PAUL BRADSHAW

THE ONLINE JOURNALISM HANDBOOK

Skills to Survive and Thrive in the Digital Age

Third Edition

FREE INSTRUCTOR & STUDENT RESOURCES

ROUTLEDGE

The Online Journalism Handbook

The Online Journalism Handbook offers a comprehensive guide to the ever-evolving world of digital journalism, showcasing the multiple possibilities in researching, writing, and storytelling provided by new technologies.

In this new edition, Paul Bradshaw presents an engaging mix of technological expertise with real-world practical guidance to illustrate how those training and working as journalists can improve the development, presentation, and global reach of their stories through web-based technologies.

Thoroughly revised and updated, this third edition features:

- A new chapter dedicated to writing for email and chat, with updated case studies
- New sections covering online abuse, news avoidance, and trust
- Updated coverage of accessibility, inclusivity, and diversity in sourcing, writing for social media, and audio and video
- New formats, including social audio, audiograms, Twitter threads, the “Stories” format, charticles, and “scrollytelling”
- Expanded international examples throughout

The Online Journalism Handbook is an essential guide for all journalism students and professional journalists and will also be of interest to digital media practitioners.

The companion website for this book further enhances student knowledge through regularly updated case studies, real-time development reports, and in-depth discussion pieces from cutting-edge sources.

Paul Bradshaw is an award-winning journalist who runs the MA in Data Journalism and the MA in Journalism at Birmingham City University, while also working in the BBC’s Data Unit. He has covered developments in online journalism for over a decade on the Online Journalism Blog and is internationally recognised for his contributions to the development of data journalism in particular, working with organisations ranging from The *Guardian* and The Bureau of Investigative Journalism to *Der Tagesspiegel* and the Balkan Investigative Reporters Network. He is the author of a number of books and book chapters including *Mobile-First Journalism*, *Snapchat for Journalists*, and *Finding Stories in Spreadsheets.*

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Third Edition

Paul Bradshaw

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Contents

Figures

Tables

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1 Introduction to the third edition

One of the things that attracted me to working in online journalism is that it never gets old. One moment you're learning how to write articles that will work online—the next you're using visual storytelling techniques to grab readers on social media. You might be putting together a gripping podcast one week— and then the week after you're editing a vertical video story. And months after you might have been bringing the news to life with data and interactivity, you might be working with online communities to uncover the human stories behind the figures. There's always something new to learn.

A generation ago, if you were a journalist who wanted to work in a different medium, you would need to make a career change. Now, you just need to download an app—or open a new tab on your browser. That freedom, that world of possibility, can be dizzying—but it can also be overpowering. There are so many things to learn, and so many things to do, that it can feel like you'll never get it all done.

But here's the thing I tell all my students when we first meet: we will never get it *all* done, and to expect otherwise is to put yourself under unreasonable pressure. The most wonderful thing about the internet is that we have access to all the knowledge in the world. The worst thing? We have access to all the knowledge in the world. There will always be things on our list of things to read, things to try, and things to learn, and the trick is never to expect to get through it all.

The trick, in fact, is knowing how to *prioritise* the things you really want to do *next*—the things that you can *realistically* do next, that take you outside your comfort zone but not so far that you can't find your way back. And to not get distracted by yet *another* tab on your browser.

So as you read through this book, think about which parts of it relate to the career that you hope to have. All publishers and broadcasters require journalists to operate online to a greater or lesser degree, and it's often in the digital space that a journalist sets themselves apart from their peers. There are different opportunities at different times, and different places—sometimes you can create those opportunities yourself by starting an email newsletter, a Facebook group, or a regular podcast. A good journalist is curious—so be curious, explore, experiment, learn—and be ready to take advantage of those opportunities when they come.

Changes in the third edition

Two of the biggest changes of the last five years have been the rise of social audio apps and the boom in email newsletters. These are reflected in the new edition with the chapter on online audio significantly expanded to include sections on Twitter Spaces, audiograms,

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and smart speakers—and a completely new chapter on writing for email newsletters, chat, and curation.

Elsewhere, new formats are recognised with sections on “tap-to-advance stories” in the chapter on online video; charticles and scrollytelling in the data journalism chapter; and Twitter threads in the chapter on writing for social media.

New practices are included too: remote interviewing techniques are explored in relation to online video; the use of the “truth sandwich” in liveblogging; and live chats in audio. Industry improvements related to accessibility and inclusivity are outlined throughout the book. Since the second edition, many platforms have introduced features that make their content much more accessible to users with disabilities, and there has been some welcome reflection on the lack of diversity in the news industry. You’ll find out how to use accessibility tools and techniques in the chapters on writing for social media, email, data, video, and audio, as well as broader best practice when using emojis and charts, advice on diverse sourcing, and how to be inclusive in the use of language and images.

Media law is woven throughout the book instead of being placed in a separate chapter, including the importance of data protection in community management; copyright law in curation and web writing; and libel and contempt laws when writing for social media and liveblogging.

There are new case studies throughout, including the story of one TV station’s use of memes on Instagram; what a radio station learned from experimenting with Twitter Spaces; the use of chat to publish an industry newsletter; how one website plans video for multiple platforms; and how coding helped a journalist-engineer to tell new stories. This edition is more global, too: you’ll find examples from Brazil to Denmark, the US to Australia, Singapore to Spain, and from the UK to Ghana.

The next decade

The first two decades of online journalism inspired hope in many of its practitioners: the hope of giving a voice to those who were voiceless, and helping journalists access a wider diversity of sources. The hope of reaching new audiences and engaging them in new ways. The hope of unearthing new stories, and a blossoming of creativity in the ways that we tell them.

More recent times added new fears: the fear that those voices will be voices of hatred, division, and confusion. The fear that the stories that we know to be important will be drowned out by the noise of argument. And the fear that audiences will distrust, dismiss, and disconnect from vital reporting.

Now it feels like journalism is ready to fight back. Our challenge in the coming decades is to take on those fears: to ensure that the most important voices are not drowned out; to make sure that the right stories are heard; and to build trust and empathy with audiences so that our reporting embraces, engages, and empowers them. There’s a lot to learn—and it never gets old.

2 Histories, futures, and the changing business and technologies of journalism

Chapter objectives

This chapter will cover:

- How key events in the history of online journalism have shaped journalism today
- Future developments in journalism and their potential effect
- Debates over the business model that might support journalism online
- The shift from desktop to mobile
- The rise of "platform publishing" and concerns over the power of those platforms
- Blogging's impact on journalism
- Automation and "robot journalism"
- Information security: how journalists can protect their stories and sources
- Sensor journalism
- Drone journalism
- Wearable tech and "glance journalism"
- The increasing role of analytics in journalism and the debate over metrics
- Declining trust and increasing abuse
- Information wars: from sockpuppetry and astroturfing to trolls, bots, and fake news

Introduction

It is fair to say that "internet time" operates at a different speed to developments elsewhere. Companies rise and fall, trends come and go, and the focus is forever on the imminent, pressing, near future: "What's next?"

Surrounded by this change, it can be tempting to ignore the past. But understanding the past is one of the best ways to understand where we are right now—and what is most likely to happen next.

If you are one of those people who asks, "What technologies should we be looking out for next?" then this chapter is for you. The path to that future has already started: not just histories of technologies, but the history of cultural change, commercial change, and the history of legal change.

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It is often said that "The future is already here—it is just unevenly distributed". Many of the features of our future are already here—if you know where to look. And so, much of the "history" of online journalism explored in this chapter has actually yet to take place in every part of the media industry, with the same lessons being learned over and over again in different publications. The newspaper sector, for example, has often been the first to experience the impacts of technological change—and also among the first to innovate in response. Many magazines and broadcast organisations have taken longer to adapt to similar, albeit delayed, effects. And in different countries and at different speeds, similar transformations are repeating themselves.

You may find yourself in an organisation that decides to experiment with a paywall or crowdfunding. You may be hired as part of a new data journalism or wearable tech unit; or join a newsroom that is going mobile first or platform publishing. You will find useful stories on all these, and more, in this chapter.

How did we get here?

When journalists were first given personal access to the internet, the response was positive. Email allowed them to be good at something they liked to do—talk to each other. In the early 1990s, most journalists got their first introduction to the internet via email, intranets, newsletters, and basic information sites. Few could have predicted how this new medium, characterised by global reach and interactivity, would provide exciting new opportunities while at the same time helping to undermine the industries in which they worked.

Big media was confident. Newspapers had survived new technological innovations previously, adapting in response to the spread of radio and television. Journalists and proprietors were still in charge of content and distribution. The business model for print media had stayed the same for over a century. The choice for the consumer was clear: you bought a paper or magazine, switched on the TV, or tuned in to a radio station. And yet those at the centre of news or the millions affected by it had little voice, just the slim chance of being quoted by a reporter or having an opinion broadcast as a soundbite.

Early adopters

The first incarnation of online journalism came in the form of bulletin boards, electronic newsletters, and paid-for information services. Early pioneers worked for outlets such as OnLine Today and The Source.

However, mainstream media was still slow to embrace the web and appeared to have a "you go first" policy. A notable exception in the UK was The Daily Telegraph, which launched what it called the Electronic Telegraph in 1994. A year earlier, a team at the University of Florida's journalism school laid claim to the launch of the first journalism site (at the same time, the US allowed commercial traffic on the internet) but it was left to other industries to demonstrate the capabilities and potential of the internet. In 1995, the search engine Yahoo! opened for business as did the bookseller Amazon and the ads site Craigslist. This year also signalled the start of the online shopping and auction site eBay.

Some of that entrepreneurial zeal rubbed off on a self-styled libertarian called Matt Drudge, who founded an email newsletter that he would later transform into one of the most influential and notorious news aggregation sites. Detractors criticised him for his mix of news and gossip. But Drudge was more concerned with the practicalities of web journalism. He told Sky News in 2007 that the secret of his website was "To keep it going". Today, drudgereport.com, which broke one of web journalism's first scoops—the news of Bill Clinton's affair with Monica Lewinsky—still attracts tens of millions of visitors and is one of the biggest sites in the world.

Dotcom boom and bust

By the late 1990s, most journalists were adept at getting their information online even if they were not working on a website. Newspapers, magazines, TV, and radio organisations had websites run by small teams and presented them as a showcase for their brand. The majority of articles were cut and paste content from the parent organisation, creating an impression that online journalism was just "shovelware" (content "shovelled" online without being adapted for the web in any way).

BBC Online, launched in 1997, was a natural destination for many but there were other webzines and sites (many with a technology or business bent) such as The Register, The Street, Slashdot, Salon, and Slate making innovations in news delivery and allowing readers a say in forums.

Salon, in particular, staffed by former journalists of the San Francisco Examiner, demonstrated that print journalists could reinvent themselves. During a strike in 1994, a few of them had taught themselves HTML and launched an online newspaper marketed as a "smart tabloid". Its conversational tone and forums pointed to a new relationship between the journalist and reader—a sense of community.

The success of these startups undoubtedly helped to galvanise newspapers' online strategies and persuade them to invest more in terms of technology and staff. Several nationals in the UK including The Guardian and the Financial Times invested millions into their online "product".

Web 2.0 and the rise of participatory media

Online journalism's next big change would be cultural, not merely technological. The web was entering a phase of mass adoption and a raft of new websites was making it increasingly easy for users to publish themselves. Blogger, Wikipedia, MySpace, and Flickr were among the new platforms that characterised a phase summed up in the term "Web 2.0". Facebook and YouTube followed soon after.

The terrorist attacks on New York in September 2001 provided one of the earliest demonstrations of this shift: as news websites crashed under demand from users, people turned instead to blogs, which passed on information about survivors. The Iraq war in 2003, the Asian tsunami in 2004, and the London Underground bombings in 2005 further demonstrated the appetite for information on the web and the agility of the medium to respond in real-time.

Journalists began to blog themselves and track what was happening on the blogosphere using sites such as Technorati. Where once they kept up with the news by reading what other journalists had to say, they now had to also keep up with news, analysis, opinion, and agendas created by people within their field or community who maintained blogs. And where once they might respond to breaking news events by chasing official sources, they increasingly looked to user-generated content such as social media updates, images, audio, and video.

Blogging's impact on online journalism

Blogging had a significant impact on journalism, making it easier than ever to publish journalism online. Commercially run blogs, and blog networks, were launched. Some—such as Boing Boing, Perez Hilton, and the Huffington Post—quickly reached readerships larger than most news websites. Others acted as showcases for their authors' careers in public speaking and consultancy, columns, and book deals.

At the same time, the practice of "blogging" started to outgrow the blog platform itself, becoming embedded in almost every social media platform, from the status updates of Facebook to the microblogging of Twitter. Even Instagram, Tumblr, YouTube, and Snapchat are built on the ideas of photoblogging and videoblogging. Now "blogging" is used routinely by celebrities, sportspeople, and politicians as a way of communicating directly with audiences, a development that has had significant implications for the journalists who previously acted as mediators and filters in that process.

The road to convergence

One of the most damaging barriers to progress was an artificial "us" and "them" culture between print journalists and their dotcom colleagues. In the 1990s, it was not unusual for web journalists to be given separate contracts, moved to another floor, or even another building (the New York Times only moved journalists into the same building in 2007. It was later seen as a model of convergence). The resulting breakdown in communication, duplication of content, and roles impaired the quality of web journalism.

Rupert Murdoch's speech in 2005 to the American Society of Newspaper Editors warning of complacency is frequently cited as the tipping point for newspapers and attitudes to change in the digital era. He portrayed himself as a "digital immigrant" and identified the challenge of creating a presence online that people would make their homepage (the first page that opened on their browser every day). Instead of people reading their morning newspaper over a coffee, "In the future, our hope should be that for those who start their day online, it will be with coffee and our website" (quoted in the Guardian 2005).

His speech spurred a change in the working practices of his newspapers and more investment into The Sun and Times online. Other newspaper groups responded: in 2006, The Telegraph and the Financial Times rolled out integrated newsrooms with journalists producing content for both platforms.

Cultural convergence

Physical changes in the newsroom were only the first step towards a truly converged strategy. Domingo et al. (2007) identified three more: multiskilled professionals; multiplatform delivery; and active audience. Some journalists were reluctant to embrace integration, and few were given training on new ways of producing news.

The global financial crisis of 2008, however, was to transform newsrooms further. In that year alone, UK regional newspaper publisher Northcliffe announced it would cut 1000 jobs from editorial, advertising, printing, and distribution staff, one of many organisations to do so (Telegraph 2008).

As more jobs went, news organisations increasingly created new, multiplatform and digital, roles to replace them. Future's announcement of 100 job losses in 2011 was described as "a move favouring digital over print" (Halls 2011). Two years later when they cut a further 55 jobs, they explained: "As Future becomes an increasingly digital business, we need to reduce costs and staff levels devoted to print products" (Smith 2013).

In 2013, Trinity Mirror cut 92 posts but created 52 new ones, including 12 "community content curators", and eight regional digital roles. The Telegraph cut 80 editorial staff but also announced it would create 50 "new digitally focused jobs". The following year, it created a further 40 roles, focusing on investigative, data, interactive, and video, and with a new breaking news team. In broadcasting, the BBC got rid of 415 staff but created 195 new posts as part of plans to be "at the forefront of producing news for the digital age using new technologies" (BBC 2014).

The trend was clear: as customers and advertising moved into digital, publishers wanted to be there too.

The magazine sector in particular—with its history of launching and folding new products every few years—was so transformed that by 2021 almost nine in ten respondents to a Professional Publishers Association (PPA) survey "said 'magazine' was not the best word to describe their organisation … These businesses now think of themselves as passion businesses, hobby businesses or audience businesses [instead]", industry analyst Douglas McCabe told Press Gazette (Majid 2022).

The shift to remote working—and remote audiences

The regular lockdowns to prevent the spread of the Covid-19 coronavirus in 2020 and 2021 accelerated two trends that were to have a significant impact on journalism. Among audiences it changed consumption patterns: the habit of buying a newspaper for the daily commute was broken for many (Adgate 2021)—while at the same time reading news on Covid-19 helped establish new regular online news consumption habits for some (Kim, Wang and Malthouse 2022). Among news professionals, that impact was felt in the shift to remote working and new production practices.

The pandemic represented "both a culmination and acceleration of existing processes of change", note Quandt and Wahl-Jorgensen. Those processes included the decline of print, organisational restructuring, new skills requirements and approaches, audience changes, new competition, and the increasing centrality of social media platforms, online video conferences, and online production tools. "The pandemic meant that technological solutions were rapidly introduced and adopted at scale—so the crisis not only served as an accelerator and amplifier, but also as an enabler for change" (Quandt and Wahl-Jorgensen 2022).

Workplace chat systems such as Slack took on increased importance for coordinating teams that no longer shared the same physical space. The Google News Initiative moved to publish a Distributed News Playbook (fathm.distributednewsroom.com) as a guide to such reorganisation.

The impact of web-only publishers

Gawker Media, The Huffington Post, and BuzzFeed launched in the US in 2003, 2005, and 2006, respectively, and were to have a massive impact on the wider industry, including on employment practices and pay. In 2008, for example, Gawker announced that it was launching a payment system based on the frequency and popularity of writers' posts. A specific number of posts was set each month for "base" pay, with further bonuses based on target pageviews (Boutin 2008).

The Huffington Post launched with dozens of celebrity contributors but soon invited unpaid contributors to publish blog posts on its platform, too. When in 2011 the company was sold to AOL for $315 million, many bloggers felt that their contribution had been exploited. They launched the Facebook group “Hey Arianna, Can You Spare a Dime?” to campaign for founder Arianna Huffington to share some of the windfall, while journalists' union America's Newspaper Guild demanded that some of the money be invested in paid journalism. A lawsuit was brought on behalf of thousands of uncompensated bloggers but dismissed the next year. BuzzFeed also invited users to contribute content to its site, without payment, providing community guidelines and tools to help users create quizzes and checklists.

Traditional publishers began to follow suit. The Guardian was quick to imitate The Huffington Post in launching the contributor-driven Comment is Free section in 2006, and in 2009, regional publisher Northcliffe Media sought to build 40 websites driven by user content with the launch of its hyperlocal LocalPeople network. By 2012, the chief executive of the regional newspaper publisher Johnston Press was announcing that he was aiming for half of content on their titles to be created by “citizen contributors” by 2020, by which time he expected “few daily print products” to still be publishing (Pugh 2012).

Forbes launched a “contributor platform”, which paid contributors based on the number of people reading their work. But 60% of contributors weren’t paid (Bilton 2014), and in 2016, Forbes was forced to launch an investigation after suggestions that one contributor had asked a PR company for £300 in order to write about their client. Other publications launching platforms for contributors (with only some getting paid) included Entertainment Weekly and Conde Nast Traveler, and a new term was being coined to refer to them: *platishers* (Glick 2014): “platform publishers”.

Analytics-driven publishing also led to new pressures on reporters. In 2015, Trinity Mirror tried to introduce web traffic targets for individual journalists as part of new job descriptions, but later shelved the plans in the face of possible industrial action. There were two strong arguments against the move: first, reporters would end up writing easier but less important stories rather than stories that might be more important but take more time to report, or which might not have such broad appeal. Second, there were concerns that a story’s traffic could be influenced by a number of factors, many of which were not within the reporter’s control.

Community-driven

Also relying heavily on volunteer contributions were the growing number of *hyperlocal* news websites, catering for a smaller audience than traditional regional publishers, and often built around blogging technology. For these contributors, however, it was not necessarily exposure or prestige that motivated them to report, but rather the “different kinds of direct and indirect reciprocal exchange” (Harte et al. 2016) that allowed them to contribute to their local community, and vice versa. Likewise, the majority of publishers did not earn a living from their publication, but rather saw it as a form of community participation or active citizenship (Radcliffe 2015).

