth of an earlier abandoned podcast platform called Odeo (Arrington, 2006; Carlson, 2011), whereby users could send an SMS message to a shortcode number, which would then be posted online for others to see (Malik, 2006). Unlike Facebook, which introduced photos fairly early on – and can be more closed to those not who are not part of its specific groups and communities – Twitter (at least in its early days) was primarily a text-based update service or 'micro-blogging' platform that was completely open for all to read. As a result, Twitter has often been perceived in the West – especially by journalists – as the method of choice for communication in social movements and protests across the world, though Facebook and other social networks have been used extensively as well. We'll return to this idea in the next section.

### 1.2.3 Smartphones and apps

It's worth noting that the first smartphone (as we know them now) was launched in the form of the Apple iPhone in June 2007. Smartphones, with their app-based software ecosystem, meant that users no longer needed to be tied to a desktop or laptop computer in order to access social networks. With smartphones, users could update their social media profiles, as well as interact with other users while outside their home or work. Teenagers, who had already been the target of earlier social networks like MySpace, also became significant smartphone users (Lenhart, 2012). By 2014, 74 per cent of US adults were using social network sites, a number which increased to 89 per cent for those aged 18–29. Social media penetration via smartphones is also important; 40 per cent of cellphone users used social media sites on their phone, and 28 per cent did so daily (Pew Research Center, 2013). By early 2015 in the UK, smartphones had become the most popular device for getting online, with 33 per cent of internet users stating that the device was the most important one for getting online (Ofcom, 2015). If we take apps as a measure of the popularity of smartphones, by 2015, there had been 638 billion cumulative app downloads worldwide. This number will only increase; the global revenues from app sales are predicted to rise to US$79 billion in 2020, from US$36 billion in 2015, and app downloads could increase to 378 billion from 211 billion in 2015 (Ovum.com, 2016).

So now that we've taken a look at where social media have come from, and how popular it is, let's look at why it's an important force in the world and what it might mean for your work as a researcher or knowledge worker.

## 1.3 SOCIAL MEDIA AS AN INFLUENTIAL FORCE IN THE WORLD

The picture we've painted of the rise of social media over the past two decades is one that emphasises the social connectedness that these networks have enabled and promote. But beyond making and maintaining friendships, what is social media good for? Quite a lot, it turns out. The factors which have made social media attractive for social means – low cost and ease of use – also make it useful in nearly all aspects of human life, from politics to business to health.

The overriding feature of the various spheres and examples of the uses of social media that we will discuss in this section is that they are not only a tool for communication and achieving change, they are also tools that can have huge value for building and growing communities with shared interests. These interests could be social, recreational and even political. Social media help support the creation of a 'digital public sphere' (Colleoni et al., 2014: 317) where people with differing opinions and experiences can interact

and communicate. Kaplan and Haenlein (2010) cite examples such as YouTube (which they term a 'content community'), which allows users to share video, as well as communities based around sports, such as soccer, on MySpace. For Lovejoy and Saxton (2012), social media tools can be effective at community-building in the nonprofit sphere, commenting that their use can create a dialogue within communities of interest, and that this is 'where true engagement begins, when networks are developed and users can join in the "conversation and provide feedback"' (2012: 350).

It's worth noting, though, that these communities can often become so successful that they begin to form 'echo chambers' (Gilbert et al., 2009), where users reinforce and don't challenge the opinions and views of others. While this tendency can be quite helpful in the formation of social movements (as we'll discuss), over time there is a risk to such communities becoming more insular and exclusive.

### 1.3.1 Social media and politics: The Arab Spring, #blacklivesmatter and beyond

It's often claimed that social media have acted as a catalyst for change over the last decade (Garst, 2013), though some critics (or cyber-sceptics) are concerned that it promotes what's known as 'clicktivism' or 'slacktivism', where people share or promote an issue within an echo chamber, which leads to little – if any – actual change (Wolfsfeld et al., 2013). That said, the simple act of clicktivism can also be a form of civic engagement itself (Halupka, 2014), does not reduce the likelihood of users being politically active and may in fact make them more likely to engage politically (Lee and Hsieh, 2013; Vaccari et al., 2015). Social media networks can also help to combine real and virtual volunteer networks in times of crisis (Reuter et al., 2013).

Rather than characterising social media as a 'catalyst' for change – which implies that it is the sole or main impetus for change – we can say that social media and social networks can help to promote change, often going hand in hand with (or even amplifying) existing movements or trends (Gerbaudo, 2012; Joseph, 2012). Studying social movements in Chile, the US and the UK, Sajuria et al. (2015) find that social media movements have a tendency to recreate structures of social capital that are seen offline.

Perhaps the most well-known instance of social media playing a major role in world events is during the Arab Spring of 2010 onwards (see Figure 1.2) – though there is significant disagreement as to the role and influence actually played (Wolfsfeld et al., 2013). Beginning in late 2010 in Tunisia, the Arab Spring, briefly, was a series of organised political protests, which led to the overthrowing of a number of governments in North Africa and the Middle East, including in Tunisia, Yemen, Egypt and Libya, protests in Lebanon, Saudi Arabia and Sudan, and with others such as Syria and Libya still consumed in civil war (Lotan et al., 2011).