In addition to hyperlocal news operations, there were many special interest publications adopting a similar user-driven approach. Mumsnet was perhaps the best-known example of this, launched as a basic forum for parents to exchange information and tips in 2000 before it became a highly influential publisher. Those who didn’t convince people to contribute failed: LocalPeople sites set out to attract 75% of the local online audience, but only managed between 0.7% and 4.6% (Thurman et al. 2012), and many sites were closed. In the US, hyperlocal network Patch.com was sold to AOL in 2009, which expanded it from 46 to 900 sites in the space of a few years. But reader posts were minimal as the network showed a "lack of clear engagement with their wider communities [and] an over-reliance on official sources" (St John III et al. 2013). By 2013, it cut staff from 540 to 98, and hundreds of sites closed. A controlling stake in the network was sold to Hale Global in 2014.

The rise of data-driven journalism

As computing power, storage capacity, and access to databases increased, data became an increasingly important source of stories for journalists. A watershed moment came in 2010, as the year was dominated by stories based on Wikileaks' data from conflicts in Afghanistan and Iraq and diplomatic communications.

Data—hundreds of thousands of documents—could now be stored on a memory stick smaller than your finger. And thanks to network connectivity, hundreds of thousands of personnel had the access to such material. The two factors combined to make it much more likely that large collections of data and documents would be leaked to journalists. The datasets behind the 2014 and 2015 "Luxembourg Leaks" and "Swiss Leaks" stories about tax evasion and avoidance were based on datasets twice as large as Wikileaks's Cablegate stories. "Offshore Leaks" in 2013 was 150 times bigger. And the data behind the Panama Papers stories in 2016 was larger than all of those combined.

But it wasn't just leaks, or investigative journalists working on data. New Freedom of Information laws and a growing *open data* movement made it much easier for journalists to access data on everything from politics and the environment to education and culture—or for citizens to get hold of it and highlight stories that journalists should be digging into. The growing availability of structured information online also made it easier for people to turn that data into stories about sport, music, and film.

The US, where Freedom of Information laws had existed since the 1960s, had a well-established history of "computer-assisted reporting" (CAR)—using spreadsheets and databases to find stories in data. But this new internet-based practice of creating stories from data needed a new name. The term "data journalism" was popularised in part by The Guardian's launch of a "datablog" in 2009 (Knight 2015), and in the US by the political data journalism site FiveThirtyEight, founded a year earlier. Data journalism's distinctiveness from CAR lay in the way that it often connected to data directly on the internet; the growth of "data visualisation", often abbreviated to "datavis"; and the way that user interactions and interactivity could be built into the storytelling.

A significant amount of data journalism was being created by non-journalists, including designers, developers, and statisticians. News organisations realised they needed to do better in reporting on and using this increasingly important source of stories: most started recruiting journalists with data journalism skills, and many established dedicated data units, particularly at broadsheets including The Guardian and New York Times, but also at tabloid news website The Mirror, whose dedicated data journalism site Ampp3d pioneered the use of games and counters as storytelling devices (see the chapter on interactivity for more).

At a regional level, one of the earliest data journalism projects, EveryBlock, was founded in the US in 2007 to turn data into news feeds "for your block". But it was not until

2013 that the work of UK data journalist Claire Miller laid the ground for her employers, Trinity Mirror, to establish the country's first regional newspaper data unit.

Sensor journalism and drones

By 2013, a new source of data was making waves in the industry: sensors. *Sensor journalism* projects included a Sun Sentinel story about speeding police cars (based on toll gate sensor data) and the radio station WNYC sending sensors to listeners to help them track cicadas.

One of the biggest opportunities for sensor journalism lay in the pockets of every reader and journalist: mobile phones now contained dozens of sensors recording everything from geolocation and movement to light and background noise.

But other types of sensors were also becoming smaller and cheaper: in sport, for example, North America's National Football League announced it would be placing sensors under players' shoulder pads during matches and *drones* were adding another way of gathering information from hard-to-reach locations using sensors.

Robot journalism and augmented journalism

It wasn't long before companies saw an opportunity to generate stories automatically from the data being generated by certain sources. Automated journalism, or *robot journalism*, relied on predictable sources of data in fields where stories could be written routinely at a scale or speed that human journalists could not match. Early examples included lower league sports matches, crime reports, weather, and company financial reports: Reuters had published computer-generated headlines based on the American Petroleum Institute's weekly report as early as 2001 (Stray 2016), while Adrian Holovaty's automated crime map chicagocrime.org in 2005 was a seminal development in data journalism. But in 2013, two companies—Narrative Science and Automated Insights—made particular efforts to introduce the technology into news organisations.

The LA Times began using the technology to generate reports on earthquakes based on authoritative sources such as the US Geological Survey, often more quickly than anyone else. Associated Press (AP) used it to generate earnings reports. From 300 corporate earnings stories per quarter, the numbers rose to around 4440. Automated Insights' James Kotecki pointed out: "4,100 of these stories would not exist without [robot journalism]" (Lee 2014). In 2016, the Press Association announced that it would use robot reporters to cover sports, football, and elections.

In addition to adding increased *scale* to reporting, robot reporting was typically more *accurate*: around 7% of human-written company earning reports at AP contained errors (such as transposed digits) compared with "only about one percent" (Graefe 2016) when generated automatically.

The technology had its limitations, however. Data could be incomplete, biased, or contain errors. Likewise, the algorithms used to interpret it might also be subject to problems: one robot reporting project in Norway generated a headline that "[celebrated] the poor guy scoring a late own goal as the hero of the game" (Waldal). A report on automated journalism noted that: "Algorithms cannot ask questions, explain new phenomena, or establish causality" (Graefe 2016). Journalists would still be needed to observe non-quantified events and help form public opinion.

The hope was that automated journalism would lead to *augmented journalism*, performing repetitive tasks in order to enable journalists to perform analysis or see patterns that might not be possible without automation. In 2014, for example, Reuters started a project called News Tracer to detect and verify breaking news on Twitter, before creating algorithms to surface trends in polling data in 2015, and an "automation for insights" system alerting journalists to "interesting events in financial data" (Stray 2016). One research project explored how a "data-driven" approach to investigations could provide an alternative to the traditional "hypothesis-driven" approach, allowing computers to highlight unusual patterns in data rather than relying solely on journalists to decide on the "story" they are expecting to find (Broussard 2014).

By 2016, the French newspaper Liberation was using artificial intelligence to successfully write, schedule, and publish updates optimised for social media, and Le Monde's factchecking team was developing a way to automate the identification of false news. The Telegraph's "Roboblogger" was automating the generation of graphics for football and rugby liveblogs. Two startups—Wochit and Wibbitz—were creating hundreds of automatically generated videos every day for customers ranging from Hearst magazines to Gannett newspapers.

Automated journalism threw up new ethical challenges. Dorr and Hollnbuchner (2016) outlined an ethical framework around "algorithmic journalism", suggesting that news organisations and journalists consider issues of accuracy and objectivity, and how it might be possible to exercise transparency and disclosure around the inputs and other elements involved.

The move to mobile-first

Commentators had for some time been predicting that mobile would become the dominant way that people consumed news at some point, but the speed with which it happened still took the industry by surprise. In mid-2013, the BBC was noting that on weekends the number of visitors to its website coming from mobile had overtaken those on desktop for the first time. Within 12 months, most newspaper and magazine publishers were reporting that mobile had become the dominant source of traffic every day.

Very quickly, many news organisations decided that they needed to adopt "mobile-first" publishing strategies. But what did that really mean?

The first consideration was screen size and orientation: mobile devices are much smaller than desktop monitors, and typically viewed vertically, rather than horizontally. The second is bandwidth: mobile users, when not using a wi-fi connection, do not have the luxury of broadband-speed internet connections and are likely to give up if pages load too slowly.

This was also an opportunity for internet giants, such as Facebook and Google, which relied on users being able to access news content on their sites quickly. In 2015, Facebook launched Instant Articles, a mobile-optimised format that promised to load up to ten times faster than standard web articles (they were shut down in 2023). Google followed quickly with its Accelerated Mobile Pages (AMP) format, supported by Twitter, and in the meantime, Apple had also joined the game with its mobile-optimised Apple News format.

But gaining access to potentially bigger audiences on Facebook and Apple came with a number of drawbacks. One was data on users: now it had to be shared, and in some cases, publishers would have access to less user data than before. Another was functionality: the sort of interactivity enabled by JavaScript, for example (see the chapter on Interactivity for more), was disabled within these formats. But the biggest is simply control: all the formats come with limitations that the publishers have little control over. For example, Facebook limited the number of ads that could be sold based on the number of words. And there was always the possibility that terms would be changed by these platforms later on.

The tension was summed up by grouping the likes of Facebook, Apple, and Google under the term “frenemy”: a portmanteau of the words “friend” and “enemy”. In other words, these were organisations that might be seen as potential competitors, but who publishers might still decide to be “friendly” with—for now.

In the meantime, having a “mobile-first” strategy meant assuming that a typical reader would be accessing your stories on a mobile device. News website content management systems (CMS) were increasingly designed to be *responsive*: in other words, to “respond” to the device being used and display content accordingly. That might mean, for example, that on a mobile device, you only see the story whereas someone on a laptop computer might see extra sidebars and related stories; or that fewer images were shown or, typically, images of a smaller size and resolution that load more quickly.

Publishers also focused more on *web performance optimisation* (WPO): making sure pages loaded as quickly as possible. After working with Google on AMP, The Washington Post went further by launching a “progressive web app” to significantly improve its load times.

But “mobile-first” also meant acknowledging that for a large proportion of readers, the mobile web was the social web: journalists would have to do more to take their content to readers on social platforms like Facebook, Twitter, Instagram, and Snapchat.

The rise of platform publishing and distributed content

During an interview for the podcast *Re/code Decode* in 2015, the founder of BuzzFeed, Jonah Peretti, revealed some illuminating statistics. Less than a quarter of BuzzFeed’s traffic, he said, came direct to the website or its apps, and only 8% came through Google or Facebook. Of the rest:

- 27% of traffic were views of Facebook-native video
- 21% of traffic involved Snapchat content
- 14% of traffic were views on YouTube
- 4% of views were of images on Facebook
- 3% of views came on other platforms

This approach has been called “platform publishing” or “distributed content”: a strategy whereby multiple platforms are used in order to publish directly to audiences. While not the first to adopt such a strategy, BuzzFeed made it a talking point when it announced in 2014 that it would hire 20 new staff to create original content “solely for platforms like Tumblr, Imgur, Instagram, Snapchat, Vine and messaging apps” as part of a new “BuzzFeed Distributed” division (BuzzFeed 2014).

Part of the reason for the shift was that *native content* (content that was published directly on social media platforms) appeared to perform much better when compared with attempts to get users to follow links to watch or read it on their sites instead. This was partly due to platforms favouring their own content (Csutoras 2015). The advantages were not so clear in all situations however: one study of Instant Articles suggested that the format had had little impact on engagement with news content (Hoffman 2015).

Conde Nast International, Vox Media, and CNN were among those creating new roles "to help coordinate and deepen its relationships with social media and video platforms, messaging apps and even hardware manufacturers" (Marshall 2016).

The World Association of Newspapers and News Publishers (WAN-IFRA) compared the rush to the early days of the web (Pfeiffer 2015a), recommending that publishers consider the corporate goals of each platform they are considering publishing on, and how that might impact on their own objectives—as well as each platform's core audience and their information consumption profiles. But it also warned publishers against locking themselves to Facebook, a related loss of branding and context, and relying too much on superficial metrics (Pfeiffer 2015b).

Platforms become publishers too

While publishers took moves to publish directly on social media platforms, the platforms themselves also began to act more like publishers, hiring journalists, commissioning content, and attracting criticism for controversial editorial decisions.

YouTube began as a platform for people to upload videos but started to behave like a media company within a year of its launch: in 2006, it was making deals with TV companies. By 2015, it was "setting up TV-style production deals with some of its most popular creators" and commissioning four original series (Cooper 2015).

Snapchat was equally quick to enter the media production game: launching, closing, then relaunching channels and stories on its platform in 2015, and launching an online technology magazine, Real Life. Similarly, the blog hosting platform Medium was acquiring and commissioning content since its launch in 2013, when it acquired the longform reporting site Matter.

Other social networks decided to buy content in other ways: Twitter paid $10 million in April 2016 for the rights to stream ten National Football League games; and two months later, Facebook, Instagram, and NBC announced a deal to show Olympics highlights on the platforms.

A number of stories about Facebook, in particular, in 2016, highlighted how it was moving into traditional publishing territory. The first was the revelation that Facebook was employing journalists to curate its Trending Topics section, rather than leaving it to algorithms. The reports led to claims of bias, and Facebook moved quickly to fire the team (this in turn led to a new "fake news" problem—see below). But perhaps a more significant story was that the company was commissioning over $50 million of content for its site from dozens of media companies and celebrities, as it tried to increase the volume of video on the site.

The strategy was now commonplace: music platform Spotify acquired the podcasting platform Anchor in 2019 at the same time it acquired the podcast production company Gimlet—and launched its own production arm, Spotify Studios. A year later, in 2020, the email newsletter platform Substack became notorious when it offered sizable advances to lure high-profile journalists to its platform (Wiener 2020); and two years later, YouTube's interest in podcasting was backed with "grants" of up to $300,000 for podcasters to make videos on the platform (Carman 2022).

But for some platforms commissioning content came to be seen as a strategic error, or a luxury: publishers attracted by Medium's subscription tools were left without a revenue stream when the platform cancelled membership two years after they were introduced, and by 2021, the platform announced it was moving away from commissioning content as founder Ev Williams admitted that it "worked less well … I don't mean the work itself, but the equation of cost, audience, and return on investment" (Williams 2021). When Snapchat decided to cut costs in 2022, it was the budget for original content that got the chop.

Wearable tech, glance journalism, and the Internet of Things

While publishers focused on an increasing number of social platforms, new frontiers were being opened outside of the web in the sphere broadly referred to as the *Internet of Things* (IoT).

Wearable technology had been around for years before the launch of Google Glass and the Apple Watch in 2013 and 2015, but the involvement of the two technology giants made publishers take notice. VICE's Tim Pool used Google Glass to report on protests in Turkey in 2013, while Voice of America created a series of special reports using it to report live from events including concerts, and the Manchester Evening News's Alex Hibbert used it to report from a supermarket on Black Friday. The Guardian and CNN were among those launching apps that users could install on the device.

Apple's smartwatch, meanwhile, saw the coining of a new phrase: *glance journalism*, named after the "glance" feature that allowed Apple Watch users to skim through notifications. The Financial Times had already launched a 24-hour news app on the Samsung Gear S smartwatch in 2014 and ESPN had created a sports alert app for the fitness bracelet Jawbone, but news organisations launching apps specifically designed for the Apple device included the Wall Street Journal, New York Times, Time Magazine, and The Guardian.

The next platform to open up was the *connected home*. This time it was Amazon leading the way for publishers, with its connected speaker Echo, launched in the US in 2014. Powered by its voice recognition technology Alexa, the speaker was able to recognise users' commands and, among other things, provide information in return—including audio news updates using its Flash Briefings feature, and narrated responses to questions using the Skills feature. In 2016, The Guardian was a launch partner as the device was released in the UK, making its podcasts available on the device, as well as news, opinion, and reviews.

And as with the connected home, and the development of Apple's Siri and the artificial intelligence (AI) technologies underpinning all of these, a broader development was becoming clear, too: alongside the keyboard, mouse, and touch, "voice" was going to become one of the major ways that users interacted with the news (see the chapter on online audio for more on voice platforms).

Timeline of web journalism

- 1991: Tim Berners-Lee releases World Wide Web browser and server software.
- 1994: Daily Telegraph launches Electronic Telegraph.
- 1994: Launch of Drudge Report. Founder Matt Drudge breaks the first big online scoop in 1998 with the Monica Lewinsky story.
- 1997: Launch of BBC Online.
- 1999: Pyra Labs creates Blogger, free software that allows anyone to set up their own blog.

- 1999: The Guardian publishes minute-by-minute coverage of sports events, a process that would later be described as "liveblogging".
- 2001: September 11 attacks: while news websites collapse under the global demand, a network of blogs pass on news and lists of survivors.
- 2002: US Senate Republican Leader Trent Lott stands down after bloggers pick up remarks ignored by the mainstream press.
- 2003: Invasion of Iraq: Salam Pax, the "Baghdad Blogger", posts updates from the city as it is bombed, providing a particular contrast to war reporters "embedded" with the armed forces and demonstrating the importance of non-journalist bloggers.
- 2003: Christopher Allbritton raises $15,000 through his blog Back-to-Iraq 3.0 to send him to report independently from the war, demonstrating the ability of blogs to financially support independent journalism (called the "tip-jar model").
- 2004: Rathergate/Memogate: CBS anchorman Dan Rather resigns after bloggers raise questions about the accuracy of CBS report on George W. Bush's National Guard service.
- 2004: Asian tsunami on Boxing Day demonstrates the reach of the web from inaccessible areas as images and video are published to the web from mobile phones.
- 2005: Podcasts take-off as iTunes adds them to its jukebox.
- 2005: Rupert Murdoch tells the newspaper industry that it has been slow to respond to digital developments. Buys social networking site MySpace.
- 2005: Adrian Holovaty launches ChicagoCrime.org, an automated map of crime in the area. It becomes a landmark in the use of data "scraping", automation, and visualisation in journalism.
- 2005: July 7 Bombings, London: mobile phone image of passengers walking along a Tube tunnel posted on MoBlog and The Sun and goes global from there. A significant moment in moblogging.
- 2007: Talking Points Memo blog breaks the story of US attorneys being fired across the country, demonstrating the power of "crowdsourcing": involving readers in an investigation and carrying it out in public.
- 2007: Mainstream media reports the Virginia Tech massacre using information from Facebook and other social networking sites.
- 2007: Myanmar protests are tracked via blogs and social networking sites as journalists blocked entry.
- 2008: News of a Chinese earthquake spreads via Twitter.
- 2008: Journalists look to Twitter as a tool after terrorist attacks in Mumbai, India, are reported in real-time on the microblogging service.
- 2010: Citizen journalism site iReport is used to track and connect relatives after the Haiti earthquake.
- 2010: Wikileaks works with news organisations on a series of major stories. The Iraq and Afghanistan war logs and Cablegate dominate the year and contribute to a broader interest in data journalism.
- 2010: Online news consumption and advertising surpasses print for the first time in the US.
- 2011: Amazon launches the Kindle Singles format, kickstarting interest in e-publishing "longform" journalism of a greater length than traditional feature articles.

- 2012: The New York Times "immersive" story Snow Fall is published, marking a broader move online towards longform journalism aimed at tablet users.
- 2013: Edward Snowden leaks information about global surveillance operations to The Guardian, triggering a debate about information security and highlighting the difficulty of protecting sources and whistleblowers.
- 2013: Google Glass is launched, leading to increased experimentation in both newsgathering and apps on wearable technology.
- 2013: Snapchat launches its tap-to-advance vertical "Stories" format, which becomes widely imitated over the following decade.
- 2014: The podcast Serial becomes the fastest podcast to reach 5 million downloads and streams on iTunes, stimulating new interest in the format.
- 2014: The New York Times's internal Innovation Report is leaked, providing a rare—and highly critical—insight into the cultural challenges facing traditional news organisations trying to adapt to the internet age.
- 2014: Information hacked from the film studio Sony Pictures is leaked for suspected political reasons. The information is widely reported in the entertainment and business press but also stimulates ethical debate around the use of hacked data.
- 2014: Collaborative open source investigation (OSINT) website Bellingcat completes a major investigation into the downing of Malaysia Airlines Flight 17 (MH17), without any funding.
- 2015: Live video app Meerkat launches, quickly followed by Twitter's Periscope and Facebook Live. Live video becomes an essential element in publishing strategy.
- 2015: The Apple Watch is launched, kickstarting interest in "glance journalism".
- 2015: Chat app Telegram opens up its bot store to developers, and news organisations begin building chatbots to help users interact with their content.
- 2015: Facebook Instant Articles and Apple News launch, followed by Google's Accelerated Mobile Pages the next year, marking the start of a battle over mobile news.
- 2016: The Independent newspaper in the UK goes online-only.
- 2016: An attempted coup in Turkey is livestreamed on Facebook Live and Periscope. But as the media is seized by the military, the president also uses Apple FaceTime to broadcast live.
- 2016: Facebook accused of censorship after it deleted posts featuring the Vietnam War photo The Terror of War. Norwegian newspaper editor, Espen Egil Hansen, sees his open letter to Mark Zuckerberg on the subject go viral.
- 2016: Amazon Echo launches in the UK and Google Home launches in the US, opening up new opportunities for publishing in the connected home.
- 2016: Mark Zuckerberg announces Facebook will introduce new measures to tackle "fake news" and work with factchecking organisations amid suggestions other countries used propaganda to influence the US election.
- 2016: Citizens caught in a siege in Aleppo post harrowing goodbye messages using social media, connecting with a global audience in the absence of journalists on the ground. But communication is confused by a proliferation of automated accounts intended to discredit the reports.

- 2018: Spotify acquires the podcasting platform Anchor and adds podcasts to its own platform as it begins commissioning original content, opening up the form to a massive new audience.
- 2020: The global coronavirus pandemic accelerates a shift to remote working, increasing online news consumption and further cutting print sales.
- 2020: Social audio app Clubhouse is launched, allowing users to create and join "rooms" and host live conversations, interviews, and discussions—its popularity fuels a boom in similar apps
- 2021: Social media overtakes direct access as the main gateway to online news, according to the Digital News Report
- 2022: Russia's invasion of Ukraine is described as the "first OSINT war" (Monks 2022) and the "first TikTok war" (Tiffany 2022).
- 2023: The launch of ChatGPT leads to an explosion of interest in "generative AI"— tools that are able to generate text, images, or video in response to prompts—with BuzzFeed using it to generate quizzes, and Reach to publish a listicle

The decline of print—and the spread of journalism

"Few industries", the US Bureau of Labor Statistics noted, "have been affected by the digital or information age as much as newspapers and other traditional publishing industries" (Bureau of Labor Statistics 2016). Since 1990, the country's newspaper publishing industry had lost almost 60% of its workers, while the magazine industry and radio broadcasting lost a third and a fifth of their workforces respectively after 2007. By 2022, the US had lost a quarter of the newspapers it had had 17 years earlier—2500 titles—and two publications were still closing every week (Abernathy 2022). The number of counties without a local newspaper was growing so much that one academic established a site to keep track of these "news deserts" (usnewsdeserts.com).

The picture was equally bad in the UK. By 2016, one study calculated that the number of local newspaper titles in the country had dropped 35% in 30 years (Ramsay and Moore 2016). The true drop was even larger, as many titles had shifted from daily to weekly production, while in national newspapers, advertising spending fell by a third between 2010 and 2015 (Mance 2016). The magazine sector was next to be affected: between 2012 and 2022, print ad revenue dropped by 75% and the number of titles being published was more than halved (Majid 2022).

The headline figures masked a more complicated story. While traditional news organisations had lost staff in the US, employment in internet publishing and broadcasting had risen from about 30,000 to nearly 198,000. And as commercial organisations used the web to publish directly to consumers, that sector was increasingly hiring journalists too: one survey of communication graduates noted that "Many of those producing what they consider journalism do not work for news organizations" (Sonderman et al. 2015). Notably, many were creating their own enterprises: a third of communication graduates described themselves as entrepreneurs and journalists. In the UK between 2015 and 2016, the number of people describing themselves as journalists or newspaper and periodical editors increased from 64,000 to 84,000: the highest total recorded since the survey began in 2001 (Office for National Statistics 2016; Cox 2016), largely due to those working in a self-employed capacity.

Inevitably, many publications began to drop their expensive print editions. In 2013, the world's oldest newspaper, Lloyds List, stopped printing after 279 years: 97% of readers had said they preferred to use it online. In 2016, The Independent became the first national UK newspaper to stop printing, while in 2018, the Arkansas Democrat-Gazette replaced its daily newspaper with a free iPad for subscribers to read its digital edition.

The global Covid-19 pandemic—with its negative impact on both commuter travel and advertiser spending—added a final nail in the coffin for many titles in 2020: News Corp Australia moved 76 of its newspapers online-only that year, closing another 36 altogether, while in the US, many newspapers started reducing the numbers of days on which they published print editions: in 2022, the largest chain in the country, Gannett, announced that it was dropping one day of print per week at 186 of its newspapers and directing readers to digital editions instead.

What had happened? There were certainly lots of theories.

The "original sin" myth

A recurring argument within the news industry has centred around whether publishers made a mistake in giving away their content for free in the early days of the web. This is sometimes referred to as the "original sin" myth: the suggestion that if news organisations had charged for their content from the start, they would not now be struggling to survive commercially.

There are a number of weaknesses to this argument. One is the fact that many publishers actually *did* attempt to charge for their content, but failed to persuade consumers to pay.

The second and broader weakness is that online newspapers were not the only organisations able to publish news: many newspapers launched websites as a defensive strategy against online-only competitors such as AOL, Yahoo!, and MSN. Had newspapers decided not to publish online at all, those organisations, with lower costs and greater economies of scale, might well have become the biggest news brands online. Indeed, Martin Nisenholtz, who helped launch the New York Times website, said that giving away content was a necessity to compete and build the significant market share that they came to enjoy (Jarvis 2014), while at a regional level, at least one analysis concludes that news aggregators have come to dominate regardless, and that print publishers may have been better to avoid the web altogether (Chyi and Tenenboim 2016).

One of the counterarguments to the "original sin" theory is that news organisations were actually not aggressive enough when they launched their websites. Steve Buttry, who worked in news organisations at the time, argues that the industry's biggest mistake was "responding to digital challenges and opportunities with defensive measures intended to protect newspapers, and timid experiments with posting print-first content online, rather than truly exploring and pursuing digital possibilities" (Buttry 2016).

Many anecdotes about the history of online news overlook the role of advertising in the business models of publishing and the way that the internet affected the advertising market. Throughout the 20th century, the majority of news content was either subsidised by, or entirely funded through, advertising. Most news consumers got their news for free through broadcast channels or paid a small proportion of the overall cost of production to get it printed on paper.

But advertisers were following their target audiences as they began to spend more time online. In 2010, regular consumption of news online in the US surpassed the consumption of news in print, and for the first time, less money was spent on print advertising than on advertising online (Pew Research Centre 2011). By 2016, in Europe, online advertising was overtaking TV advertising too (Fennah 2016).

The internet provided advertisers with a new way to reach audiences. In order to try to keep advertisers as clients, most news organisations launched websites and sold advertising on those as well. But the competition online was much fiercer, and this had an impact on news organisations in three particular ways:

- Many news organisations dominated local advertising markets, allowing them to keep advertising rates artificially high. Competition online reduced advertising rates.
- Online-only competitors did not have the same costs as print and broadcast news organisations (including interest on loans that traditional news organisations had taken out to acquire competing titles). This allowed them to charge much less for advertising and still make a profit.
- Some online services competed not just on price, but on the quality of service they offered to advertisers.

One of the earliest examples of this competition was Craigslist. As people began to use online classifieds sites instead of local newspapers, revenue plummeted: from a high of $19.6 billion for US newspapers in 2000 to less than half that within eight years (Jones 2009). The same story was repeated with classified advertising for jobs, cars, and houses.

Advertising: The half that worked

Display advertising—larger adverts that tended to be placed alongside articles—would suffer a similar fate. It had often been said that half of the money spent on advertising was wasted, but the trouble was that no one knew which half. The major advantage of online advertising was being able to measure precisely *which* advertising worked, and increasingly to only pay *when* it worked.

Early online advertising adopted the model of print advertising and was displayed next to editorial content and sold on the basis of the number of people who would be "exposed" to it. The rate of payment was often called *CPM* (cost per thousand): if an advert had a CPM of £1, and 120,000 people saw that page, the advertiser would pay £120 (£1 for every thousand viewers).

Like print advertising, it was impossible to know whether your advertising worked for those thousands of users, and it became increasingly clear that banner advertising in particular was not very effective. A term was even coined to describe the way that people ignored advertising on websites: "banner blindness".

Partly in response to this, websites began to only charge advertisers when an advert had a measurable impact: *CPC* (cost per click) meant advertisers were only charged every time a person *clicked* on the advert; *CPI* (cost per installation) rates were based on the numbers of times an app was installed as a result of the ad. *CPA* (cost per action or cost per acquisition) was charged every time someone completed a certain *action* (for example, calling a number, ordering a brochure, or subscribing to something), which might be considered *acquiring* a customer. *CPL* (cost per lead) was a similar metric where payment was given for every customer lead acquired.

Google was one of the web services using these metrics, but it also had another advantage: it could target users much more accurately based on their behaviour. In his book *The Search*, John Battelle called this the "database of intentions" (Battelle 2005): while publishers might target people who belonged to broad demographics, Google was able to target individual users who were specifically intending to do things (based on their search terms at least).

While search engines like Google were able to sell advertising based on users' intentions, social networks were able to sell advertising to audiences that were very specifically defined. When people signed up for a service like Facebook, they provided information on their location, age, education, gender, relationship status, and even sexual orientation. As they used the service more and more, further information was added on the books, films, music, and pages that they liked.

Facebook and Google reinforced their dominance further by providing services to publishers that collected data on users even when they weren't on Facebook or Google itself. Google's AdSense, for example, allowed hundreds of thousands of websites to sell advertising. But it also allowed Google to track users of those sites: if you've ever been followed around the web by advertising for a particular product, this is probably why. Google's Chrome browser, and mobile operating system Android, allowed Google to track user activity even on sites that did not use Google ads.

Facebook's "like" buttons could be installed on any site to make it easier for people to share content—but they also gave the social media giant the ability to track user behaviour in the same way. With its acquisition of the ad platform Atlas in 2014, it looked to repeat what Google had done with AdSense.

By 2015, advertising-based websites had another problem: "significant consumer dissatisfaction with online advertising, expressed through the rapid take up of ad blockers" (Newman et al. 2015).

Publishers were struggling to compete in this market, nor did they command the scale of audiences or control over platforms that Google, Facebook, and other internet giants boasted. By 2016, 85 cents of every *new* dollar spent on advertising online was going to Google or Facebook (Herrman 2016), with Microsoft, Yahoo, and Twitter taking up a large chunk of the rest. In the UK, they accounted for 80% of all advertising spend by 2019 (Competition and Markets Authority 2019).

It was clear that the advertising-based model of 20th-century print and broadcast was not always going to work in a 21st-century digital world, for many traditional publishers at least. Advertising might be part of the business model going forward, but it would not be enough on its own.

The rise of native advertising

Without the scale or technological power of Google and Facebook, publishers looked to play to their strengths in other areas. One area that appeared to hold particular promise was "native advertising" or "branded content". Online reinventions of the "advertorial" concept (an advert that appears to look like editorial content), native advertising was typically produced by the media organisation itself, rather than being created by the advertiser. One of the most striking examples of the format was the Wall Street Journal's "Cocainenomics", an in-depth investigation into the cocaine trade which doubled as a promotion for a new Netflix TV series; other examples used familiar editorial formats such as listicles or sponsored discussions.

Promising higher effectiveness for advertisers, and a format that could not be replicated by Google or Facebook, it led to heavy investment from a range of publishers. In 2013, Trinity Mirror attempted to fund its new Sunday People website entirely through native advertising, while the New York Times set up a dedicated branded content unit in 2014 and the Atlantic, Telegraph, News UK, and The Guardian were among dozens of publishers doing the same.

The blurring of editorial and advertising created obvious ethical issues, particularly when editorial staff were used to create "branded content". One study, which found 68% of magazine publishers to be using staff in this way, also reported that 45% believed the biggest threat to native advertising was the "lack of separation of the editorial and the commercial side" (Waldman 2016).

Research by Poutanen et al. (2016) based on interviews with lifestyle magazine editors and news editors explored these ethical issues in more detail. It identified four particular ethical dilemmas facing the "hybrid editors" who had to make decisions relating to native advertising and similar formats:

- Balancing the editorial role and promoting a media brand.
- Balancing journalistic integrity and advertisers' desires.
- Balancing commercial and journalistic content production.
- Balancing disclosure and attractiveness of new forms of online advertisement (Poutanen et al. 2016).

They concluded that what had been common practice in lifestyle journalism would soon become common practice in news media too, but that news media lacked sufficient guidelines to negotiate those challenges.

In addition to its ethical challenges, native advertising was expensive to create, and by 2016, there were suggestions that renewal rates were low as advertisers appeared uncertain that they were getting enough return for the expensive campaigns. In the same year, BuzzFeed was censured by the Advertising Standards Authority for failing to clearly label its article "14 Laundry Fails We've All experienced" as being paid for by the fabric dye manufacturer Dylon. Like so many previous "magic bullets" for publishing's commercial problems, it seemed that native advertising might not be the only solution after all.

Diverging revenue streams

Beyond advertising, publishers had been exploring a range of other revenue streams, including events, webinars, training, analysis, data services, book publishing, promotional services, merchandise, and e-commerce.

The NME was one of the best examples of a traditional publication that reinvented its business model online. One of the first to launch online, in 1996, the music magazine built revenue around ticket sales and merchandise rather than advertising or subscriptions, but it also explored a range of other avenues including events, festival partnerships, and even a radio station.

Some publishers used the work of their writers as a way to move into book and ebook publishing, with Amazon's launch of the "Kindle single" format in 2011 for works between 5000 and 30,000 words providing a key impetus. In the UK, The Guardian launched "Guardian Shorts" with the short ebook *Phone Hacking: How the Guardian Broke the*

Story, the same year as Vanity Fair magazine published theirs on the same topic, while in Canada, The Toronto Star, The Globe and Mail, the National Post, and the Edmonton Journal all experimented with the format.

Events had always been a part of the magazine industry, but it expanded noticeably in that field as print revenues dropped. Future Publishing created a division specifically dedicated to events in 2012; magazine publisher UBM acquired numerous exhibitions companies in Asia, and Time Inc acquired UK Cycling Events to complement its cycling publications. By 2015, EMAP noted that their events business was accounting for 40% of turnover.

News organisations started to explore the same opportunities too: The Texas Tribune was generating one-fifth of its revenue from events by 2013, while The New York Times's conference business was described as "a potential $20 million enterprise" by the public editor (Sullivan 2015), who highlighted the potential ethical issues in sponsored events using journalists on conference panels: sponsors "have no control or role in determining the content of the conferences", she emphasised.

The Covid-19 pandemic created a big problem for those media businesses reliant on events as a major source of revenue—but it also spurred the exploration of virtual events and webinars as alternatives, with audiences that were not limited by geography. When travel restrictions were lifted once again, events teams increasingly adopted a hybrid approach.

E-commerce is another unfamiliar business that publishers have had to get to grips with. Again, magazines were early to experiment, examples ranging from House and Garden partnering to launch the retail site Spirit-Boutique.com in 2011, to Harper's Bazaar's ShopBazaar, but newspapers including the Daily Mail and Telegraph, and websites including Reddit and BuzzFeed also began to sell items to readers. Many more chose to use *affiliate schemes*: this involved including a link that users might follow to buy products on sites such as Amazon or eBay. Any purchases made by readers then generated a small commission for the publisher. Hearst magazines, for example, displayed affiliate links beneath product reviews on Goodhousekeeping.com, and by 2022, Future Publishing was making a third of its revenue from affiliate sales—as much as from advertising.

Many media startups used flagship publications as a way to attract clients for other parts of their business. The creative agency TCO London, for example, publishes the film magazine Little White Lies—but also magazines for clients including Google, the British Film Institute, and Sony PlayStation (Rowlands 2013). Some hyperlocal sites supported themselves in a similar way, using their online profile to attract work in areas such as social media consultancy, web design, and editorial training.

From hard paywalls to meters

Publishers also continued to attempt to persuade users to pay directly for content. *Paywalls*—barriers that forced users to pay before they could access content—were always a trade-off: any income generated by the minority of readers who are willing to pay has to be set off against the extra costs involved in acquiring and retaining subscribers, the impact on search engine rankings, and the loss in advertising revenue through having much smaller audiences. One newspaper said that they took down their paywall because "We traded every dollar in advertising we lost for a nickel in online subscription revenue" (Marsh 2014).

Financial newspapers like the Wall Street Journal and Financial Times were among the first to introduce paywalls, in 1997 and 2001, respectively. With content that had financial value to an affluent readership whose employers often paid for their subscriptions, it was a relatively straightforward proposition. But when mass-market newspapers tried the same approach, it didn't go so smoothly. The LA Times and New York Times launched paywalls in 2003 and 2005, respectively, both dropping them after two years. In 2009, the publisher Arianna Huffington stated that "The paywall is history" (Huffington 2009).

But it wasn't. Publishers regrouped and rethought, and a significant innovation came in 2011 when the New York Times launched a "metered paywall". Instead of requiring all users to pay before viewing any content, a metered or "soft" paywall allowed a certain number of free articles per month, before users were asked to pay to see any more. This addressed two major problems: how to allow readers to "sample" the product before buying it; and the need to maintain large audiences when only small sections of your readership were heavy enough readers to be willing to pay.

In the same year, Google launched its OnePass initiative to help publishers sell subscriptions, and a year later, the Slovakian startup Piano Media appeared to offer similar hope when it created a "national paywall" covering nine publishers in the country. Similar paywalls were set up in neighbouring Slovenia and Poland, and by 2014, Piano Media was being used on over 100 sites across Germany, the US, the UK, and Spain.

Suddenly paywalls were everywhere. One study found almost three-quarters of newspaper companies surveyed were charging readers; it also reported much higher retention rates for the metered paywalls (Marsh 2014).

Still, many did not last, and there was wide variation between types of organisations—broadcast media and online-only publications were unlikely to use paywalls—and between countries. In the UK, only a third of news outlets (including broadcast and online) had pay models by 2019—while in the US, 48% of outlets had a paywall at the same point, and the figure for the EU was 46% (Simon and Graves 2019).

Getting readers to pay: A history of "golden bullets"

Paywalls weren't the only way of allowing readers to fund journalism directly. Crowdfunding, micropayments, apps, and the "tip-jar" model were all used in different ways to fund journalistic projects.

A major year for apps was 2008 with the launch of Apple's app store on iPhones coinciding with paywalls failing to deliver. The launch of the iPad in 2010, and then Apple Newsstand and in-app subscriptions in 2011, only encouraged more to jump on the app bandwagon. With its magazine-like appearance and use in the home, publishers became hugely optimistic that they could return to the old days of selling "editions", as well as old-fashioned full-page advertising alongside it. When Wired magazine launched its app, it sold 100,000 copies of the first edition—more than it normally sold in print. But the second edition only sold 31,000, and sales declined further after that (Benkoil 2010). Magazines including Men's Health, People, and Glamour could only attract iPad readerships equivalent to less than 1% of their print audience (Ives 2010).

Apps had been heralded by some as a "golden bullet": one technology that could solve publishers' problems and turn back the clock to a time when they dominated media consumption. But the problem was that people seemed reluctant to pay for news apps, and even when they downloaded them, did not renew them or use them very often.

What was often overlooked was that phones and tablets were not a replication of the old-fashioned newsstand: there was a lot more competition. The app used more often than any other on a phone or tablet was the web browser, and it already provided access to endless free sources of news. Social networking apps such as Facebook and Twitter, where an increasing number of users were encountering news content, also dominated. What reason, then, was there for users to use yet another app for news? Especially an app that only provided access to one publisher's reporting?

A further problem was quality: many news and magazine apps merely reproduced pages from print editions rather than thinking about how they might play to the strengths of the new medium, and customers were frustrated by performance issues including slow loading and frequent crashes. Some publishers, particularly in the magazine sector, realised it might be more fruitful to look at apps as a separate product entirely. Men's Fitness and Women's Fitness, for example, both launched specific workout apps, while Golf Monthly created an app called Short Game Tips. What Car? magazine created an app to help people put a value on used cars; Uncut magazine launched separate apps about David Bowie, Bruce Springsteen, and The Rolling Stones. In news media, The Economist's Espresso app focused on the essentials; BuzzFeed's app was video driven; and Quartz's app mimicked the behaviour of a text message chat.