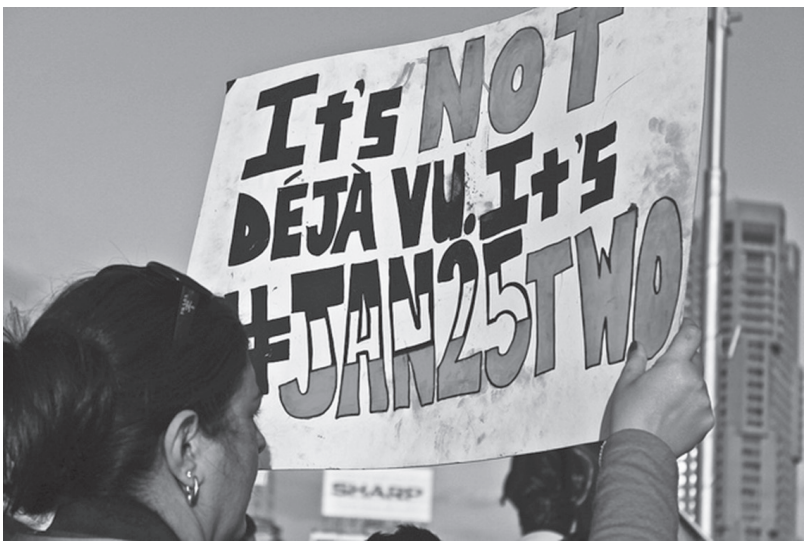


**Figure 1.2** Protest sign using Twitter hashtag during Egyptian revolution, January 2012

*Credit*: Ahmad Hammoud via Flickr (CC-BY2.0)

Khondker (2011) points out that social media were one of many factors in the various revolutions; their role was critical given that many countries lacked an open media and civil society because of repression by the government. As such, social media played a simple but incredibly important role in the protests that marked the beginnings of the Arab Spring, with activists making use of Twitter and hashtags, blogs and image and video sharing to organise demonstrations and exchange information. Gerbaudo (2012) characterises the digital activists who used social media in this context as 'choreographers', who acted as catalysts for mass mobilisation. Social media were also used by protesters to share stories of what was happening on the ground with the wider world, before Western journalists were able to arrive (Lotan et al., 2011; Murthy, 2013).

In the US, the #blacklivesmatter movement was formed following the acquittal of George Zimmerman in the shooting of an unarmed black teenager, Trayvon Martin. The movement, the name of which is actually based on a Twitter hashtag (Guynn, 2015), gained strength following public anger at further killings of young black men by police in 2014 and 2015 (see Figure 1.3). Harris (2015: 35) contrasts the use of social media by #blacklivesmatter activists with the 1960s civil rights movement:

> The movement's use of technology to mobilize hundreds of thousands of people through social media is light years away from the labor that was once required to mobilize black people and their allies during the 1960s or even a few years ago. Jo Ann Robinson of the all-black Women's Political Council in Montgomery, for instance, spent hours using

a hand-driven mimeograph machine to crank out over 52,000 leaflets that announced a mass protest after Rosa Parks's arrest in 1955. Today, social media – particularly Twitter – can reach individuals throughout the nation and across the world in milliseconds, drastically slashing the time it takes to organize protests.

**Figure 1.3** Protesters using the #blacklivesmatter hashtag, in solidarity with Ferguson, MO, encouraging a boycott of Black Friday consumerism in NYC, November 2014

*Credit*: The All-Nite Images via Flickr (CC-BY-SA-2.0)

While the Arab Spring and the #blacklivesmatter movement demonstrate that by facilitating the creation and building of communities of interest social media can aid social movements in affecting change at a national level, which affects the lives of millions, it can also be effective in more targeted ways by those who want to see more specific changes (rather than the overthrow of an entire government or change at a societal level).

In 2013 a social media campaign launched by the London School of Economics student Caroline Criado-Perez aimed to address the lack of women on UK banknotes, other than the Queen. Her campaign to add the author Jane Austen to the £10 banknote was successful in drawing over 30,000 signatures on the online platform Change.org and convinced the Bank of England to introduce the new note design (Crawford and Gillespie, 2014; Criado-Perez, 2015). It is also important to note that this campaign – and others like it – did result in an online backlash against Criado-Perez and one of her supporters, UK MP Stella Creasy, which included threats of rape and murder. This abuse did not deter the campaign, with Criado-Perez stating on Twitter at the time that she 'won't

be silenced by anyone'. In 2014, two people were arrested and convicted for threatening Criado-Perez on social media, with both receiving custodial sentences (Lewis, 2014).

Many political campaigners have taken to social media as a way to engage with the public and potential voters. Most famously, the role of social media in politics gained currency with the then Senator Barack Obama's 2008 campaign for the presidency, which made extensive use of social media tools, mobilising an online network of over 5 million volunteers, and drove over 3 million campaign donations to the candidate (Harfoush, 2009; Kenski et al., 2010; Cogburn and Espinoza-Vasquez, 2011).