Fragmentation and saturation were the next challenges: by 2012, Google's mobile operating system Android (and Google Play Store) rose quickly to become a serious competitor to Apple, meaning that many news organisations now had to create and maintain two versions of their apps. Apple's app store was becoming increasingly crowded, and publishers sometimes had to wait weeks for changes to an app to be approved. In 2013, Apple's iOS7 update sidelined the Newsstand app, making it harder for people to find publications. At the same time, due to improvements in browser technology, it was now possible to create the same experiences with web apps (see the chapter on interactivity for more) using HTML5, so many publishers decided to take control, reduce costs, and do that instead.

By 2015, people were installing much fewer new apps than before, and only using a handful regularly. Apps were still being developed, particularly at larger publications, but elsewhere, attention had begun to turn to platform publishing (see above) and bots that could live *inside* the most popular chat apps.

Print dollars, digital dimes: Micropayments

Many publishers looked towards *micropayments* as another way to get people to pay for content. Unlike paywalls—which required the user to pay a regular fee in order to access all content behind the paywall—micropayments allowed users to pay much smaller amounts for individual pieces of content. The most commonly cited example of a micropayment is paying for individual songs, rather than having to buy entire albums or subscribe for unlimited access.

But when it came to paying for content, micropayments have been notoriously unsuccessful. DigiCash, for example, launched its digital payment system in 1990, but closed in 1998. CyberCash launched in 1994 and went bankrupt in 2001.

Part of the problem was the cost of processing payments, which often exceeded the payments themselves. Another was convenience: many users were unwilling to pay even small amounts for content if they could get the same content more conveniently for free elsewhere, especially when most news content had nothing like the shelf life, or distinctiveness, of music.

But that didn't stop new companies from launching. Two of the best-known experiments in journalism were TinyPass and Blendle. Google also tried to enter the game in 2014 with Contributor. All allowed customers to add credit to their account that would then be used to pay for articles that they viewed on partner sites as they moved around the web.

Some of the more long-lived experiments in micropayments were closer to the "tip-jar" model of payments: instead of being required to make a small payment in order to see content, the "tip-jar" model allowed readers to give money as a sign of appreciation of the content that they were already reading. Flattr, launched in 2010, allowed publishers to display a special button that users could click to donate money from their Flattr account to the publisher. TinyPass's "Applause" tool worked in a similar way.

Going direct: The rise of crowdfunding

Crowdfunding started in cultural fields like music where as early as 2000 the ArtistShare platform allowed musicians to directly raise donations from their fans, but the same techniques were also being used in the charity sector on donation platforms like GoFundMe. Journalism fell somewhere in the middle: users might donate because they believed in a good cause, or because they wanted to back a great reporter.

One of the earliest dedicated journalism crowdfunding projects was Spot.Us, which received funding in 2008 from the Knight Foundation to launch a platform where readers would nominate, and donate to, investigations. In the years that followed, several similar projects were launched: in 2011, Emphas.is, for crowdfunding photojournalism; in 2013, Beacon Reader, Vourno (for video journalism) and Indie Voices (for journalism in the developing world); and in 2014, The Guardian Media Group launched its own project, Contributoria.

By 2016, all had closed, but that did not mean that crowdfunding in general wasn't working for journalists. Media organisations were increasingly using the Kickstarter platform to raise money for stories (Vogt and Mitchell 2016), with one study finding that the 30 single-biggest journalism projects on the platform had raised $21 million between 2012 and 2021 (Majid 2021).

Journalism projects had also been successfully funded on other crowdfunding sites including IndieGoGo and Patreon, and on donation sites including Donar Online. Examples ranged from supporting hyperlocal journalists and factchecking projects to investigations, podcasts, books, and magazines.

In many cases, the lines between donation, membership, and subscription were blurred: donations to crowdfunding projects typically came with different levels of rewards, which included free access to content, merchandise, and access to events or other opportunities. The founders of Dutch startup De Correspondent, for example, raised $1.7 million to launch its publication, but 19,000 donors also became subscribers in the process, while donors to projects on the crowdfunding platform Beacon were rewarded with access to content from *all* projects on the site.

The rise of philanthropy and public funding

The decline in the number of traditional news organisations led to increasing calls for journalism to be treated as a public good worthy of philanthropic funding. Between 2000 and

2011, the number of non-profit news operations outside the US more than quadrupled to over 50 (Kaplan 2013), while there were 70 in the US and Canada alone.

The most prominent of these was ProPublica, founded in 2007 with funding from the Sandler Foundation. In 2010, it became the first online organisation to win a Pulitzer Prize for Investigative Reporting, and the following year, it became the first non-print organisation to win the Pulitzer Prize for National Reporting. In the UK, the Bureau of Investigative Journalism, founded in 2010, followed a similar model, funded by the Potter Foundation. It won the Amnesty Media Awards two years running for its work on the Iraq war logs and deaths in police custody.

Many of those who made millions from new media also decided to use their money to support old media: eBay founder Pierre Omidyar put his money into launching First Look Media, hiring the people who broke the Edward Snowden story. His investment firm Omidyar Network also backed a number of non-profit organisations including News Trust and the Sunlight Foundation. Google established the Digital News Initiative Fund in 2015 with tens of millions of euros to support innovative technology projects around journalism. Notably, it was focused on European news organisations, where the technology giant was facing the most pressure from regulators over its dominance. In the US, a similar role had been played by The Knight Foundation since the establishment of its News Challenge fund in 2007. But an ongoing problem for news organisations and journalists in some countries was the lack of charitable status, which denied news organisations tax-exempt status and prevented them from applying for a range of funds.

The growing importance of analytics in online journalism

Analytics is a broad term used in the media industry to refer to the *process* of measuring user behaviour and using those measurements to try to improve the performance of the organisation. This can include:

- Using analytics to improve journalism
- Using analytics to improve advertising
- Using analytics to improve the product (e.g. the website or app)
- Using analytics to improve marketing (e.g. increase subscriptions or reduce the number of people cancelling subscriptions)

What is measured is normally called *metrics*. For example, you might measure how many people view a story, whether they scrolled down the page or how long they spent on it; whether they clicked on something or posted a comment, or shared that story on social media or elsewhere. Each of those measurements is a different metric.

Metrics can also be used to measure commercial performance: for example, you might measure how many people responded to an ad in some way, which pages on your site people tended to leave on, or what sort of behaviour characterises someone who tends to cancel their subscription. The Times newspaper, for example, now uses a sophisticated analytics system to identify users who are most likely to take out a subscription, the sorts of content most likely to encourage them to do so, and the patterns of behaviour that might indicate they may cancel.

Analytics is full of jargon. Here are some of the key terms explained:

"Page views" are the number of pages that were viewed over the specified period. You might hear people use the term "hits"—but this term can be confusing because it can also mean how many items were loaded by visitors (image, HTML, etc). Avoid this term if you can, and make sure you understand whether the person is talking about page views or something else.

"Unique users" are a measurement of how many separate users are using your site. For example, if you have 100 unique users and 200 page views, that means on average each user is viewing two pages. However, unique users are not always so "unique": identification is normally done by each different *device* accessing a webpage. If the same person accesses your site on their phone, laptop, and tablet, they could be counted as three separate users, unless they are logged in with a user account or identified in some other way. Likewise, if someone accesses your site on Chrome, Firefox, and Safari, or deletes cookies or other forms of tracking.

Bounce rate refers to the percentage of users who leave after viewing just one page: in other words, they "bounce" out of the site. This is generally quite high, but gives you a benchmark against which to test various strategies to try to keep users on your site: if they are working, the bounce rate should go down.

Dwell time or *visit duration* refers to the amount of time a user spends on your page. Dwell time is often used alongside bounce rate: an engaged reader who spent a long time on a page before "bouncing" out of the site is clearly different from the frustrated browser who only spent a couple of seconds before bouncing out. Publishers try to increase dwell time by using formats known to do well on this front, such as longform, liveblogs, data journalism, interactivity, and visual journalism.

These four terms give you the basic information about your audience: how many people visit your site, how many pages they tend to read, for how long, and how many fail to read more than one. The most basic publishing strategy seeks to increase their audience, increase the number of pages each visitor reads, and the amount of time they spend there.

There are many more metrics that are likely to play a role in any publishing strategy. Analytics can also tell you about your *audience*, for example: whether they are new or returning; what type of device they are using; what country they are in; and in some cases, demographic information such as gender, age, and so on. Analytics tools also tell you about *acquisition* (whether they have come from search engines, social media, direct to the site, or through other avenues like email).

Engagement might be measured through a range of metrics, including the time spent per visit or how far down the page they scrolled, through to the proportion of users sharing an article, or actions such as posting comments and voting. The more *engaged* the average user is, the more a publisher can normally charge for advertising.

Analytics tools

There are a number of tools that you can use to measure the analytics of your own site or content. The best-known free analytics service is *Google Analytics* (analytics

.google.com): once signed up to the site, you will be given a piece of code to copy and paste into your website which will then start to measure what happens as people use your site. Paid-for analytics services include *Chartbeat*, which focuses on real-time analytics that are often displayed on a screen in newsrooms so journalists can see which stories are performing best.

Many platforms have some sort of analytics built in: *WordPress*, for example, gives you basic metrics on the number of people who have visited your site each day, with a breakdown by story. *Medium* tells you how many people read your article, how long they spent reading and how many "liked" it. *Twitter*'s analytics dashboard (analytics.twitter.com) shows you your best-performing recent tweets and allows you to download a spreadsheet so you can perform your own analysis on metrics including link or hashtag clicks, favourites, retweets, follows, and media views. You can also download data from *Facebook* pages' "Insights" view or use the dashboard to look at the updates that had the most interaction.

Third-party analytics tools like *Bitly* (bit.ly) and *Buffer* (bufferapp.com) will give you a special URL for any link you want to share, and then track when people click on that link. This allows you to test what times most people click on your link, which social media platforms the links tend to perform best on, or what accompanying text is most effective in getting users to click. Buffer in particular allows you to schedule social media updates to try to maximise their impact.

New threats to journalism online

In January 2013, an anonymous individual contacted the documentary maker Laura Poitras, with a request that they exchange encrypted messages. The individual was Edward Snowden, and that contact with Poitras would not only transform the public's understanding of state surveillance but highlight the challenges facing journalists who wanted to protect their stories and sources in an ever-more connected and networked world.

The first stories from that exchange were published in June of that year. At first, they revolved around the US's National Security Agency (NSA), its collection of millions of phone call records, and its claims that they had direct access to user data held on the computers of Apple, Google, and Facebook. Later, the focus would move to the UK intelligence agency GCHQ, as it was revealed that it had access to the same communications, including users' email contacts and web search history, as well as images from video chats.

Around the world, governments were passing laws to make it easier to monitor citizens. Between 2013 and 2014, 19 of 65 countries studied by Freedom House passed new legislation that increased surveillance or restricted user anonymity (Freedom House 2014).

The revelations had major significance for journalists: "metadata" about phones and internet communication revealed very detailed information about the movements of individuals, what webpages they visited, and who they communicated with. Data was collected even when phones were switched off. This made it possible to identify who journalists were making contact with, not only at the time but retrospectively too. And it wasn't just the security services who had access to this information.

In early 2014, this fact was brought home to UK journalists when it was revealed that a police force had used the Regulation of Investigatory Powers Act (RIPA) to obtain the phone records of reporters and editors at The Sun newspaper. Soon journalists realised that other public bodies had done the same: in total, 19 police forces had accessed journalists' communications data in three years, spying on hundreds of sources. UK industry publication Press Gazette was moved to launch a "Save Our Sources" campaign: it helped lead to some amendments to the law, but by the end of 2016, a new law was about to give public bodies even more powers.

The Investigatory Powers Act required internet service providers to keep details of all webpages visited by users throughout the year and gave authorities access to phone records and the ability for mass interception of communications of targeted groups of people. Although there was some requirement for authorities to get permission to access journalistic sources, there would be no opportunity for news organisations to argue their case against this, and journalists would not be aware that their communications had been compromised.

The importance of journalists being security-conscious in their communications was now paramount: the traditional legal defence was becoming something of the past. What's more, the increasing use of wearable technology, connected home and car technology, workplace surveillance, and the rise of smart cities would only make it more difficult to avoid movements being tracked.

Hackers targeting hacks

Journalists and media organisations were not just being targeted by state authorities. In 2013, the entertainment website E! Online and Associated Press both had social media accounts hacked by the Syrian Electronic Army. The New York Times admitted its computers had been attacked in order to obtain data and New York Magazine was reportedly hacked over a story about women claiming to have been raped by Bill Cosby. The New York Times, Global Post, CNN, and Forbes were all targeted by "spear phishing": highly targeted emails designed to fool people into passing on their login credentials (Freedom House 2014).

Reporters might be hacked for a number of reasons. In some cases, social media accounts were hacked in order to spread misinformation or propaganda; sometimes they were used as attacks against the news organisation itself; in other cases, attacks were designed to collect information from within the news organisation. In many cases, journalists and publishers might be hacked without realising it: journalists' computers at Al Jazeera were remotely accessed without anyone at the organisation finding out until years later. More broadly, data breaches at social media platforms including Twitter, Tumblr, LinkedIn, and Yahoo! compromised the security of millions of users, including journalists.

Commercial organisations were caught at it too: the Leveson Inquiry into phone hacking in journalism said that the same practices were being used by blue chip companies. In 2014, Microsoft accessed a blogger's email to identify the source of a story about the company; and in 2015, Vodafone Australia admitted that one of its employees accessed a journalist's phone records in an attempt to uncover her sources.

And news organisations might be aiding hacking without realising it: in 2009, a malicious link was inserted in an email sent by Reporters Without Borders to its supporters, infecting the computers of those who clicked on it. The Investigatory Powers Act also gave security services similar powers not only to hack into computers and other devices, but to compel organisations to assist them in doing so.

Information wars: Fake news, sockpuppetry, and propaganda

With information becoming increasingly digital, the potential to manipulate that information increased too. When organisations or individuals created fake profiles and posted comments or reviews to push a particular agenda, this was given its own name: "sockpuppetry". Examples ranged from posting favourable reviews of your own book and attacking commercial rivals to attempting to undermine critical scientific reports or spreading propaganda.

A whole industry grew up around paying people to post positive reviews of particular products, comments in blogs and forums, or edits in wikis. In 2013, Yelp deemed 20% of its reviews "suspicious" and Wikipedia banned 250 accounts it suspected of the practice, but this was the tip of the iceberg: sockpuppets were increasingly being automatically created and managed by a range of actors, including government agencies (Bakir 2015) and in political campaigns. "Astroturfing" was used to describe a similar technique: PR and lobbying companies creating the appearance of fake "grassroots" campaigns to manipulate the media.

Governments began to use the same techniques—and journalists were falling for it: in 2017, The Guardian reported that "Members of a Russian 'troll army' were quoted more than 80 times across British-read media outlets before Twitter revealed their identity and banned them" (Hern, Pamela Duncan, and Helena Bengtsson 2017). Facebook was creating teams specifically to stop governments from using its platform to interfere in the elections of other countries.

A year earlier, the US election had drawn attention to the problem of "fake news". Some fake news sites were simply propaganda: created to generate anger that might influence the election in a particular direction. Others were motivated by the commercial gains to be had by driving large amounts of traffic generated by those same emotions: in Macedonia, a small cottage industry appeared to have sprung up based on using fake news sites to generate advertising revenue from Facebook and advertising widgets.

Most of the criticism over fake news was aimed at Facebook. Their decision earlier that year to fire the human editors overseeing its "Trending Topics" section had led to fake stories appearing in that section within days. Other commentators highlighted its decision to give less weight to publishers and brands in its news feed algorithm. One BuzzFeed investigation into over 1000 posts on "hyperpartisan" Facebook pages found that "the least accurate pages generated some of the highest numbers of shares, reactions, and comments on Facebook", and more engagement than mainstream news pages (Silverman et al. 2016). By November, Mark Zuckerberg was forced to announce plans to tackle fake news through improved reporting and detection systems.

The decade up until that point had seen a significant increase in the number of sites and sections devoted to factchecking and verification. Between 2008 and 2012, the number of factchecking stories in the US increased by more than 300% (Graves et al. 2015), while the number of factchecking sites globally tripled over the same period (Lowrey 2015).

Factchecking had historically been done before publication, both by reporters—when presented with claims by interviewees—and by subeditors ("subs"), who checked journalists' copy before publication. But with sources able to publish their claims directly to audiences, and audiences able to spread misinformation without any checks in place, the focus shifted outwards. Factcheck.org launched in the US in 2003 as a standalone website, and in 2007, the St. Petersburg Times (now the Tampa Bay Times) launched PolitiFact with the Poynter Institute. Two years later, it won a Pulitzer Prize. Existing news organisations also added factchecking sections: Channel 4 News launched its Fact Check blog for the

2005 UK election, but by 2010, it had become a regular feature. Similar initiatives were launched in dozens of countries, from Turkey, Iran, Japan, and India to Ukraine, Georgia, Singapore, Chile, and Australia. In Brazil, there have been no fewer than nine separate factchecking websites.

At the same time as Facebook was being asked to take a more active editorial role in blocking fake news stories, it was also being accused of censorship. In September, the social network became embroiled in controversy after it removed a post by a Norwegian journalist featuring the Pulitzer-prize winning Vietnam war "napalm girl" photograph. The editor-in-chief of the Norwegian newspaper Aftenposten, Espen Egil Hansen, wrote a front-page open letter to Mark Zuckerberg. In it, he acknowledged that Facebook's editorial control superseded his own and accused Zuckerberg of abusing his power. "I am worried that the world's most important medium is limiting freedom instead of trying to extend it, and that this occasionally happens in an authoritarian way", he wrote (Hansen 2016).

The same year, Facebook complied with a police request to deactivate a live video stream from a user engaged in a standoff with officers, suspended live footage from protests, and disabled Palestinian journalists' accounts. In most cases, the social network was responding to a legal request, but where a traditional publisher might mount a legal defence there was little reason for Facebook or other technology companies to do so. Journalists and news organisations were realising that they had ceded at least some editorial independence to the platforms that they published on.

Concerns about misinformation grew globally: by 2022, 62% of people were concerned about false and misleading information (Newman et al. 2022), and increasing numbers began to distrust the media.

A decline in trust—and increasing abuse

While misinformation was a real phenomenon, the term "fake news" was also used to attack genuine reporting and undermine trust in journalism. In the US, Donald Trump's use of the term to attack negative press reports had a marked impact on Republican supporters: the proportion of consumers who trusted news "most of the time" dropped from 25% to 14% between 2015 and 2022 among those on the right of the political spectrum—while among those on the left, it rose from 35% to 39% (Newman et al. 2022). In the UK, Government attacks on the BBC as being "liberal" or "anti-Brexit" contributed to a similar decline in trust in that organisation, from 75% to 55% over five years.

This decline wasn't isolated: interpersonal trust was also declining at the same time, as was trust in other institutions, and research across four countries suggested that trust was "in part driven by factors external to the news itself [including] the degree to which people are bonded to other individuals and specific groups in society, and how satisfied people are about the way democracy is working" (Toff et al. 2021).

One ugly dimension of both the decline in trust and the weaponisation of information was the rise of online abuse (Vogels 2021). A survey of British journalists in 2020 found that more than half had experienced online abuse in the last year (NUJ 2020); a similar survey of media workers in Canada found 65% who said they had experienced harassment online in the past year (Sethi 2021). Two-thirds of women in a survey by Reporters Without Borders across 32 countries said they had been victims of harassment (Reporters Without Borders 2018). In the UK, the government launched a National Action Plan for the Safety of Journalists.