With greater youth take-up of social media, political campaigners have been especially keen to make use of it to tap a group which has tended to be less likely to vote (Hendricks and Frye, 2011). Gainous and Wagner (2014) characterise scholarly reactions to social media and politics in two ways: as a way of levelling the playing field between citizens and politicians, or as yet another method of political communication, leading to little real change in the relationship between the governors and the governed.

What is becoming more certain is that social media are an effective tool for influencing election outcomes. Recent research on US online campaigning has found that campaigners' online messages are reaching similar audiences to offline communications, and that they have a positive impact on voter turnout (Aldrich et al., 2015). Similarly, examining more than 100 million Facebook updates, Settle et al. (2015) find that users who lived in US states with more contested elections were more likely to post status updates about politics and were also 40 per cent more likely to vote.

### 1.3.2 Social media and campaigning: Nonprofits to human rights to health

Social media can also be incredibly helpful for nonprofit and charity organisations, which can use them for advocacy and public education, fundraising and communications with stakeholders. Guo and Saxton (2013) put forward the idea of a mobilisation-driven, relationship-building framework, where nonprofits first reach out and build awareness of their cause among the public, followed by sustaining communities of interest and supporter networks, which is followed by mobilisation and calls to action messages sent to supporters in order to further the organisation's purpose. In their study of nonprofit public relations (PR) practitioners, Curtis et al. (2010) found that those organisations with specified PR departments were more likely to adopt social media.

Joseph (2012: 153) argues that social media also expands awareness of human rights abuses beyond the sphere of the traditional media, bypassing the 'veil of secrecy' that repressive regimes often hold up, contrasting the example of reports from a relatively small number of activists in Syria of the government's attacks on unarmed protesters in

2011 with a massacre of tens of thousands in the Syrian town of Hama in 1982, which was largely unknown to the rest of the world until much later.

Social media have also proved useful in recent years in the area of public health. For example, health researchers can 'mine' large numbers of users' tweets to provide public-health information in real time. This is especially useful in cases of seasonal outbreaks of disease such as influenza or food poisoning (Dredze, 2012), or even weather-related depression (Yang et al., 2015). Social media data can also provide different information from traditional sources, as patients may be more willing to share behaviours and conditions with their social networks than with their doctors. Social networks such as Twitter are also useful for public health institutions to provide health information to the public or even face-to-face via Skype conversations (Murthy, 2013). On the treatment side, social media can also form the basis of patient support networks, with hospitals facilitating patient social media groups using a variety of tools, such as blogs, video chats and Twitter and Facebook profiles (Hawn, 2009). These tools mean that patients are better able to manage their own care, reducing the need for interventions from physicians, as well as support and encourage those with similar conditions.

### 1.3.3 Social media and business: Profits, losses and lives

Recent years have seen businesses from the largest multinationals to the smallest family-owned shops take up social media to varying degrees and with varying success (Long, 2011). Social media networks, especially Twitter, allow companies to have a direct line of communication to their customers in ways that were either previously not possible or very expensive. Marshall et al. (2012: 357) go as far as to say that social media and related technology provide 'a revolutionary change in the way contemporary selling is conducted' by changing the traditional relationships between customers/clients and salespersons. Similarly, Rapp et al. (2013) suggest that social media have a 'contagion' effect where their use has a positive effect on brand and retailer performance, and increases customer loyalty. Social media use can also lead to more customer visits and greater firm profits (Rishika et al., 2013).

Companies are also able to build up communities around brands and products in a fashion not dissimilar from the patient support networks described above. Corporate engagement via social media can also become incredibly important in times of corporate crisis, and must be managed very carefully; engagement can backfire quickly, such as during BP's Deepwater Horizon oil spill in the Gulf of Mexico in 2010. The corporation was slow to respond to fake Twitter accounts highjacking and impersonating its corporate persona, and later struggled to build up its own social media response, further adding to public opprobrium towards the company (Wauters, 2010; Long, 2011).

With many corporates keen to use social media to promote their corporate social responsibility initiatives, Lyon and Montgomery (2013) argue that the transparency that social media bring may actually lead to a reduction in corporate 'greenwashing' if citizens and activists become concerned that the company is promoting itself to too great an extent.

Now that we've covered how social media can be an important influence across various aspects of society, we're going to look more closely at how social media are used by knowledge workers in education, research and in what's called 'digital scholarship'. We'll see that some of the ideas and considerations we've looked at in this section are also important when working with research and in knowledge dissemination and public engagement.

## 1.4 SOCIAL MEDIA IN EDUCATION, RESEARCH AND DIGITAL SCHOLARSHIP

The chances are that you have at some point in your working life, either at a conference, departmental meeting or through an internal strategy document, come across arguments for the use of social media in higher education and the research environment. There are now plenty of guides and introductions to using social media platforms too, including our guide to 'Using Twitter in university research, teaching and impact activities' (Mollett et al., 2011), which continues to get thousands of downloads each year, and Bik and Goldstein's 'An introduction to social media for scientists' (2013). Discussions and guides like these centre around the new opportunities and challenges that social media bring to the research environment, and reflect the fact that an increasing number of researchers and academics are using social and digital media in a variety of ways.

While the opportunities for social media may seem apparent, the degree to which scientists and researchers are actually using these platforms varies across countries and disciplines. According to Bastow et al.'s 2012 dataset of UK social science academics, one in six academics (16 per cent) use Twitter (Bastow et al., 2014: 230). A 2014 survey by *Nature* suggests a modest incremental increase, with 25 per cent of the 480 social science, arts and humanities researchers sampled using Twitter regularly (Van Noorden, 2014). Among science and engineering fields, there was a stronger emphasis on academic-focused social networks (Mendeley, Academia.edu, ResearchGate), with nearly 50 per cent of the 3,000 scientists reporting that they regularly use ResearchGate, termed 'Facebook for scientists' by its founder Ijad Madisch (Knapp, 2012). Survey findings of course offer only a limited understanding of usage (not least because a primary way of advertising surveys now is through social media and online channels), but at this point it seems fair to conclude that social media usage rates are strong and continuing to grow in academia, and the same pattern can be observed when we look around the NGO, think tank and charity sectors.

But growing usage figures ultimately provide only a tiny slice of what is going on here. Alongside other dramatic changes to the research environment, like the internet and open access to research publications, social media as a whole remain under-theorised aspects of the research environment. A common conception of social media is that they are primarily used for procrastination (see Riemer et al., 2010; Tervakari et al., 2012; Vanwynsberghe et al., 2015). Alongside research practice, we recognise that it is becoming more common for social media to be used in higher education as part of marketing campaigns (Reuben, 2008) and also as a pedagogical tool (Alexander, 2006; Franklin and Van Harmelen, 2007; Moran et al., 2011).

Digital sociologist Mark Carrigan's *Social Media for Academics* (2016) is an instructional primer on why academics are currently using social media and how they can deal with and address the challenges of social media. The thread running through all these different findings and applications is that there is now a critical mass of individuals using social media for education and research, and what was once recognised as potential opportunities for social media are now becoming a taken-for-granted reality. As Carrigan (2016) notes, social media are facilitating the reach of new audiences, enabling more enhanced collaboration, and are also presenting new challenges for the research community to deal with.

The growing adoption of digital tools and technology in this environment can be broadly understood as 'digital scholarship'. This is a concept that will be explored and interrogated in greater detail in Chapter 2, but for now we will look at how researchers and educators are integrating social and digital media into their working practices and take a brief look at the landscape for digital scholarship.

### 1.4.1 Social media in practice in the research environment

In an extensive survey conducted over nine months, with more than 20,000 responses, Bianca Kramer and Jeroen Bosman (2015) have substantial data informing an in-depth look at today's research environment. They explore the patterns and process of digital scholarship through scholars' workflow and use of tools. The responses and working practices reported suggest researchers are already integrating a variety of social tools and social media for research and scholarly communication purposes. In Table 1.2, Kramer and Bosman have categorised the developments across six identified phases of the research workflow: discovery, analysis, writing, publication, outreach and assessment.

Current tools and workflows certainly play an important role in connecting research and researchers with the wider society, but even more important for digital scholarship is designing systems that look to align the particular tools with the practices and aims of scholarship (Burdick and Willis, 2011).

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**Table 1.2** 101 innovations in scholarly communication – the changing research workflow

Most important developments in six research workflow phases

| | Discovery | Analysis | Writing | Publication | Outreach | Assessment |
|---|---|---|---|---|---|---|
| **Trends** | social discovery tools | datadriven & crowdsourced science | collaborative online writing | Open Access & data publication | scholarly social media | article level (alt) metrics |
| **Expectations** | growing importance of data discovery | more online analysis tools | more integration with publication & assessment tools | more use of 'publish firsts, judge later' | use of altmetrics for monitoring outreach | more open and post-publication peer review |
| **Uncertainties** | support for full-text search and text mining | willingness to share in analysis phase | acceptance of collaborative online writing | effect of journal/ publisher status | requirements of funders & institutions | who pays for costly qualitative assessment? |
| **Opportunities** | discovery based on aggregated OA full text | open labnotes | semantic tagging while writing/citing | reader-side paper formatting | using repositories for institutional visibility | using author, publication and affiliation IDs |
| **Challenges** | real semantic search (concepts & relations) | reproducibility | safety/privacy of online writing | globalisation of publishing/ access standards | making outreach a two-way discussion | quality of measuring tools |
| **Most important long-term development** | multidisciplinary + citation-enhanced databases | collaboration + data-driven | online writing platforms | Open Access | more & better connected researcher profiles | importance of societal relevance + non-publication contributions |
| **Potentially most disruptive development** | semantic/ concept search + contextual/social recommendations | open science | collaborative writing + integration with publishing | circumventing traditional publishers | public access to research findings, also for agenda setting | moving away from simple quantitative indicators |

*Credit*: Kramer and Bosman (2015), Figshare (CC BY-SA)