The George Washington University professor Silvio Waisbord attributed the rise in hostility to the demonisation of the media, the rise of extreme right-wing cultures, and the increasing public accessibility of journalists, arguing that abuse should be understood as "mob censorship … bottom-up, citizen-vigilantism aimed at disciplining and silencing journalists" (Waisbord 2020). Research elsewhere suggested that it was having an effect: the "chilling effect" of online harassment, one report concluded, "prevents women journalists from serving in their capacity as a watchdog on government and other institutions" (Carlson and Witt 2020); other research concluded that "repeated online harassment could lead to cases of self-censorship as journalists avoid topics they know are likely to result in backlash" (Holton, Belair-Gagnon, Bossio, and Molyneux 2021).

Researchers Michael Walsh and Stephanie Baker saw the technical qualities of social media platforms contributing to online hostility too—specifically "deindividuation (the feeling of being 'freed' from one's own identity)" (Walsh and Baker 2022) and, on Twitter, the forced brevity of character limits.

They suggested that the desire of participants to "win" online exchanges led to interactions on those platforms being more similar to a police interrogation or a court case than civil or collaborative exchanges.

By the 2020s, this rise in hostility was prompting many news organisations to create new roles to support staff, new policies, and new tools. In 2021, UK regional newspaper group Reach hired the first online safety editor, Dr Rebecca Whittington, to "support Reach staff who are receiving online abuse and work on measures both internally and with external partners such as social media platforms to try and prevent further harassment" (Tobitt 2021). The New York Times appointed María Salazar Ferro as director of newsroom safety and resilience the same year, leading the organisation's "threat response team" (Benton 2022).

Policies at news organisations changed in two ways: first, new policies were created specifically addressing how the organisation should respond to harassment (Ishisaka and Gawlowski 2022); second, existing policies—particularly regarding social media—were updated to reflect the increasing toxicity of the working environment online. News organisations that might previously have required journalists to use social media as part of their job, for example, now said that it was "purely optional" (Benton 2022).

But they also moved to advise staff themselves not to become hostile online: The Guardian, for example, updated its guidelines to warn that "staff who engage in public slanging matches with each other on Twitter could face disciplinary action" (Ponsford 2022) while a "social media meltdown" by Washington Post staff led to a memo emphasising: "We do not tolerate colleagues attacking colleagues either face to face or online … The newsroom social media policy points specifically to the need for collegiality" (Klein 2022).

Facing criticism for their role in facilitating online abuse, technology companies started to take action too. Twitter's decision to increase its character limit from 140 characters to 280 helped improve the civility of discussion (Knowles 2018; Walsh and Baker 2022), and the organisation put out a call for ways to measure "conversational health" on the platform (Kraus 2018). Spurred on by the pandemic, the platform began to label false or misleading information in 2020, and in 2021, it introduced a "Safety Mode" "that temporarily blocks accounts for seven days for using potentially harmful language—such as insults or hateful remarks—or sending repetitive and uninvited replies or mentions" (Doherty 2021). The banning of Donald Trump from the platform in January 2021—"due to the risk of further incitement of violence"—was a landmark event, and by 2022, it was recommending third-party apps for preventing harassment too.

Facebook was also taking steps to show it was trying to protect journalists: in 2021, it announced it would count journalists as "involuntary" public figures—meaning that they would be more strongly protected than voluntary public figures, such as politicians and celebrities—and "increase protections against harassment and bullying targeted at these groups … they cannot call for the death of a private individual, or now a journalist, under Facebook's policies" (Culliford 2021).

Google had a dedicated unit—Jigsaw (jigsaw.google.com)—focusing on disinformation, censorship, toxicity, and violent extremism. It worked with journalists and activists with large Twitter presences, and partnered with Twitter, to launch Harassment Manager, a codebase for documenting and managing abuse.

Selective news avoidance

The barrage of major news events in the years leading up to and after 2020 saw the emergence of a further change in news consumption habits: selective news avoidance, whereby consumers consciously limited their exposure to news or certain types of news. By 2022, the Reuters Institute Digital News Report recorded that selective avoidance of news had doubled in Brazil and the UK, to around half of respondents (Newman et al. 2022).

But this was not always combined with a reduction in news consumption. The same report noted:

> People can make a conscious decision to moderate their news use—or perhaps coverage on specific topics—while still regularly checking in. In Poland, around 40% of people who accessed news several times a day during the conflict also say they sometimes or often actively avoid the news.

Research elsewhere was also quick to note that the most vocal and vociferous critics were actually "selectively trusting" of certain news brands, while a separate category of "generally untrusting" consumers "tend to be the least knowledgeable about journalism, the most disengaged from how it is practised, and the least interested in the editorial decisions and choices publishers and editors make daily when producing the news" (Toff et al. 2021).

The causes of this avoidance were complex: decline in trust (particularly among those on the right of the political spectrum) and the toxicity of online discussion were just two factors; others included feeling overwhelmed by news and powerless in the face of major global events; while some felt that ongoing coverage of particular political stories, or the pandemic, were repetitive, or hard to understand (Newman et al. 2022). The need for explainers to help make sense of complex stories, and for more positive and empowering "solutions journalism", were both identified as potential strategies for addressing this (Newman et al. 2022).

What was harder to untangle was how much news avoidance was tied to the sheer volume of news that consumers were now being exposed to through multiple channels. One paper based on respondents across 35 countries found that while people were *less* likely to avoid news if they used social media alongside other platforms, those who "*relied* on social media as their main source of news were significantly more likely to say they were actively avoiding news" (Toff and Kalogeropoulos 2020).

Protecting your sources and stories online

Information security ("infosec") is important to every journalist, whatever field they work in. Anyone with a large audience, or who has access to colleagues and newsroom systems, can be a target. If you're an entertainment reporter or you only edit other reporters' material, it can be easy to assume that you are not at risk. But that's not necessarily the case. But equally, you don't want to paralyse your workflow by incorporating overly technical protection systems.

The first step to addressing your security online, then, is to identify *why* you need to *think* about security online.

A *threat model* evaluates the security risks in your work. It involves answering four simple questions:

- What information do you not want other people to know? (This can be anything from passwords to contacts' details, data, and documents, but can also include colleagues' details or details of your organisation's passwords).
- Why might someone want that information? Who?
- What can they do to get it?
- What might happen if they do?

Two key pieces of information that are likely to be of interest to others are the passwords of your social media accounts and those of your publication or programme and information held by colleagues in other roles. "Phishing" attacks, for example, often work by infiltrating minor employees' accounts first and then using those to send emails to the "true" target. So even if you think your information doesn't matter, you may still be a target.

If you are working on sensitive stories—anything involving protestors or activists, but also fields like health, crime, and finance—then you will need to consider the possible threats to your security, and what steps you might need to take to protect that.

Use multiple passwords, make them strong, and use two-factor authentication wherever possible

One very basic security practice is to make sure that you use strong passwords, and don't use the same password for different accounts (companies including LinkedIn, Tumblr, and Twitter have all had their computers hacked and customer details leaked).

One way to create a strong password is to use a "pass phrase" instead, which uses a combination of words together. If you find it difficult to remember multiple passwords for multiple accounts, consider using a *password manager*.

Many accounts also offer *two-factor authentication* whereby a second code is required when you log in (typically it is sent to your mobile phone).

If your threat model suggests that you need an extra layer of protection you can explore *encryption*. This is the process of "encoding" something so that people cannot read it unless they have the "key" to decode it. You can encrypt an email, a message, or a document so that if it is intercepted it can still not be decoded and read. Only the *contents* of messages are encoded: it will still be possible to see who is contacting who, when, and (in emails) with what subject line, without having a decryption key.

For sources who need extra protection—whistleblowers or protestors, for example—advise them not to use devices and accounts owned by their employers to contact you: it is common for a log to be kept of all webpages visited, emails sent, and documents printed, for example.

For more guidance on information security, you can download the free ebook *Information Security for Journalists* from www.tcij.org/resources/handbooks/infosec.

Summary

After more than three decades of online journalism, the pace of change shows no sign of slowing. Online journalism's early days based on adding links and images to text now look quaint when compared with the multiplatform, mobile-optimised, visual, and interactive reporting that is now standard.

But it is not just the form of storytelling that has changed. The business of journalism in the 21st century is very different to the way that it operated for a century before that. There are fewer certainties—advertising and charging readers are no longer the reliable or obvious models that they once were—but there are also now more opportunities available to those who wish to build a business around an audience, from events and crowdfunding to merchandising and e-commerce.

The economics and ethics of publishing now require more thought. Most journalists agree that involving users improves their journalism, but by inviting your community to publish on your platform, are you helping to connect and amplify them—or exploiting their free labour? Do new revenue streams such as native advertising and affiliate links also bring new potential conflicts of interest that need to be addressed?

It is clear that the bar has been raised in terms of what is expected of individual journalists. It is no longer enough to simply relay information from one part of society to another; journalists are expected to be expert curators and verifiers, data journalists, or multimedia producers. Our ability to protect our sources now relies not just on institutional support, but on technological savviness. And we must earn our readers' trust and engagement—we cannot take it for granted.

As new opportunities continue to open up to publishers, the one skill above all that journalists will need is *adaptability*. To tell the most important stories, to the right audience, on the best platforms, and in the best ways—that is what journalists do. But it is also about using the experience of the newsroom—and an awareness of history—to learn from those mistakes that have been made and avoid repeating them.

Activities

Archive research

Chart the development of a major news site such as nytimes.com by using the web to go back in time.

1. Go to the waybackmachine site at www.archive.org (which stores 150 billion pages).
2. Using the search engine field type in the web address of your site.

3. By clicking on the years displayed you will build up a picture of how many pages, multimedia features, and designs the site has had.
4. What multimedia features did it use to report big news stories such as the 9/11 attacks in New York?
5. Try to answer the following questions: in which year did it launch interactive features, forums, blogs, podcasts, video, user-generated content, data journalism, liveblogs?
6. Now use the search engine again to track the history and development of the wayback-machine site!

Platform publishing

Identify a story that has recently been covered by a number of news organisations and explore how they treat it differently on different platforms.

1. Look at how they have reported it on their website.
2. Look at how they have reported the same story on their social media platforms: are they doing it in a "native" way, different to their website version? Or is it merely "promoting" or republishing the same story?
3. Repeat the process for chat platforms such as Snapchat.
4. Has any coverage been produced, or commissioned, by the platforms themselves?
5. How might you report a story "natively" on platforms other than a website?

Evaluating revenue streams

Pick a publication that interests you and explore how it is funded. Ask these questions:

1. Does it charge users to access content, for example, through a paywall?
2. What sort of advertising does it sell? Does it sell native advertising? Look for their media pack online: this normally includes information such as advertising rates and formats. Also search for industry coverage of that publication's initiatives in advertising using publications such as InPublishing, Journalism.co.uk, and MediaBriefing.
3. Does the publication sell merchandise or have an e-commerce facility?
4. Does the publication use affiliate links so that it earns money whenever someone clicks to a product on another site and buys it?
5. Has the publisher ever used crowdfunding or been awarded funds from projects like the Google Digital News Initiative? (Again, try searching the industry press for mentions of the organisation and those terms).

Researching crowdfunding

Explore what makes a successful or unsuccessful crowdfunding project. Look for journalistic projects that are using, or have used, a crowdfunding platform like Kickstarter. Try to identify:

1. What makes for a compelling project—and which ones don't work very well?
2. Find articles about and by people who have managed crowdfunded journalism projects. What are the potential problems and pitfalls they identify? Can you think of any others?

3. What would make you donate to a project? And why would you choose not to?
4. If you were to plan a crowdfunded journalism project, what sort of project would have the best chance of success? Put together a "pitch" for your crowdfunding page.

Exploring analytics

Publish a story on Medium or WordPress. Use a URL shortening tool like Bitly to get special shortened links that you can share on different social media platforms. Then share those links across different social media, email, and chat apps.

Now compare the metrics that you get: how do Medium's metrics differ from WordPress's? What extra context does Bitly give you? What information is missing—and how you might find that?

Now, ask yourself: what is your objective as a journalist? Why? And how might you measure that? What issues, dangers, or problems might there be in that approach?

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3 Finding leads and sources online

Chapter objectives

This chapter will cover:

- The importance of search skills for speed and depth in reporting
- Finding people to follow on social media
- How to "triangulate" between documents, people, and data
- How to keep up to date with your field—and get leads to come to you
- Setting up your dashboards to monitor key sources
- The importance of diversity in sourcing
- Advanced search techniques for finding key authoritative information
- Finding experts and representatives online
- Finding case studies
- Finding witnesses: advanced search on Twitter
- Human interest stories: identifying newsworthy Facebook pages and forums
- What is open source intelligence (OSINT) and how it's used in journalism

Introduction

Journalism combines two core skills: newsgathering and production. In order to tell stories, we must first *have* a story to tell—and that means identifying potential "leads", or story ideas, then collecting the information required (the "sources") to tell that story clearly and accurately.

A large part of reporting, then, involves engaging in a range of information-gathering activities, from checking social media feeds and alerts to conducting interviews; from background research and reading new reports to analysing data; and from reading press releases to attending conferences, meetings, or protests.

As we do this, we are trying to make sure that our story is *new* to our audiences in some way—because we know those audiences are engaging in a wide range of information-gathering activities too. The sports fan can read statements on their team's official website; the fashion fan can follow major brands on Instagram and Snapchat; or parents might be following their local school's Facebook page. In some cases, non-news organisations will

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even actively compete with news organisations to "scoop" them in being the first to their own story (Sherwood, Nicholson and Marjoribanks 2016).

The skills required to find information that's new to that audience—and deal with the proliferation of information available to us—have expanded just as much as the technical skills required to tell those stories. In this chapter, we explore some of those skills and the critical issues to consider as we navigate journalistic sources.

The three categories of source

Two centuries ago, journalists were called *reporters* because they drew their information from official *reports*—documents. Then in the late 19th century, a new source became part of journalistic practice: *people*, as interviews and eyewitness accounts were added to news articles.

The late 20th century saw reporting undergo another expansion in sourcing, as *data* was added to the journalist's toolkit. Although strictly speaking another form of document (spreadsheets, webpage tables, or data files), data's role as a source has been qualitatively different enough to merit being treated separately (see the data journalism chapter for more on this).

Considering sourcing along those three dimensions—people, documents, and data—can be particularly useful when planning sourcing (Figure 3.1). It can ensure your news-gathering is original and multi-layered and, in particular, it can help you think about how each type of source can lead to the another:

- Documents can lead you to people: an obvious example would be a webpage (a document) listing contact details—but you might also use a report or presentation to lead you to an expert (the author), a document about a meeting, or livestream to identify those people who were present.
- Conversely, people can lead you to documents: an expert might tell you about a piece of research or an interviewee might mention a message they received or a file they saw.

Figure 3.1 Triangulating the three categories of sources

- In the same way, people can lead you to data: supplying you with a spreadsheet or pointing you to a table in a report, for example.
- And data can lead to people: sorting data to find the biggest or smallest values can help you identify a potential case study or the place you need to visit to conduct interviews. Data often comes with contact details of someone you can speak to for more context.
- Documents can lead you to data, too: it might be included in a table or appendix, linked, or referred to.
- And finally, data can lead to documents: for example, you might take a term in a dataset as a starting point to undertake background research, or use data to direct a Freedom of Information request for documents on a particular problem (e.g. numbers getting worse).

Knowing how to "triangulate" between the different types of sources is a key skill for a journalist—it will improve your reporting and help unlock new story leads.

Considering sourcing along these three dimensions can also help us think more critically when considering different online source strategies. For example, although the internet can connect us with people through video calls and direct messaging, the world wide web is fundamentally a web of *documents*—and social media updates or profiles, for example, are documents, not people, a distinction that is important to bear in mind in ensuring that your reporting includes an original human element.

It can also help us distinguish between different types of story leads: for example, a newsworthy statement made by a celebrity, politician, or CEO might be made in document form (a tweet or a video on Instagram, for example), or it might be made in person (while conducting an interview or speaking at an event). The public or non-public nature of the statement will shape how you proceed as a journalist: if the statement is non-public then it will be new to your audience and you may have more time to work on the story; if it's public, however, some of your audience will have already seen it and you may need extra information to add more value—and distinguish it from competitors reporting the same statement.

The importance of diverse sourcing

> I noticed that when I looked around the newsroom, I couldn't see anyone that looked like me. It was not something that bothered me in the past. I thrived on my originality. I'd never seen myself as a disabled journalist, rather a journalist who has a disability.
>
> Saad Bashir, in *Everybody In: A Journalist's Guide To Inclusive Reporting For Journalism Students*
>
> (Calver, Kemp, and Ryder 2017, p. 8)

A growing body of research has found that audiences don't feel news organisations represent them (Gallup and Knight Foundation 2020; Gottfried and Barthel 2020) or cover their gender, ethnicity, class, or geographical area fairly (Fletcher 2021)—and with good reason: newsrooms fail to reflect the diversity of their audiences along a number of dimensions, from ethnicity (Grieco 2018; Nielsen, Selva, and Andi 2020), political leaning (Thurman, Cornia, and Kunert 2016), and class (Kirby 2016; Merrill 2021) to gender (Allsop, Ables, and Southwood 2018; Andı, Selva, and Nielsen 2020), sexuality, and disability (Cumberbatch et al. 2018). As Head of News and Current Affairs at the UK's

Channel Four put it in 2019. “If yourselves are not representative of your audience or your readers, then you cannot understand and represent their interests” (Byrne 2019).

This has a direct impact on the range of sources that journalists use—limiting the stories that are covered as a result, and how well they are reported (Soon-Shiong 2020). News organisations have begun to act on this (Cherubini, Newman, and Nielsen 2020).

The BBC’s 50:50 initiative (bbc.co.uk/5050) is one example of that: the project was launched within the BBC London newsroom in 2017 with the aim of ensuring that news reporting had equal male and female representation, and has since expanded both inside the organisation, with 670 different teams now participating, and outside the BBC: more than 100 partner organisations in 26 countries are part of the project, including ABC News in Australia, Voice of America, and TVNZ (United Nations 2021). The project has also expanded beyond gender representation to include representation of ethnicity and disability.

Conducting a “source audit” can be a valuable exercise as a journalist or newsroom to help understand where your sourcing can be improved. This involves measuring the characteristics of sources—such as gender, disability, race, sexuality, age, class, and location—and comparing that information to data on your local community (often available from the national census or local bodies). You can find an example of a script used by NPR, for example, at training.npr.org/wp-content/uploads/diversity-script.pdf and read articles about how other news organisations have done it by April Simpson (2018), Andrea Wenzel (2019), and Celeste Sepessy (2020). Some organisations have been moved by the process to compile their own databases of sources to help journalists, such as NPR’s Diverse Sources Database (training.npr.org/sources).

The free ebook *Everybody In: A Journalist's Guide to Inclusive Reporting for Journalism Students* (Calver, Kemp, and Ryder 2017) also provides insights, tips, and guidance from a range of working journalists on ensuring your sourcing reflects the diversity of audiences you are serving. As then-BuzzFeed deputy news editor Elizabeth Pears writes in the book:

> In journalism, who you know is what you know … It means journalists are either limited or strengthened by their range of contacts … Who you know is who gives you information or access to an exclusive. Who you know is whose stories you tell and how; who you include in your reports; and who you book on your shows. Who you know is often whose work you read and, therefore, what you learn.
>
> (Calver, Kemp, and Ryder 2017, p. 13)

The same awareness should be maintained when using search engines and other resources: Safiya Umoja Noble’s 2018 book *Algorithms Of Oppression* explores how search results, rather than being neutral sources of information, actually reflect institutional and commercial biases (Noble 2018), while legal considerations also play a role (Peston 2014; Ball 2014).

For a visual illustration of these biases, search Google Images for the word “beautiful”. Then search for the word “professor”. Try to identify what types of people are missing from the results—and why that might be. Then ask how those same forces might affect your research more generally—who is missing from the top results, and how can you fulfil the journalistic role of giving a voice to those people?