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As such, at this point, it is helpful for us to go into a bit more detail about what digital scholarship actually looks like in an academic context. As we described in the Introduction, in reference to how LSE has promoted and managed its public engagement in the digital sphere, this can often mean a 'blogs first' strategy, with institutional or individual blog platforms providing the source for content to be distributed via social media. Expert commentary by academics in the UK can be divided into four rough areas: university-based blog sites, externally hosted blog collectives, 'professional' blogs and individual blogs. We will go into these in more detail in Chapter 3, but here are a few (non-exhaustive) examples:

- **University-based/hosted blog sites**: Oxford Politics (OxPol), Ballots and Bullets (Nottingham), Eastminster (University of East Anglia), Edinburgh Politics and IR Blog, Policy Wonkers (King's), Policy @Manchester, the LSE's blogs.
- **Externally hosted blog collectives**: Open Democracy.
- **'Professional' blog/journalism collectives**: *The Economist*, *The Conversation*, *The Guardian*.
- **Individual blogs**: Mainly Macro, Enlightened Economist, Tax Research UK, countless other examples.

Before moving on, it's worth briefly focusing on what we term 'professional' blog collectives. Sites such as *The Guardian* and *The Economist* are online versions or representations of what would have been traditional media commentary, which often includes academic commentary. *The Conversation*, on the other hand, is a site for professional academics. It employs journalists to commission academic commentary on current issues, which is then edited with the aim of disseminating it across online media and news organisations. The range of examples of internally-managed and externally-supported platforms with which academics can now be involved is indicative of the growing opportunities for public-facing, digital research content.

### 1.4.2 Social media in practice in teaching and learning

When knowledge workers also have a role as educators, social media can have a large influence on how students work within their educational environment, by providing a new learning conduit by promoting engagement with content and allowing greater collaboration between students, providing educators are consistent and committed to this engagement (Yaros, 2011; Tess, 2013). Social media may also be part of a 'new way of learning', with less emphasis on individualised instruction and a greater focus on collective and collaborative understanding and exploration (Selwyn, 2012), though some are concerned that the 'conviviality' of social media may be counterproductive in certain educational contexts (Friesen and Lowe, 2012). These new ways of learning can also benefit those who have previously been more likely to have been disadvantaged by older models of teaching, such as students from low-income backgrounds, by

building connections with other students and faculty and providing new sources of information (Davis et al., 2012).

At this point it's worth remembering that the internet – and by extension social media – was created by researchers who felt that collaboration was more powerful than competition. Remember those graduate students working with the military in the early days of ARPANET? Social media, by their very nature, encourage this sort of collaboration and the circulation of knowledge. And compared to the pre-digital age, this now occurs far more rapidly (Quinnell, 2011; Beer, 2013). Social media can also provide new opportunities to engage with the participants of research, as well as with those who are affected by it (Durose and Tonkiss, 2013). Where traditionally scholars were engaged in a very straight, unidirectional research process of asking questions, doing research and then reporting results, social media allow us to be more engaged with the subjects of our research and provide new avenues for collaboration with other knowledge workers and inspiration for new research. In many respects, social media 'beg us to reconceptualize what it means to be a scholar and do scholarship in the 21st century' (Sugimoto, 2016). We'll go into more detail about the interplay between social media and academic research in the next chapter.

### 1.4.3 Social media in practice in think tanks and research bodies

Social media can be tremendously useful in promoting the activities and research outcomes of knowledge workers. While we will go into this extensively later in the book, we'll give a short overview here of how different knowledge organisations make use of it.

We would argue that if research is worth doing (and funding), then it's also worth promoting and disseminating to the wider public. For some knowledge organisations, such as think tanks like the UK-based Institute for Public Policy Research (IPPR), the US-based Brookings Institute and the Urban Institute, for example, undertaking and then promoting research is part of their 'core business'. The IPPR has its own journal, *Juncture*, where it publishes its research and commentary, while Brookings regularly releases books and research papers based on its research. The Urban Institute, based in Washington DC, has its own blog, *The Urban Wire*, which has the tagline 'The voices of Urban Institute's researchers and staff'. Organisations such as these now make extensive use of social media to push their research in support of their agendas (Stieglitz and Dang-Xuan, 2013). These types of organisation are more instrumental in their objectives; while they will have in-house researchers (or commission research) who will be pursuing different projects, these will all tend to be focused in one direction, be it curing cancer for a health research charity or tackling urban inequality in the case of a think tank.

While think tanks and NGOs will tend to have in-house communications teams and motivations akin to those of nonprofits, discussed above, knowledge workers who work

in educational institutions such as universities are often 'out on their own', both in terms of the research they do and in how it's promoted. This can simultaneously be very freeing and also constraining on academics' abilities to make an impact with their research.

By early 2016, to say that the social media environment for knowledge workers across nearly all disciplines was saturated would be an understatement, with universities, think tanks and NGOs all making extensive use of blogs and most forms of social networks to promote their research and agendas.

### 1.4.4 Reflections on the individual benefits of social media for researchers

In the past, the main vehicle for academics to achieve impact was via their journal articles. While there is some confusion as to how often academic papers are actually cited – with a widely held (though likely inaccurate) belief in academic circles that the number could be as high as 90 per cent (Remler, 2014) – it's clear that academic works in journal articles faces a barrier to its dissemination in the form of journal paywalls (where only those who have paid a subscription fee are able to access content). With this in mind, the impetus for using social media to share information from research becomes clear. Social media and networks allow knowledge workers to share the summaries and findings of their work, as well as important aspects of their research process, with large numbers of other social media users who may be interested in their work.