Making leads come to you: updates and personal newswires

> In 1846, five New York City newspapers funded a pony express route through Alabama to bring news of the Mexican War north faster than the U.S. Post Office could deliver it. And The Associated Press was born.
>
> —Associated Press: Our Story

Journalists have been using newswires for over 180 years, and agencies such as Reuters, Associated Press, United Press International, and Agence France-Presse (AFP) now provide thousands of stories, videos, and images every day to newsrooms around the world.

With the rise of public relations in the 20th century, a new type of agency was born: the press release distribution service. Companies like Business Wire and PR Newswire mimicked the structure and appearance of traditional news agencies, but with one key difference: the content was paid for not by news organisations, but by organisations wanting to promote themselves.

Press releases raise important ethical issues for journalists. As Patricia A. Curtin puts it: “Public relations practitioners provide information subsidies to the media on behalf of their clients to influence the media agenda and potentially affect public opinion” (2009, p. 53). In other words, a news organisation’s independence in choosing the most important stories and collecting the information to report them can be compromised by the availability of free content paid for by someone else.

In a modern newsroom, journalists don’t only draw on news agencies and press release services—they also, effectively, subscribe to their own personalised newswires: updates through social media platforms, email alerts, RSS readers, and other tools.

Those personalised newswires often combine multiple types of content:

- Updates from news organisations and their journalists
- Updates from organisations and their representatives
- Updates from individuals

This combination complicates things for the reporter: updates from organisations and their representatives are, essentially, a modern version of the press release, raising the same questions: are you picking a story lead that seems most important? Or simply picking up information which is easiest to access and takes the least time to write up into a story?

Making sure that you follow a wide range of sources on social media is a key step in ensuring you are retaining editorial independence and not merely repeating what a well-resourced media team is putting out online. And seek out people who *don’t* have a presence on social media: remember that women and people from underrepresented groups are more likely to suffer abuse online and may be less likely to post updates or have a publicly accessible profile as a result.

Likewise, updates from individuals should be judged differently from updates from other journalists and news organisations: information may not be verified or put into context—those things are *your* job! Once you’ve identified a potentially newsworthy update, you’ll need to do some extra reporting to turn it into a story, including the following:

- Establishing whether the story has already been reported, and if so, whether you can ‘move the story on’ with some new information (such as a reaction from someone in a position of power).
- Verifying that information is correct by checking other relevant sources.
- Gathering extra information through interviews and background research.

Closer look: Four tips for finding useful Twitter accounts

Here are five techniques you can use to find the right people to follow on Twitter.

Search Twitter biographies only

There are a number of tools for searching biographies on Twitter, such as FollowerWonk (make sure you select the "bios" option from the menu).

Try a range of terms: not just likely job titles but interests, organisation names, locations, and other keywords.

Find related lists

It's likely that someone else has already created a Twitter list covering the same or a related area. One way to find these is to look at the users you've already found and see what lists they've been added to.

You can find these by adding /lists/memberships to the end of the user's Twitter URL. The resulting URL should look like this:

https://twitter.com/USERNAME/lists/memberships

…but with the username instead of USERNAME. All the public lists that I've been added to, for example, can be found at twitter.com/paulbradshaw/lists/memberships.

You can also try to search for Twitter lists themselves. One way to do this is to use an advanced Google search like this (replacing YOURKEYWORD with a keyword, e.g. "politics" or "fashion"):

site:twitter.com/*/lists/inurl:YOURKEYWORD

Or try broadening the search to something like this (replacing the phrase with your own):

site:twitter.com/*/lists/"mental health"

This will bring back any list pages where one of the tweets mentions that term. Obviously, this depends on what people are tweeting about at that moment in time.

Search discussions and hashtags

As you start to follow people in your field, you'll come across some terms and hashtags repeatedly. Try searching Twitter for the ones that are relevant to your field, such as particular locations or pieces of jargon. Watch out for scheduled live chats too, where members of a community use a hashtag to host a discussion at a particular time each week.

You can also use a tool like Hashtagify.me to find hashtags related to ones you already know, while BuzzSumo will allow you to identify "influencers" around keywords or phrases.

Following followers

Finally, look at the people you've already found and who they're following and listing.

When you're logged in to the Twitter website it will sometimes show a box on each profile page showing "similar accounts", but clicking on "Following" and "Followers" will give you more suggestions—or you can just add those words to the Twitter account URL: a list of accounts that The Guardian's Patrick Butler is following can be found at https://twitter.com/patrickjbutler/following, for example.

Alerts and updates via email

While social media can be useful in providing updates, it can be easy for noteworthy updates to be buried under dozens of updates that have no journalistic value. Email alerts, in contrast, will stay in your inbox until you've checked (or deleted) them. These can be created in a number of ways:

- Alerts providing updates directly from an organisation
- Alerts for when a webpage is changed
- Alerts for when a search engine finds a new match to a search

Search for "email alerts" or "subscribe for updates" and the name of key organisations in your area of interest to see if they provide an email update service. Many police authorities and health bodies, environmental authorities, and local and national governments offer email updates: for example, Congress.gov offers email updates when a bill, nomination, member profile, or committee profile has been updated with new information, or when a saved search has new or changed results (congress.gov/help/alerts), and the UK Government's Research and Statistics page (gov.uk/search/research-and-statistics) offers email alerts for new documents.

Some of these alerts are no different to press releases, but some relate to events (e.g. a vote or meeting) and some relate to releases of new documents or data, which might be newsworthy (e.g. "new report/data says X").

Look out for transparency activists or organisations providing updates on a public body: TheyWorkForYou does this for activity in the UK's parliaments, while in the US, the Sunlight Foundation's Open States project (openstates.org/about/subscriptions) allows you to "track all legislation that has been introduced on a given topic as well as subscribe to updates on existing bills".

If an organisation doesn't provide its own alerts for updates, you can create your own email alerts to notify you whenever a specific webpage is changed using services like Visualping and Versionista. This can be particularly useful for pages where organisations regularly publish new information: for example, sports teams' results pages, public bodies' meeting listings, and Freedom of Information (FOI) disclosure logs. Bear in mind that alerts can be patchy, so it is still worth checking manually every so often.

A "search" alert will update you whenever Google discovers something new fitting a particular search query. You can create them using Google Alerts or Talkwalker, and they can be especially useful for very specific queries such as searches for a particular event, person, or organisation. Any time Google finds something new related to that, it will let you know.

If you are a music journalist planning to interview a particular band or report on a particular music festival, for example, you might set up alerts for their name so you are aware of everything coming out in the weeks before you attend the event or conduct that interview. Or if you're planning a big story on light pollution, you might create an alert for any new PDF files mentioning "light pollution" that Google finds (see the section below on advanced search operators for more on how to specify file format). But remember that Google doesn't know when every document is added to the web so just because Google hasn't seen it doesn't mean it doesn't exist!

There are also services that will update you when someone changes their social media profile (this might mean a change of job, which could be newsworthy). Visualping.io and Spoonbill.io are two examples but search for "website monitoring tools" or "profile change alerts" for others.

Alerts and updates on social media: Creating lists

When you begin reporting on a particular field, area, or subject, you should make sure that you are following relevant and useful social media accounts in that area. For journalists, Twitter is the dominant tool to use in this respect: it is succinct and fast; but don't overlook Facebook and, depending on your field, social networks like LinkedIn, Instagram, TikTok, and YouTube, among others.

One of the most useful functions in Twitter is the Twitter list: this allows you to add any user to a list that you can then look at separately to your main Twitter timeline (Facebook also has an option to create lists of friends or interests. You can find guidance on their Help pages at facebook.com/help/135312293276793).

Lists can be made on any basis. Here are some examples:

- You might make a list of people within a particular geographical area you are covering (your "patch")
- Or a list of people in a particular industry if you're reporting on it
- You might focus more specifically on people with a particular role (e.g. police officers or fashion designers) too
- Or a list of accounts that are not human (e.g. automated accounts for press releases)
- If you're following a lot of accounts on Twitter you might make a list of people you have met in person, so you can make sure you're up to date with them separately
- Likewise, you might make a list of colleagues
- Or celebrity accounts for potential celebrity stories
- Or a list of accounts that are funny and provide light relief

CNN correspondent Ryan Noble (@ryanobles), for example, maintains or follows nine lists. These include two lists of politicians in Virginia from when he was a news anchor and political reporter in Virginia; two "Florida politics" lists (from when he covered elections in that state for CNN); a list of Democrat politicians; a list of Republican politicians; and a list of news organisation accounts. One of these lists was created by another user, and then "subscribed to" by @ryanobles.

You can find lists made and followed by other people by adding /lists to the end of their Twitter URL, for example, twitter.com/ryanobles/lists. Click on any list to see the latest tweets from accounts in that list and click "members" to see who's on the list. Once you are on a list page you can click "Follow" to add that list to your own lists.

Your own lists can be found in the same way, but you can also view them using a Twitter dashboard like Tweetdeck (Figure 3.2).

To create a list yourself first find someone that you want to start that list with and click on the three dots button (…) next to the "Follow" or "Following" button. Select "Add/remove [name] from Lists…" and on the window that appears click "Create a new List" and give it a name. You can also choose whether the list is public or private.

To add more people to the same list, follow the same process as above but tick a list you've already created instead of "Create a new List".

Some people worry about following too many people on Twitter because they might then receive too many updates to cope with, but the Twitter list stops this from becoming a problem: instead of checking your main timeline, you can switch between lists just as you would switch between different TV channels.

Alerts and updates: Using social media dashboards

Twitter's own website isn't very useful for following updates on the service. Instead, you should use a social media "dashboard" service such as Tweetdeck (now owned by Twitter) or Hootsuite. These services also allow you to follow different lists, hashtags, and searches on the same screen and manage multiple social media accounts too (for example, you might need to update both your own professional account and a branded account for your publication). If you do use a dashboard to post from multiple accounts, always check you are posting from the right account!

When you log into Tweetdeck (Figure 3.2), it presents updates across different columns on the screen. The basic columns might be your general timeline, any @ messages, and a column for direct messages. On the left, however, you can add extra columns by clicking on the plus icon. These include tweets that you have favourited, new followers, search results (including hashtags), and lists.

By putting each list in its own column, you can quickly scan across updates in different fields. You can also order them from left to right based on their priority.

Figure 3.2 A Tweetdeck dashboard with columns based on different lists

Hootsuite offers similar functionality to Tweetdeck, but also allows you to show updates from Facebook, Instagram, YouTube, Pinterest, and LinkedIn.

Some news organisations have subscriptions to professional social media monitoring services that provide dashboards, too. Dataminr, for example, allows journalists to specify which topics they are interested in, and which geographical areas, and will provide alerts on Twitter updates that appear newsworthy based on those criteria. Crowdtangle provides similar functionality across Facebook and Instagram.

An extra dimension to media monitoring can be provided by curation services and news aggregators. Tools like Flipboard, Feedly, News360, Netvibes, and Medium will provide a personalised supply of stories and blog posts on subjects that you select, which you can access via their website or app, or a personalised email newsletter. With some you can add individual sources, too, such as particular publications or blogs, or even specific sections or journalists (some websites provide individual feeds for particular topics and writers, called RSS feeds). On platforms like Digg, Mix, and Reddit, you can follow topics to see what stories are trending or being surfaced by other users.

Closer look: Bots

Short for "robot"—specifically an internet or "web robot"—a "bot" is just a computer script, normally created to perform repetitive tasks. This broad description can cover such a wide range of terms that you may find it being used to talk about very different things in different contexts.

One common type of bot is a "crawler" or "scraper", which explores multiple webpages or documents and collects information about them: the "Googlebot", for example, was created by Google to build its search directory. Others will monitor information online and respond to it (for example, by changing prices based on demand).

In the context of reporting the term, "bot" is normally used to refer to something that users can interact with. Examples include:

- A bot that automatically publishes updates on a particular social media account when it receives new information from a feed (such as new articles).
- A bot that can supply article suggestions in response to a query from a user.
- A bot that attempts to provide answers to questions given by users.

Twitter bots have tended to automate three particular aspects of journalism: *alerting*, *aggregating*, and *monitoring*. The result is a level of coverage that would be unlikely to be provided by human reporters alone. The @North_GA news bot, for example (now suspended), aggregated feeds from a number of news sources in the northern part of the state of Georgia. And @stopandfrisk fetches and tweets data from the New York Civil Liberties Union on police use of stop and search (Lokot and Diakopoulos 2015).

An analysis of 238 Twitter "news bots" (Lokot and Diakopoulos 2015) identifies further uses of news bots, including *critique and opinion* (@NYTanon, for example, critiques the use of anonymous sources in the New York Times, and @cybercyber highlights the overuse of the term "cyber" in news reporting) and *entertainment* (some bots, such as @DrunkBuzzfeed, "remix" content with amusing results). Both are examples of what Lainna Fader, Engagement Editor at New York Magazine, identifies as bots' usefulness "for making value systems apparent, revealing obfuscated information, and amplifying the visibility of marginalized topics or communities" (Fader 2016).

Bots can also be used for internal purposes: the New York Times used a Slack bot (github.com/newsdev/nyt-campfinbot) to notify reporters about filings to the Federal Election Commission's website.

You can find many tutorials online for creating automated news bots, especially on Twitter, by searching for "RSS to Twitter" or "Twitter automation". Look for more recent tutorials as older ones may be out of date due to platform changes. Automation tools such as IFTTT, Apify, and Zapier have templates for connecting an RSS feed (RSS stands for Really Simple Syndication and is a format used to make it possible to subscribe to new content) or Google spreadsheet to Slack, Twitter, or other services. The key is to decide what you want to do this for.

Building a news diary: Finding events listings

A major part of a journalist's work involves forward-planning: identifying forthcoming news events that provide a reliable source of stories. Examples might include press conferences, meetings, cultural events, anniversaries, demonstrations, and industry conferences. These form the reporter's *news diary*.

Online resources and social media can be a valuable resource for compiling and updating your news diary. Sites like Eventbrite and Meetup.com can be browsed for events and conferences in a particular area, or searched for those related to a particular field, and most areas have a local listings site with details on cultural events (if yours doesn't consider creating one!). Consider individual cultural organisations like museums, art galleries, theatres, and events venues, too: they should publish a schedule of forthcoming events and may have a section with regular updates or press releases.

It's likely that political bodies in your field will have a section on their website listing meeting dates for various committees or groups as well—these will often have a particular focus such as a committee responsible for leisure and culture, and another for employment and the economy, and so on. These meetings are reliable sources of stories as decisions are made, problems raised, and new information shared. Look for health bodies and crime and justice bodies, too, who are likely to have similar public meetings. More broadly you might search online for "board meeting" or "committee" along with the names of local areas to find other organisations you might not have thought of, such as educational, environmental, or cultural bodies.

Another phrase to search for along with the name of your area or field is "release calendar" or "release schedule". This is a list of forthcoming dates when a public body is planning to publish data or reports, or when a company is planning to release new products. You can often get an idea of what to expect by looking at the last set of data that was released and how it was reported.

Google is quite clever when it comes to events: if you search for "events" or "events near me" on Google you should see a special events box with a link at the bottom to "Search more events". If you click on that you will be taken to a page where you can filter events that Google knows about from a range of sources (Figure 3.3).

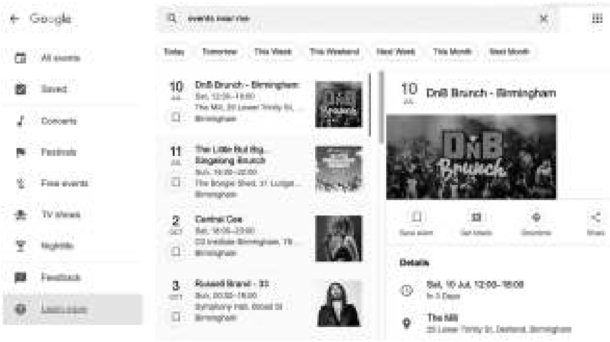

Figure 3.3 Google's events page

On social media, Facebook Events are well worth checking for potential story leads. Browsing the events section of Facebook is likely to bring up events in your area, but you can also actively search Facebook ("community" is a good keyword to try), using the filters on the left to narrow results to "Events" and within that by "location". There are also further filters for category and date.

Finding documents and data using advanced search techniques

Once you have a story idea, you will need to read up on the issue, organisations, or people you're reporting on—and at this point, most people will turn to search engines such as Google.

When most people use search engines, they make the mistake of searching for *what they want to know*. However, to use them most effectively as a journalist you should instead *describe what you expect to find*. The difference is subtle but important: here are some things to consider:

- *Who* do you expect might have published this information? (For example, a government body, or charity? A police force, or a health authority? A university?)
- *When* do you think this information was published?
- *What type* of document do you expect to contain this information? (A report? A presentation? A spreadsheet?)
- *Where* in the document do you expect certain words to appear (the body or the title? The URL?)
- What *specialist jargon* might be used in the document, which you might not find in other reports?
- What qualities do you expect the information *not to have*? For example, it might not have certain words, or not be published within a particular timeframe, or not be published by a particular body.

All these qualities can be described using *search operators*. Search operators allow you to specify something about the search results you want to get, beyond the words that you are using (Table 3.1).

The best-known search operator is a quotation mark: putting quotation marks around a series of words means that the search engine will only look for that *exact pattern* of words.

Table 3.1 Advanced search operators

Question	*Operator*	*What it does*
What type of document?	filetype:	Narrow the search to PDFs, spreadsheets, presentations, or other document types
Who publishes it?	site:	Narrow the search to particular web domains or websites
When would it have been published?	Google Tools	Narrow searches to a date range
Where might keywords be?	intitle: inurl:	Narrow results to those where keywords are in the title of the document or the URL

So "Michael Brown" with quotation marks means you will exclude results where those words are separated, for example, *Michael has brown hair* or *Michael William Brown*. More advanced search operators can specify other qualities.

Looking for documents and data with authority: Using the **site:** *operator*

Most of the time journalists are looking for information that has some sort of *authority*. It might be "official" reports, statements, or statistics made by government, health, or police bodies; or it might be authoritative research done by an academic or claims made by a charity or union that represents thousands of people.

The *site:* operator allows you to specify the type of source of information by identifying the domain that the information sits on. Here are some examples:

- site:au
- site:gov
- site:gov.au
- site:virginia.gov
- site:piegel.gov.uk
- site:atlantapd.org
- site:police.uk
- site:ac.uk
- site:edu
- site:org

Adding *site:au* to a search, for example, will only bring back results on sites that are hosted on a .au domain (Australia's web domain). That includes sites like amazon.com .au, police.vic.gov.au, and hmv.com.au but it *excludes* sites like amazon.com, piegel.co. jp, and piegel.net.

Likewise adding *site:gov* to a search will limit results to US governmental and state department websites (and similar sites). For other countries' governmental sites, you need to add the country domain too—*site:gov.au* covers all local authorities in Australia, for example, as well as national, territory, and state government bodies, including police and health bodies. You can work out what the domain should be by looking at a couple of official websites and seeing what follows ".gov" in their web address.

A similar pattern applies to universities: in the US these have websites on the .edu domain so adding *site:edu* to a search would limit results to those, but in other countries, it's either .edu followed by a country domain, such as edu.au in Australia, or .ac followed by a country domain, such as .ac.uk in the UK and ac.za in South Africa.

So, for example, if you were looking for documents about poverty published by public bodies in Canada, you might search for: *poverty report site:gov.ca*.

Charities and non-profits use the .org domain, both in the US and internationally, so site:org can be quite useful in limiting searches to those types of organisation but be aware that some will use a country-specific domain like org.uk.

The *site:* operator can also be used to be even more specific: adding *site:atlantapd.org* or *site:bristol.gov.uk* to a search will limit results to that particular website.

In some countries, particular types of official bodies may have other particular types of URLs: all UK police forces, for example, use the police.uk domain, while health bodies use nhs.uk, the military uses mod.uk, and schools use sch.uk.

Online investigator Michael Bazzell says he often uses the operator to track individuals by searching for their phone number and *site:craigslist.com* or their username and *site:amazon.com* (Bazzell 2013).