This impetus has become much more prominent over the last decade. One notable example was the association of the 2012 presidential election with 'Big Data' in a way that previous contests had not been, and what that meant for social media commentary from knowledge workers. Nate Silver, through his now-famous *FiveThirtyEight* blog, was able to predict the presidential election result in all 50 states, in a prediction model which outperformed all others. For what seemed to be the first time, the mainstream media were taking bloggers and online commentators seriously in the area of US politics.

Similarly, one of the most popular US academic blogs is *The Monkey Cage*, which launched in 2007. The blog was bought by the *Washington Post* newspaper in the summer of 2013, and moved from its independent blog platform to the newspaper's website. This move, by a large and popular national newspaper, was another signal that academic commentary of the kind that had previously been the domain of journals and books was entering the mainstream. *The Scholars Strategy Network*, begun in 2009 by Harvard political scientist Theda Skocpol, has a more wide-ranging remit, but it produces its own copy of academic commentary to be repurposed for the wider media, rather than operating as its own dedicated publishing platform.

Promoting one's research or findings on social media and social networks is of course a form of public engagement (a topic we situate in the Research Lifecycle and go into

greater detail about in Chapter 2) and is the starting point for knowledge workers who wish to begin to build a public profile. Sasley and Sucharov (2014) argue that combining engagement on social media with moral activism can be appropriate and even necessary in some cases. For scholars and knowledge workers who are often marginalised in an academic context, it can also be a means of both self- and community promotion (Grollman, 2015). The move to digital has meant that what were once niche areas of study can often have their own journals or online presence:

> The explosion of Internet access in the 1990s provided academics with a way of sharing their work outside of the traditional publishing route, and new kinds of journals began to emerge. Think of electronic journals and the open access publishing models those journals helped foster as the do-it-yourself record labels of academia. (McCabe, 2013: 55)

In the 21st century, many academics have seen their roles shifting or augmented. Where previously, academia largely consisted of research, teaching and publishing work in academic journals, knowledge work has extended to include self-promotion. In this context, self-promotion does not just include the promotion of articles and research; it also means participating (though not always) in social media discussions in areas of their research and on current events and general societal trends. Social media allow researchers to be social, both with those who share their interests and with the wider world in general. This naturally creates some tensions in terms of academic freedom and in how knowledge workers create a public profile. Sugimoto (2016) comments that while online activity has become the front of house for academics to show their work, policies to protect scholars are currently lacking in this space. Recent years have seen growing incidences of knowledge workers being scrutinised and even sanctioned for comments made on social media, something that knowledge workers should bear in mind when contemplating their own online public engagement.

Another aspect of public engagement is the so-called 'Sagan effect', referring to the success of American astronomer Carl Sagan as a science populariser, but also to the difficulties he faced as an academic as a result (Martinez-Conde, 2016). Despite hosting the most widely watched public television series in US history, *Cosmos: A Personal Voyage*, in 1980, Sagan was denied tenure at Harvard University as well as membership of the National Academy of Sciences in 1991, due to 'the perception that popular, visible scientists are worse academics than those scientists who do not engage in public discourse' (Martinez-Conde, 2016: 2077). Many will recognise a general understanding in academia that public engagement is seen as light, fluffy and not what an academic should be doing with their time. Carroll (2011) has argued that academics look down on those colleagues who have too high a public profile, mostly due to the belief that public scientists care more about their media presence than about their research. But do scientists and academics who undertake public engagement activities such as proactive

media coverage, knowledge exchange, and blogging and social media actually underperform compared to those who don't publicly engage?

In short, no. Jensen et al. (2008) found that scientists who engaged with society were in fact more active academically than others who did not engage. Inactivity in public engagement actually correlated with lower performance. Bentley and Kyvik (2010) found that scientists with popular publications like books and blog posts also had higher levels of academic publishing as well as a higher academic rank.

The idea – as the 'Sagan effect' aptly illustrates – that public engagement by academics may not always please all people all of the time is an important one. Engaging in and with social media is certainly not a guarantee of an academic or knowledge worker's success, and it's important to think critically about how social media have been developing in the academic context.

### 1.4.5 Critical reflections on social media in academia and research settings

Before we move on to Chapter 2 to consider the ways in which social media have impacted the research environment and the new framework we propose for understanding how social media can be useful, it is equally important to consider the negative aspects of the increasingly embedded nature of these new media in our lives – research lives and otherwise. Social media tools and technology can help researchers act in more social ways, thereby realising the social potential of research, which has, as of yet, been underdeveloped and underexplored. But given the complexity in this space, the application of digital technology must be done in a sensitive manner – sensitive both to the researchers and the researched.

#### Saturation and balance

It may well be apparent that digital technologies and social media are everywhere and to an unprecedented degree, a phenomenon which has been referred to as a culture, or cult, of connectivity (see Van Dijck, 2013, for an overview). But to what ends and to whose benefit do these technologies operate? Nick Couldry (2015) argues that there is a wider normative shift taking place in society that is certainly sceptical of the role of social media. The heightened level of scrutiny of the place of social media in our lives has been brought on by two reasons, according to Couldry: the unprecedented media-related saturation, or '*super*saturation', of everyday life, and social media's complicated relationship with generating economic value and propelling capitalism through the monetisation of the data of our lives. He writes:

> No one doubts the pleasures and benefits of some aspects of social media – what major innovation in history has had no benefits? This issue is balance, and how we get enough distance from our own embedding in social media to assess that balance. (Couldry, 2015: 1)

His strategy for achieving balance is for researchers in media and communications studies to move away from investigations of social media at large, and rather to focus on 'the type of "social" now being constructed through social media. … What should be the role of media institutions in the construction of the social?' (Couldry, 2015: 1). As we let these new media in, researchers should be aware of the shifting relations that this may entail.

## Monetisation of data

Another considerable critique of social media's 'supersaturation' of everyday life relates to the monetisation of data and how this may affect the research environment. For example, Gary Hall (2015) has explored the role of academic social networking site Academia.edu and the parasitic relationship its business model could have with the digital sustainability of academic research. While the user-friendly platform enables academics to upload and share their research outputs (a noble aim that aligns well with other digital scholarship trends), its financial rationale (and the $17 million it has thus far received from venture capitalists) rests instead on the data generated by the sharing. This is not unique to Academia.edu but is a hallmark of many digital for-profit services that academics have come to rely upon. Hall writes:

> for the likes of Google, Twitter and Academia.edu free content is what for-profit technology empires are built on. In this world who gate-keeps access to (and so can extract maximum value from) content is less important, because that access is already free, than who gate-keeps (and so can extract maximum value from) the data generated around the use of that content. (Hall, 2015)

Because of the startup's core commitments to its investors, Academia.edu and other third-party platforms used in Higher Education should always be viewed with a degree of scepticism: academic interests are not a core consideration for these companies, and academics and their valuable data are in danger of being exploited.

## Optional or obligation?

This situation becomes all the more complicated in an environment where academics are not only encouraged to be more visible on these networks, but now feel obligated to take part in these platforms, whether through internal disciplinary community

pressure or through more top-down institutional pressure. Carl Zimmer, the *New York Times* columnist and science writer, has picked up on this trend in a recent commentary piece for the journal *Cell*, noting the rise of headlines like 'Why scientists should write for the public' and 'Why every lab should tweet' (2016: 1094). Zimmer argues that the shift from science communication and public engagement as a voluntary act to a mandatory one could have harmful consequences. In Zimmer's view, most scientists are not equipped with the skills and training to widely communicate their work and by mandating wider communication, the public will become inundated with science content it is not able to filter adequately, 'drowning in an ocean of things to read, watch, and listen to' (Zimmer, 2016: 1095).

The opinion that the general public is not necessarily served by hearing from scientists in their own words is not one that 'the public' necessarily shares. A 2016 Ipsos Mori survey on public engagement with science, funded by the Wellcome Trust, found 'the majority of the public (63 per cent) say they are interested in hearing directly from scientists about the research they are conducting' (Wellcome Trust, 2016: 50). Zimmer's implicit argument for respecting the mediator's role in science communication may be partially motivated by his own livelihood as a journalist and professional science communicator, but the rising trend he has identified in making researchers' public-facing activities mandatory still raises a number of important issues for the academic community and the balance of academic freedom, public engagement and obligation in scholarly communication. Incidentally, the same survey (Wellcome Trust, 2016) found a very low level of public trust in journalists as mediators of medical research information.

In contrast to Zimmer's view of scientists' engagement as a 21st-century symptom of social media, Cassidy Sugimoto (2016) argues that this obligation for academics to communicate their work is no recent phenomenon. The obligation to engage with the wider public over one's work is as old as the concept of academic freedom, and indeed is inextricably linked to it. Sugimoto has traced the understanding of academic freedom to 1915, though notes that we, as an academic community, have not necessarily recognised this obligation. But with the rise of social media, these tools offer the opportunity for scholars 'to fulfill our scholarly obligations associated with academic freedom' (2016). Sugimoto notes that these opportunities are not without complexity, and mismatched incentives and the lack of appropriate social media policies are potentially hampering wider positive engagement.

New vulnerabilities are emerging for academics who have previously had little interaction with the public. In more traditional interactions with the media, the primary risk researchers reported dealing with was the misrepresentation of their work (see Kevin Burchall's (2015) literature review on 'Factors affecting the public engagement by researchers'). With digital media, the risks seem to have multiplied. Deborah Lupton's (2014) survey on academic use of social media reviews a number of perceived

risks associated with online technologies in general that demand particularly urgent attention, such as sexual harassment, racist abuse, hate messages and death threats (see Cottom, 2012; Beard, 2013; Kitchin et al., 2013; Mitchell, 2013). Mark Carrigan's instructional book, *Social Media for Academics*, also highlights these existing risks and adds to it a concern over 'the ways in which universities risk stifling the creative possibilities in their concern to manage the risks to corporate identity' (Carrigan, 2016: 16). Carrigan expresses similar worry to Zimmer about the possibility that these engagement activities could be something academics feel forced to do, as this compulsion would take out the freedom and enjoyment integral to many academics' practice (2016: 68). But as Sugimoto argues, freedom and responsibility to engage are not so easily separated.