Evaluating online sources

Journalists have fallen for misinformation so many times on Wikipedia that there's even a dedicated "list of hoaxes on Wikipedia" webpage—on Wikipedia, of course (en.wikipedia.org/wiki/Wikipedia:List_of_hoaxes_on_Wikipedia). This is well worth reading to get a feel for the sorts of pitfalls to watch out for and how to avoid them. Wikipedia can still be useful: every statement of fact in a Wikipedia entry should be supported by a footnote, so you can (and should) use those to find useful sources of information.

Limiting searches to particular domains can help avoid the dominance of Wikipedia and increase the *likelihood* that you will find authoritative information—but note that a particular domain *is not a guarantee of authority*, *or of accuracy*. Government webpages may be out of date or contain misleading information, for example, so they should still be treated with scepticism; and students (who should not be quoted as experts) are often given webspace to publish anything they want on .edu and .ac websites. Even the academics who also publish on those domains are not always independent.

It's important to know that anyone can register a .org domain, too: a famous example of misinformation on a .org domain, for instance, is martinlutherking.org, which claimed to be "A True Historical Examination" but was created by a white supremacist group.

You should always judge information carefully as a journalist before including it in your reporting, based on:

- *Who* published it (are they independent? Do they have credentials in the field? You can use whois.net to try to identify who registered the website).
- *When* it was published (see below for one useful technique).
- *Where* it was published (was it this country or another country that speaks the same language? This is where country domains like .uk can be useful).

- *Why* it was published (is it intended to persuade? Was it commissioned by someone who might benefit in some way).
- *How* the information was created: for example, is this just someone's opinion or have they undertaken significant research such as a large-scale survey?
- *What* else you can find out that either confirms or contradicts the information concerned—this is especially important for Wikipedia entries which should link to sources that you can follow up on.

The user-generated content (UGC) organisation First Draft's five pillars of verification (First Draft 2019) include a further consideration: *provenance* (are you looking at the original account, article, or piece of content).

Drilling down to reports, presentations, or spreadsheets: The **filetype:** *operator*

Authoritative information often comes in particular types of documents: reports are often published in PDFs or Word documents. Spreadsheets are published in Excel files or CSVs. Presentations are published in PowerPoint.

To specify this, use the *filetype:* operator like so:

- filetype:pdf
- filetype:xls
- filetype:xlsx
- filetype:doc
- filetype:docx
- filetyps:ppt
- filetyps:pptx

Here's an example of how you might use these: let's say you were trying to find a report about mental health. Rather than just search for "mental health report" you could add the *filetype:* operator to limit results to the types of documents likely to be most useful: *mental health report filetype:pdf*.

Or what if you needed some statistics on mental health? Those are likely to be in a spreadsheet, so you might try: *mental health filetype:xls.*

Note that there is no space between the colon and the document type: xls for an Excel spreadsheet (or xlsx for more modern versions); doc for a Word document (or docx); and ppt for a PowerPoint presentation.

Bear in mind that documents are sometimes created in one format and saved in another: spreadsheets and presentations, for example, may be exported to PDF format before publishing, so you might need to try different approaches until you get the results you need. See the data journalism chapter for more on converting PDFs.

Specifying where words appear: inurl, intitle

Two operators allow you to specify where terms appear: *intitle:* specifies that a word appears in the title of the document or webpage; *inurl:* specifies that it appears in the URL. You can also specify more than one term by using the related operators *allintitle:* and *allinurl*:.

The *intitle:* operator can be particularly useful when you have a lot of results and only want to see those where the document is specifically about your keyword (rather than it being mentioned briefly or incidentally). Such a search might look like this:

intitle:"top secret" filetype:pdf

The *inurl:* operator can be useful where your keyword is used in the actual structure of a website or tends to appear in the name of the website. For example, noticing that clinical commissioning groups in the UK all tend to have "ccg" in their URL, or that US police departments tend to have "pd" in the URL, you might narrow a search to those by specifying: *inurl:ccg* or *inurl:pd* in addition to *site:nhs* or *site:gov*.

When was it published: Using Google's Tools option

Google also allows you to specify a time range for the results it gives you, although this is not done with an operator but instead in the *Tools* menu underneath the search box. To use it do the following:

- Conduct a search as normal
- Underneath the search box click *Tools* then select *Any time* from the menu that appears.
- You can specify periods such as the past hour, 24 hours, week, month, or year if you want to exclude older results
- However, this functionality is most useful to exclude more recent results (if you want to ignore recent news reports). To do this click on *Custom range…* and select a start and end date.

Note that this only refers to the time when Google *indexed* a webpage (stored it in its database), not necessarily the date when it was actually published.

Excluding results containing certain words or other qualities

Language is a flexible thing, and often the same thing can have many different meanings. "Golf", for example, can refer to the sport or to a car made by Volkswagen. "Table" can be a piece of furniture or something on a page that shows data.

If your search results are confused by these ambiguities, you can exclude certain results by using the minus operator (without any space after it) like so:

- *golf -volkswagen*
- *table -furniture*

You can also combine this with other operators. For example, the following search not only excludes any mentions of Volkswagen, but also excludes any results on the BBC domain, and any results that have "championship" in the title:

- *golf -volkswagen -intitle:championship -site:bbc.co.uk*

Finding photos, video, and audio

You will probably have used a media search engine like Google or Bing's Images or Video search facilities to find non-textual documents. It is worth emphasising that search operators can be used on these search engines, too: so, if you are trying to track down a video by a particular organisation, or an image on a particular domain, it is worth using the relevant operators.

Many of these media-specific search engines also offer additional search options under the "Tools" menu. Google Images, for example, allows you to specify the preferred colour and usage rights: note that these will need checking. Google and Bing Videos both allow you to narrow searches by duration and quality—as well as choosing from a menu of common sources.

Look for other useful media-specific search engines too: Creative Commons Search (search.creativecommons.org) allows you to search images that use the Creative Commons licence, for example, and filter by those which will allow you to use the photo for non-commercial purposes, or those that will allow commercial use too. It also provides results from audio search engines for Creative Commons-licensed content such as ccMixter and Jamendo (search.creativecommons.org/search/audio) and searches for Creative Commons-licensed videos on Vimeo and YouTube (search.creativecommons.org/search/video).

Closer look: Do you have permission to use media?

When you find images or other media online or on social media, bear in mind that the user still retains copyright over those, and you cannot usually publish a picture without permission from the copyright holder. You should ensure you use images online that you and your colleagues have originated yourself. If you are relying on a Creative Commons licence for an image derived from Wikipedia, Wikimedia, Flickr, Pinterest, or Google images, make sure that you comply with all the specific terms (see creativecommons.org).

The licences usually require a specific attribution such as: "Creative Commons '10th Birthday Celebration San Francisco' by tvol is licensed under CC BY 2.0". When publishing on an online platform you can do a number of things that show respect and courtesy to the CC licensing. For example, in WordPress editing, you can embed the URL of the source image hosting so that it clicks through. You should use captioning to fulfil attribution, and hyperlinking can also act as source acknowledgement.

Some countries have more flexibility than others when it comes to using images for news and current affairs, or for criticism and review. You may be able to use images to illustrate your genuine criticism or review of a photographic exhibition or book of photographs, for example, but your selection and publication should not be so excessive that you would defeat the purpose of anyone visiting the exhibition or buying the book of photographs. Make sure you are aware of the law in your country.

If you find user-generated image content on Twitter, for example, you can message the account holder to find out if they originated the image and would be prepared to allow you to use the image with a credit. It is important to establish that the person giving permission has the right to do so and ideally owns the photograph. The provenance and original rights in an image can be determined through "reverse image searching" (see below).

Sports reporters should be alert to the tendency of significant sports rights holders to ban the use of GIFs in social media coverage. The International Olympic Committee's decision to engage in such a ban for the Brazil Olympics generated considerable controversy. The IOC media rules stipulated: "The use of Olympic Material transformed into graphic animated formats such as animated GIFs (ie GIFV), GFY, WebM, or short video formats such as Vines and others, is expressly prohibited" (Price 2016).

In some cases, news organisations consult their lawyers and take the risk, especially when they assume the images are for public relations purposes. However, that may not be the case. Neil MacDonald, head of web and data at the Liverpool Echo, notes that:

> When celebrities put images on social media it can be complicated. For example, when there's a news event and someone is sharing an image, we ask for permission to use their image. But with celebrities it's not always clear if the image is for promotion and wider use. [The footballer] Steven Gerrard, for example, has posted images of himself on holiday to his Instagram account. We've had one footballer contact us to say we were using his images and it was his copyright.

Closer look: Finding older versions of webpages and pages that have disappeared: Caches

Sometimes you may click on a link and discover that the webpage no longer exists, or you suspect that a webpage has been changed and you want to see what it used to look like. In these situations, archives and caches can be useful to compare the latest version of a webpage with older versions or to find pages that have disappeared.

For more recent changes, try conducting a relevant Google search and clicking on "cache" next to the relevant result. This will show you Google's own "cached" (saved) version of the page. You can also use other services that do this for you, such as CachedView.com.

For older changes, the Internet Archive's Wayback Machine (archive.org/web) can give you snapshots going further back. Search for the URL and you will be presented with a calendar showing what dates it has saved that page: click on any date to see the saved copy.

One example of a story found using this technique involved UK Government adviser Dominic Cummings. In a press conference defending his decision to break lockdown rules during the early stages of the coronavirus pandemic, he claimed that he'd written about the threat of coronaviruses the previous year. Indeed, there was a post on his blog published the previous year that mentioned coronaviruses—but a check of cached versions on the Wayback Machine showed that the post had been changed recently to add the reference—at the time the post was originally published, it hadn't mentioned coronaviruses at all (Bradshaw 2020).

Closer look: Vertical search engines and custom search engines

Google, of course, is not the only search engine around. And while other search engines such as DuckDuckGo, Bing, and Yahoo are always worth a try too, more interesting are the smaller "vertical" search engines that focus on more specific fields. If you work in a particular field, it is worth identifying specialist search engines which cover that. Here are some examples:

- Skyscanner (flights and airlines)
- Boardreader.com (forums)
- Google Video (video)
- Creative Commons search (images, video, or audio)
- Slideshare (presentations)
- Healthline (health)
- Google Scholar (academic research)
- Bing Scholar (academic research)
- Academia.edu (academic research)
- Eventbrite or Meetup (events)
- Nexis (press cuttings—check if your library has a subscription)

If you regularly search a particular collection of sites, you can create your own custom search engine at cse.google.com/cse (or just search for "Google custom search engine"). You just need to type in the URLs of any sites you want to search and then it will give you a link to the new search engine you've just created.

If you want to change your custom search engine at any time just return to Google custom search engine and it should be listed there for you to edit.

Closer look: The invisible web and the dark web

It is important to remember that Google only indexes a small part of the web: most of it is invisible to search engines, and there are two key terms to refer to other parts that it does not see.

The *invisible web* (sometimes called "deep web") refers to millions of pages that cannot be found by search engines (for example, because they are only generated when a human searches a database, are password protected, or exist on private networks and intranets).

The *dark web* or *dark net*, on the other hand, refers to pages that are not only invisible to search engines but have also been intentionally hidden. Pages on the dark web can only be accessed using the web browser TOR (it stands for The Onion Router). The dark web is best known for black market and illegal sites such as The Silk Road, which was shut down by the FBI in 2013 and again in 2014. But it also hosts political discussions and human rights activity that users cannot conduct safely in countries where internet usage is censored, monitored, or both.

If you cannot find something using Google, it may be worth using specific "invisible web" search directories such as the WWW Virtual Library and DeepPeep or searching for databases themselves. Of course, often the fastest approach in this case is simply picking up the phone. As former BBC researcher Murray Dick explains:

> Some research tasks are far better resolved by going straight to source, by finding interactive mediums or sources of expertise far beyond the crowd. This is especially true where search tasks are complex, hard to express in simple terms or unlikely to exist in a convenient place online.
>
> (Dick 2013)

Finding human sources online

> Talking to the right people means doing a thorough job of backgrounding both the concept for the story and the people who are, or might be, involved.
>
> Mark Blaine, in Interviewing: The Oregon Method
>
> (Laufer 2014, p. 17)

The search techniques outlined above can also be used to find documents that lead you to *people*. People tend to fit into particular categories in stories, which can be summed up as follows:

- *Power* (political, financial, or cultural): these people often initiate stories by doing or saying things.
- *Experts* to provide the big picture, context, or analysis.
- *Representatives* to act as the voice of a particular group involved in the story.
- *Witnesses* to describe what happened.
- *Case studies* to help the audience understand the impact of the issue we are reporting on.

Those people also tend to play particular roles in stories (Table 3.2):

- *Action*: a person (or their organisation) does or says something newsworthy—for example, a powerful person might say they are going to do something, an expert or representative might raise concerns, or a witness might come forward with new information.
- *Colour and context*: providing further details about the newsworthy event—for example, witnesses might describe what happened; case studies might explain how an issue affects them; experts might explain the background, or whether a particular issue is getting better or worse.
- *Reaction* to move a story on—typically that reaction should come from one of the first three categories above, for example, a political reaction, an expert reaction, or a representative organisation reacting.
- *Response*: where a person or organisation is criticised (explicitly or implicitly) then a right of reply will need to be sought from whoever is responsible for a problem or event. Most often this is someone in power, but it can also be a representative of a group being criticised.

Table 3.2 The different types of human sources and how they're used in stories

	Powerful sources	*Experts*	*Representatives*	*Witnesses*	*Case studies*
Action	Taking action Proposing action Objecting	Publishing research Raising concerns	Raising concerns	Provides new information about an event	Takes legal action or campaigns
Colour and context		Providing background to an issue, event, or claim		Describing what they saw happen	Describing how something affected them
Reaction	Criticism of or support for action or proposals	Criticism of or support for action or proposals	Criticism of or support for action or proposals		Criticism of or support for action or proposals
Response	To criticism of or concerns about their actions		To criticism of or concerns about their actions		

Different types of sources play different roles in stories. This table describes typical ways that each type of source might play some of the four roles and where types of sources don't tend to play a role. Highlighted boxes are those most likely to be used.

Many of the search techniques outlined above can be useful in finding these human sources—along with other techniques too.

Finding experts

Experts are a particularly useful example. Typical types of experts include the following:

- Academic experts who research and/or teach the field. These may also work within the industry on a part-time, consultancy, or secondment basis, and have probably done so in the past.
- "Observers"—individuals who have an interest in monitoring how a particular industry operates, either because they are concerned about its impact on themselves or their loved ones or because they see commercial or professional opportunities. This also includes the following.
- Issue campaigners—people who are interested in an issue which relates to the field. They may be nationally focused or tackling how an issue plays out locally.
- Insider "experts" who are employed within the industry full time, part time, or on secondment.
- Retirees—people who have retired from any of the above positions. One journalistic trick is to follow who leaves the industry, because they will have insider insights without, necessarily, the concern over keeping their job that often comes with that.

Experts tend to work for a narrow range of organisations: for example, universities, government, charities, and think tanks. Many organisations also promote their own experts on specific expert directories and others have set up directories to help journalists source a wider diversity of experts: the Women Experts Network (woxnetwork.org) is one example, while The Brussels Binder (brusselsbinder.org) offers both a database of women experts and links to similar databases around the world. City University New York publishes a list of directories for diverse sources at researchguides.journalism.cuny.edu/findingexperts/diverse-experts.

To find an expert then, try to imagine the documents that might contain information about a relevant expert (for example, a profile page, a piece of research they have done, or a presentation they have delivered). Then create searches that describe those documents. For example:

- Profile pages for academic experts are likely to include the word "professor" or "doctor" or "Dr" (as well as the particular keywords you're interested in) and on educational domains like .edu and .ac.uk so use the *site:* operator to limit results to those domains
- Try adding "experts directory" to your search too
- Research about the subject will contain the names of experts (the authors). These are also likely to be on those educational domains but also those of academic publishers (e.g. tandfonline.com). You can also try specialist search engines for academic research like Google Scholar and Academia.edu
- As well as academic experts, there are those working for non-profit organisations and scientific bodies—try using the *site:* operator to limit results to domains like .org and .org.uk or specific charities in the sector
- Reports by experts are likely to be in PDF formats, so try adding *filetype:pdf* to your search to limit results to those types of documents.
- Presentations by experts are likely to be in PowerPoint or PDF formats, so try adding *filetype:ppt* or *filetype:pdf* to limit results to those types of documents.
- Profiles of speakers are likely to be on events pages—so add terms like "conference" to your search or limit searches to domains like Eventbrite.com, Meetup.com, and Slideshare.com.
- And, of course, you can look at news reports on the subject to identify experts who have already been interviewed on the topic. A cuttings service like Nexis can help here (check if your library has a subscription).

Again, what is happening here is you are considering *who* might publish the information about these people (universities, non-profits, events websites); *what* type of document it might be in (academic papers, reports, presentations); and specialist jargon that might be involved (professor, doctor, "experts directory").

As well as using search operators on Google to find the profiles of experts on their institution's pages, you can also search their profiles elsewhere: Twitter biographies, for example, can be searched using Twitter's search box and then selecting the "People" tab on the results, and Facebook's Friend Finder (facebook.com/friends/requests) can be used to search for people based on their location and employer.

Open source intelligence: Using LinkedIn, reverse image search, people search, and other tools

If you need to find an expert from a particular industry, or a representative from a particular part of an organisation, LinkedIn is a very useful tool—so much so that the service has a dedicated LinkedIn For Journalists group (news.linkedin.com/media-resources/linkedin-for-journalists), guides on search techniques, and quarterly webinars. These are well worth signing up for, as journalists are able to get free access to a Premium Business account.

The site has an advanced search facility that allows you to search by job role, employer, location, and even the strength of their connection to you (i.e. they are a "friend" on the site or you have a mutual connection). You can even search by former employer, too. At the time of writing, these advanced search options can be accessed by conducting a normal search and then looking for "All filters" above the results (search Google for "LinkedIn advanced search" if you cannot find it).

If a LinkedIn profile doesn't list contact details, send them a message with a contact request, then try to find their details elsewhere while you're waiting to see if they reply.

There are a number of search engines that focus on finding people rather than documents. These include Pipl, 192.com, 123people, and Yasni. Often these will connect to social media profiles and other publicly available information.

If those don't work, then you can try conducting a *reverse image search*. A reverse image search is a search based on an *image* rather than words: you upload an image (or paste the URL of an image) and the search engine will show results of any webpages it knows of where the same, or similar, images appear. TinEye.com is one such search engine, and Bing Visual Search (bing.com/visualsearch) allows you to search by image too. Google Images has a reverse image search facility you can access by clicking on the camera icon next to the search bar to open up the "Search by image" menu. Because people tend to use the same profile pictures in lots of different places, they can be especially useful in conducting reverse image searches to find other places where they have a profile or have been profiled.

Email-finding websites such as Hunter.io, VoilaNorbert.com, and Email-Format.com are another option: these will make an educated guess on someone's email address based on their name and employer.

All of these techniques are examples of a practice known as open source intelligence—often shortened to OSINT. Whereas traditional "intelligence" gathering involves spying and collecting information in secret, *open source* intelligence is the process of gathering intelligence from open, public sources: postings on social media and forums; databases and directories; cuttings, reports, and documents; and clues in media such as video and photos. The skill is knowing where to look, and how to interrogate those sources—for example, by using advanced search operators, using reverse image searches, or looking for metadata in photos.

One of the pioneers of OSINT in journalism is Eliot Higgins, the founder of Bellingcat, whose investigations have used open source intelligence techniques to investigate the use of chemical weapons in Syria, the downing of Malaysia Airlines Flight 17, and the Skripal poisoning (Higgins 2021). But the same techniques are now used by teams such as the "first social media newswire" Storyful, ProPublica, and the New York Times Visual Investigations team (nytimes.com/spotlight/visual-investigations), as well as non-journalistic organisations such as Amnesty International and Forensic Architecture. Among other things they are used to verify and factcheck, track powerful people, and reconstruct events.