## Who owns and controls social media, and who's watching?

Two of the main attractions of social media are their relative ease of use and the fact that they are free. While, for many, social media services are thought of as a form of new public utility (boyd, 2010), that they are free implies that the user is giving up something in return. For example, Twitter's terms of service states:

> By submitting, posting or displaying Content on or through the Services, you grant us a worldwide, non-exclusive, royalty-free license (with the right to sublicense) to use, copy, reproduce, process, adapt, modify, publish, transmit, display and distribute such Content in any and all media or distribution methods (now known or later developed). (Twitter, 2016)

While Facebook's states that:

> For content that is covered by intellectual property rights, like photos and videos (IP content), you specifically give us the following permission, subject to your privacy and application settings: you grant us a non-exclusive, transferable, sub-licensable, royalty-free, worldwide license to use any IP content that you post on or in connection with Facebook (IP License). (Facebook, 2016)

While these licences essentially enable providers to distribute your content on their network, they do also imply that you do not own your content, which is something that any social media user – knowledge worker or otherwise – should remember. While, for the most part, social media interact with social media providers without difficulty, there have been instances where the provider has been influenced to remove a user's content in incidences of alleged copyright infringement (Edwards, 2015). In 2015 Twitter was criticised for shutting down Politwoops, a site which archived politicians' embarrassing tweets that had been deleted, meaning that this public record was no longer available (Murdock, 2015).

In July of 2016, Facebook was accused of censoring articles and users who had posted about the killing of a high-profile separatist militant in Kashmir (Doshi, 2016).

It's also worth noting that social media are a new venue for state and corporate surveillance over members of the public (Brown, 2014; Trottier, 2016). This surveillance can result in relatively benign outcomes, such as targeted advertising, or more sinister ones, such as police social media surveillance of the Occupy movement (Fuchs, 2013). While most knowledge workers will likely not encounter the latter, more problematic type of surveillance, it's useful to keep in mind for those whose work might intersect with activism or advocating for change.

### Who gets to participate?

Social media are frequently seen as democratising, allowing those who have had their voices restricted to be heard, as well as enhancing their ability to build communities. But is this really the case? Meraz (2009) finds that traditional media sources – mostly news – do not have as great a hold on agenda setting and influence online as independent bloggers. In their examination of responses to terror attacks in Norway, Enjolras et al. (2013) comment that those who were mobilised on social media tended to be younger and of lower socio-economic status than those who mobilised through more traditional media channels. Xenos et al. (2014) echoed these findings with their study of social media use in Australia, the UK and the US. In section 1.3.1, we mentioned that social media were also seen as a useful tool for levelling the field in terms of political participation. Using the example of Sweden's 2010 national election campaign, Holt et al. (2013) find that social media use increased the attention and engagement of young people in the political process, while Yang and DeHart (2016) find similar effects in the 2012 US elections for online participation.

But we must also be aware that social media may also help to reproduce existing inequalities of voice. In a study of websites, blogs and social media platforms, Schradie (2011) finds that existing class-based inequalities of content production persist. In their study of online activists in the US, Oser et al. (2013) determine that while women and men are likely to participate equally, and young people are highly engaged, the education and income of such activists are similar to their offline counterparts.

## 1.5 CONCLUSION

The power and relevance of social media are apparent across virtually every realm of public life, and universities and research organisations are certainly not exempt from this. As we have seen, the adoption of social media is pervasive in our research lives and,

as is consistent with the adoption of all powerful technologies, this has meant individual benefits and emerging insecurities (Postman, 2011). If anything, we recognise that keeping up with this environment is overwhelming, if not completely exhausting. To confront this complex landscape head-on, the next chapter will take a step back to explore the conceptual underpinnings of research communication today and investigate where social media might fit more systematically in this wider network of mediated communication in the information age. Through descriptions of the research environment, we present a Research Lifecycle Framework for understanding the role of social media and provide snippets in Chapters 3, 4, 5 and 6 of how blogging, data visualisations, podcasts and photo and video formats offer opportunities and challenges for 21st-century research.

## 1.6 FURTHER READING

Burchall, K. (2015) 'Factors affecting public engagement by researchers.' Available at: https://wellcome.ac.uk/sites/default/files/wtp060036.pdf [Accessed 7 November 2016].

A good overview of the extent to which researchers engage with the public and why.

Carrigan, M. (2016) *Social Media for Academics*. London: Sage.

A practical guide for academics looking for a broad overview of the benefits and challenges of using social media.

Gainous, J. and K.M. Wagner (2013) *Tweeting to Power: The Social Media Revolution in American Politics*. Oxford: Oxford University Press.

A close look at how social media have changed and are changing US politics.

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A short discussion of the challenges facing existing models of scholarly communication in the face of social media and the rise of open access journals.

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