A large part of this growth is down to the open, collaborative nature of the OSINT community itself (Muller and Wiik 2021). There are dozens of sites providing lists of OSINT tools, and tutorials on different OSINT techniques. The OSINT Framework site (osintframework.com), for example, provides an interactive list of tools on everything from finding emails to public records, and you can find courses on OSINT on Udemy and

LinkedIn Learning. Bellingcat itself is one of the best sites in the field, providing a range of resources and guides, while the #OSINT hashtag on Twitter is well worth following for tips, discussion, and challenges.

Johanna Wild, open source investigator

Johanna Wild is an open source investigator who works for Bellingcat (bellingcat.com)

We don't like the term OSINT (open source intelligence) because it sounds like it comes from a military or secret service context—we prefer OSI, for "open source investigations". OSI is quite a wide term—in the broadest sense of the term it can be everything—but what we usually do at Bellingcat is more towards the direction of investigative journalism—we don't do a lot of day-to-day reporting.

The biggest difference between open source investigation and traditional journalism is that everything is transparent: you can easily share it with online users, and nothing is hidden. Crowdsourcing and collaboration are often part of it: you can do so much more in a team, and with these types of techniques, it's even more important that you work with more people because they all find different things and you all need to monitor different things. For example, with geolocation, you can divide the tasks so that everyone looks at a different city to see where a video has been filmed. You don't just need journalists to contribute there—it can be every user who can start doing this type of investigation and I think this is really amazing.

Open source investigation often involves combining different methods—not only monitoring what's on social media but we might first identify a specific video and try to geolocate that to determine the exact location where it was taken; we might identify people that are interesting and find other ways to research them, like phone book apps to check who's behind a number—it's the combination of using all those techniques together in an investigative workflow.

OSINT has been out there for a long time, but in the last few years, I have seen different types of organisations and users starting to use the same methods: more and more NGOs; organisations focusing on environmental topics or organisations focusing on the illegal arms trade—they all use open source methods now. That is really amazing to me.

In journalism specifically, development was slow for quite a while, and very few teams focused on it, such as Bellingcat and Storyful. But in recent years, quite a few dedicated teams have been established, such as the New York Times visual investigations unit and BBC Africa Eye. I see more and more newsrooms have people in their newsrooms that have at least some skills in this area: if they use a technique for investigating the far right they don't just go out and see the demonstrations, they might be getting on Telegram and finding out how to monitor Telegram, or they have a video and they need to verify if that really took place at a particular location.

Many OSI skills have become basic skills that one needs, such as using advanced search operators on search engines. These things have become more and more important. But there's a lot of room for specialists—for example, geolocation. I feel it's quite easy to become a specialist in this field because there are not so many people out there. There are a lot of opportunities for people who want to focus on this.

You can find some of Johanna's work at bellingcat.com/author/johannawild

Finding representatives

Representatives are people who are able to speak for a larger group of people, rather than just themselves. Examples include:

- *Unions*: these negotiate on behalf of workers who make up their membership. In universities, for example, students' unions act as the voice of students and people are formally elected to act as their representatives.
- *Local politicians*, likewise, are in most democracies formally elected to represent people in a geographical area. People in that area will write to their local politicians about problems, so they can act as a voice for those people in raising those issues or confirming that they are a problem.
- *Professional bodies* represent particular professions, often acting to agree on particular standards and practices, granting membership and access to the profession.
- *Industry bodies* (also called trade associations) represent the companies that form their membership. The Motion Picture Association is one well-known example of an industry body that represents the film industry in the United States.
- *Religious organisations* also have members—note that belief in a particular faith does not mean that someone belongs to a particular organisation connected with that faith, however.
- *Charities* may have insight into what is happening "on the ground" through the information that they receive from those using their services, or trying to access them, and be in a position to "speak for" certain groups of people as a result
- *Other membership bodies* can also represent their members; for example, there are a number of motoring associations around the world that are regularly quoted in stories about issues that affect drivers
- *Editors of specialist media and administrators* of large Facebook groups might also be quoted as a representative on the basis that they have their "ear to the ground" and are able to speak about the volume of messages they see on a particular issue. This can sometimes be the only resort when the group you're interested in doesn't have any formal representation.

With all the above, consider how to use advanced search techniques to find the sorts of domains they might use (many will use .org domains, for example), the sorts of language they might use (e.g. "membership"), and the type of documents they might publish where you can find names of potential sources (PDF reports or PowerPoint presentations, for example).

Finding case studies—and go-betweens

Case studies are harder to find than experts: contact details for those affected by a particular issue aren't likely to be published by a single type of organisation like universities so you need to be more creative. You might instead think of the sorts of *communities* where those affected might gather online. In some cases, specific groups might be set up by those campaigning against a particular issue (for example, local residents opposed to new development work might set up a Facebook group which you can use to contact them); in other cases, you can imagine the type of person affected and try to find online communities they might belong to: to reach parents, for example, you might try Mumsnet or a similar community for parents; to reach teachers, you might try the forums for educators.

Some of these might have their own search facility, but it's often worth trying a Google search with the *site:* operator to limit your searches to a particular site as you may get better results. To look for Facebook groups on a particular issue, for example, you can use Facebook's own search or add *site:facebook.com/groups* or *site:facebook.com/pages* to a Google keyword search. Consider what sorts of phrases someone affected by an issue might use. If you want to find someone who is a twin, you wouldn't search for the phrase "twins": you would search for "my twin sister" or simply "my twin" (with quotation marks) because that's a phrase that only a twin themselves would use.

Note that some online communities may not be as diverse as the real-world communities they are supposed to reflect due to lower rates of internet access or literacy in certain groups within that community, or even the qualities of the online community itself. Rahim Kurwa's research into the neighbourhood-based social network Nextdoor, for example, argues that it has enabled "the creation of what I call digitally gated communities [using] forms of segregation and surveillance" (2019, p. 1). Be prepared to visit places in those communities physically in order to ensure that your sourcing doesn't suffer from blind spots.

Remember that with case studies in particular, it's not always about finding a way to contact the potential case study directly: often you're looking for a *go-between*, someone who knows the right person.

A good example of this is charities: these often come into contact with people affected by an issue (it may be a health issue, poverty, crime, or something else) and may be able to ask someone if they're willing to speak to you. So use search techniques to find the contact details of their media office (limiting searches to .org domains and variations like .org.uk can be useful here).

Likewise, even if a member of a community hasn't been directly affected by someone, they may know someone else who *has*, so use searches to find contact details for administrators of popular forums and Facebook pages and ask them if they'd be able to help you.

You can apply the same approaches in the physical world, too: those who run clubs and events for a particular group of people are worth speaking to. You can often find details of those events on listings sites and platforms like Meetup.com.

Closer look: Finding leads for human interest stories

Many websites can be valuable sources of news stories themselves if you know what to look for. Here are some examples:

- People often post on the Facebook pages of brands and organisations when they have a bad experience (such as finding a spider in their food!).
- They often seek out online support groups and forums in similar situations.
- Major personal achievements tend to be shared on fundraising sites, or on the pages and forums for weight loss programmes, campaign pages, and other initiatives.
- Crowdfunding sites can provide useful leads for new products, struggling businesses, and inspiring stories.

- Journalists often scour tribute pages to find out about people who have tragically died.
- Auction sites like eBay can feature some bizarre items—and related stories.

Some of these situations will raise important ethical and legal issues. Where someone has a reasonable expectation of privacy, for example, you can be breaking the law if you are sharing their disclosure with a wider audience (even if it is public within that group). Always contact the individuals and ask if you can get more details for a published story.

Remember that many accusations levelled in these forums may be libellous. Ensure that you seek a right of reply and consider your legal position carefully.

Finding witnesses

Trying to find people who were in a particular place at a particular time is a real skill. Twitter is one tool you might use, as its *geocode:* operator (see below) allows you to search for tweets near a particular location, but remember that only around 1% of users turn on the geolocation feature in Twitter that includes location information with their tweets. Instead, it might be better to try to identify the first people to talk about the event that you are interested in by using the *since:* and *until:* operators in Twitter's search to limit the time range of your search (see "Closer look" below). You can also use Tweetdeck's search filters to limit results to verified users, or those with a certain threshold of engagement (the number of retweets or likes). Twitter's Joanna Geary also recommends adding swear words to your search, as people who actually see things happen tend to swear in their reactions.

Instagram has a much higher proportion of geotagged content, and you can search Instagram for images in a particular area by using a tool like Worldcam (http://worldc.am/). Flickr also allows you to search by location at flickr.com/map.

If you're looking for live video, or people who have recently streamed live video, Facebook Live can be browsed at facebook.com/watch/live and livestreams on YouTube can be found by conducting a search and then using the search filters to select *Live*. On Twitter, live video can be found under the Explore tag (twitter.com/explore)—but you can also ask to be notified when an account you follow starts streaming live video by tapping the notification button on their profile and selecting *Only Tweets with live video*. Consider checking Instagram or TikTok for live video too. Remember that you don't have editorial control over live video so it's important to consider any potential ethical issues if you intend to link to or use the material: could something distressing happen on the stream that may traumatise viewers? Could it put witnesses or law enforcement at risk? You may need to use only parts of the video, or blur elements, when publishing it.

Note that any witnesses to a newsworthy event are likely to have many journalists trying to contact them, and your approach should be sensitive to that. You should also consider the physical safety of witnesses, and their emotional welfare, when communicating with them—indeed, their wellbeing and safety should be the first thing you ask about. "Always consider the feelings and circumstances of the person you are trying to reach", recommends First Draft's guide to working with social sources. "Journalists can often cause eyewitnesses to shut down and stop all contact by tactless approaches" (Wardle 2016). Always be guided by respect for their needs and give them advice on where they can access help.

Once you have introduced yourself, explained how you found them, and which organisation you work for, it is always better to speak to someone directly—face-to-face or on the phone—than via messages as early as possible, as this makes it easier to build trust and provide emotional support. It also makes it more likely that you can verify their account. Don't forget to tell them when they can expect to see the story—and update them if that changes.

Another approach may be to think about witnesses who may not have shared content on social media about the event in question. Think instead about who is likely to have been in the location and where to find those people online. For example, if the event is a demonstration of some kind, can you find local supporters of the cause who are likely to have been there? If it's an accident or crime, will members of the emergency services have attended? If it's a meeting or conference, is there an agenda listing attendees? Another tip is to use Google Street View to look at the location of the event and identify local businesses and shops whose employees may well have seen what happened—then find their phone numbers online and call them!

Closer look: Twitter advanced search

You can search Twitter from a box at the top of Twitter.com. However, there is also an advanced search option at twitter.com/search-advanced. This allows you to specify exact phrases and Twitter accounts that tweets come from, to, or mention; exclude results containing particular words or retweets. You can filter results by language, location, or date.

For timings that are more specific than dates (e.g. a period of time lasting just a few hours), you will need to use the *from:* and *since:* operators with a unix timestamp code. This is a series of digits that represents a particular date and time: you can convert any data and time using a tool like epochconverter.com. A search using these timestamp codes would be conducted in the normal search box and might look like this:

yourkeyword since:1417443899 until:1417444300

Summary

When anyone can seek out information about topical issues online, advanced search skills become a must for professional journalists. Being able to source appropriate, authoritative information quickly, and identify relevant experts and case studies, helps make your journalism better informed and illustrated.

The modern journalist needs to be able to manage a number of different sources of information, from multiple lists on social networks to email alerts and live feeds. But they also need to be able to seek out information and find appropriate contacts and ensure that they draw on a diverse range of sources that reflect the communities they are serving.

There is a range of skills that you can use to make your work quicker and easier—and of a high standard, from setting up initial alerts in your field to following the right people on social media and organising those sources into dashboards and lists. And when the amount of information is overwhelming, search operators and OSINT techniques can help you drill through the noise to find the key information and individuals that will make the difference.

Activities

1. You've been told that you're going to be the new transport correspondent for a regional broadcaster. How would you quickly find and follow key people in that field on social media? What about email alerts and forthcoming events?
2. The government has announced a new strategy to tackle child poverty. You need to find statistics on child poverty in your area. What search might you use to find those? Think about who might publish this, in what format, and where.
3. You're writing a feature about the fashion industry and need some expert comment. How can you identify someone who has researched the industry and knows it inside out? How would you find someone who holds a senior position at a major brand?
4. There's a fire at the Guggenheim Museum in New York—and everyone is tweeting about it. But how do you identify which tweets are from people on the scene? How can you contact someone who may own or work at a business nearby, but not on social media?
5. It's a slow news day and you need a heartwarming story about someone raising a lot of money in your local area. Try some search techniques to find that. Think about the sites where a fundraiser might talk about this.

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Cordelia Hebblethwaite's website *The Social Media Reporter* has a wealth of resources and advice on organising feeds and lists, trends, advanced research tips, and verification: https://medium.com/the-social-media-reporter.

Eyewitness Media Hub provides guiding principles for handling eyewitness media at http://eyewitnessmediahub.com/resources/guiding-principles-for-handling-eyewitness-media

Craig Silverman's *Verification Handbook for Investigative Reporting* outlines a number of advanced search techniques and case studies: http://verificationhandbook.com/book2/

Bellingcat.com contains regular behind-the-scenes posts on how they found or verified a piece of information for a story.

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4 Writing for the web

Chapter objectives

This chapter will cover:

- How online journalism is different to writing for print
- BASIC principles in writing for the web: brevity, adaptability, scannability, interactivity, and community and conversation
- Search engine optimisation
- Using trends tools
- Social media optimisation
- Blogging tips and how to choose a topic for a blog
- Elements to consider in a content strategy

Introduction

If you've been writing for the web in the same way you might write for a newspaper or magazine, or for TV or radio, I've got bad news: *you've been doing it all wrong*.

It shouldn't have to be said that the web is different, but I'll say it anyway: *the web is different*. It is not print, it is not television, it is not radio.

So why write content for the web in the same way that you might write for a newspaper or a broadcast? The short answer is: *you don't*.

In the early days of the web, many news organisations used to take content written for print and put it online without any changes. This was called *shovelware*, a derogatory reference to the way print content was "shovelled" onto the web without any thought as to whether it was the best way to tell the story on this new medium.

It was not.

We know, of course, that television news reporting relies on getting *footage* and making a story *visual*. We know that radio reporting relies on recording *sound*. What is less well known is that the very first television news bulletins were just radio broadcasts on a black screen, while early radio news broadcasts saw presenters simply reading out the most recent copy of the newspaper. It took decades to invent the language of broadcast

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journalism on radio and TV, and you are part of the generation that is inventing the language of online journalism.

Some fundamental principles of good journalism apply whatever medium you work in: answering the "five Ws and an H" (who, what, where, when, why, and how), being factual, clear, and getting to the point quickly. This chapter outlines some of the best practices around web writing established since news media began publishing on the web, alongside the changing context surrounding it. That context includes changing consumption behaviours, changing distribution behaviours (search and social), changing cultures of production, including the influence of blogging and other new media forms, and the rise of converged newsrooms.

Closer look: What is online journalism?

Online journalism has a number of characteristics that define it compared with print or broadcast journalism:

- The *internet* is used as a platform for stories. This means that people can consume it on any internet-connected device. As a result it is also as follows.…
- *Multiplatform*: stories might be accessed on desktop or laptop computers, mobile phones, tablets, e-readers, glasses or watches, or any other internet-connected device.
- *Interactivity*: readers can engage with journalists, with content, and with each other. That includes…
- *Hyperlinks*: the ability to link your story to other information online. This opens up opportunities for…
- *Non-linear* storytelling: readers determine how, when, and where they consume content, including...
- *Transmedia*: stories can be reported *across* multiple delivery channels. For example, a story might start on Twitter, with more details on a news site, background in a blog post, live video on Facebook, and a roundup via email.
- *Multimedia*: stories are not limited to any one medium. They might be told using only text, images, audio, or video, or any combination of these.
- *Real-time*: instant connectivity means journalists can go live as soon as a story breaks. Stories don't have to be published at a regular time.
- *Transparency*: links and embedding allow journalists to give access to their sources. Unlimited space allows publishers to upload raw data, documents, full audio, video, and transcripts.
- *Measurability*: because content is published online, it is possible to measure how people use it in all sorts of ways, from clicks and time spent on a page to the number of shares, likes, comments, and other forms of engagement (see the chapter on web history for more on analytics).
- *Autonomy*: in print and broadcast, content typically went through an editorial process overseen by more senior members of the team. Online, however, content is sometimes

published without editorial supervision—particularly on social media and in live reporting. This places greater emphasis on the journalist to be accurate, write clearly, and understand legal implications.

- *Accountability*: at the same time, journalists are more accountable to readers who can point out factual errors, spot plagiarism, identify copyright infringement, and highlight out-of-date information.

BASIC principles of writing for the web

When remembering web writing principles, it is useful to think about the mnemonic BASIC. This stands for brevity, adaptability, scannability, interactivity, and community and conversation.

B is for brevity

Brevity has long been a core part of web writing practice. This is due in part to early studies on how people read from screens compared with reading print, which suggested that people read more slowly from the former. Later research challenged this, however (Noyes and Garland 2008), suggesting that users have become more skilled at reading from a screen and the differences are less pronounced. But the custom of writing with brevity remains.

Why? Partly because the majority of news reading in many countries now takes place on mobile devices, where there are more demands on users' time than might be the case if they were reading a newspaper or magazine—and less screen space to get your story across.

But also partly because we now know a lot more about how people read more generally. In print, we had much less information about the consumption behaviour of readers; online, however, publishers can measure how long the user spends on the page, how far they scroll down, and even where their mouse travels and how they interact with the page. Unless you are writing a longform piece of journalism, you should be thinking about how to ensure your writing demonstrates brevity.

Forms of brevity

Brevity comes at a number of different levels. These include:

- The length of the headline
- The length of each sentence or paragraph
- The length of the article
- The possibility of "chunking" a longer piece into a series of shorter parts
- Brevity in multimedia

At the level of the headline, many news organisations require journalists to write two versions: a longer one for the webpage when it is read on a desktop computer, but also a second shorter headline that is used for the links to the story from the homepage and section pages—as well as for mobile and social media. "More than 55 characters can appear very long at the top of a story on a mobile", notes the BBC's Nathalie Malinarich (2014).

At the level of the paragraph, try to stick to one concept per paragraph. Once you've made your point (one or two sentences at most), move on to the next paragraph. Initially, this may feel a little bare, but you will be surprised how effective it is. For a good example of an organisation that uses this style very effectively, look at how BBC news reports are written.

At the level of the article, if you are writing anything other than in-depth features, *shorter pieces* tend to work better online. Because you are not filling column inches or airtime, there is no reason for your article to meet a particular word count such as the standard 500 words. Around 300 words are normally enough to tell a basic news story. Consider using links and embedded media to add the extra background that print articles would normally be filled out with.

If your article is a longer feature, consider "chunking". This is the process of splitting a longer piece into smaller chunks, each with a particular focus. Chunking has a number of advantages, including the increased chance of each part of the article being found, more opportunities for search engine optimisation (each part can be optimised separately), and more combined visits across the articles than would be achieved with just one. And of course, you can also publish the full, combined longer feature so people can choose to read it in either form. However, don't label the chunks as "Part 1", "Part 2", and so on—people will not only be likely to feel that they cannot read a later part without having read the first, but they may also avoid the first part if it feels like a long-term commitment.

Brevity is equally important when producing multimedia material, and similar approaches including chunking are also used in multimedia production. See the chapters on video and audio for more.

A is for adaptability

When it comes to creating online content, adaptability is important in two respects:

- First, the journalist needs to be able to adapt the story to the best medium available.
- Second, you need to think about how the content itself might be adapted by users.

The journalist who *only* writes text, or who *only* produces video or audio, is now a rarity. Whatever industry you work in, it is likely you will be expected to take pictures, film videos, and record audio when needed. You might need to create galleries or maps, publish data and charts, blog about story background, explainers, or analysis, host live chats, or stream live video.

Not only must you be able to adapt your style for different types of reporting and across multiple media, but also across multiple platforms: Facebook, blogs, Instagram, YouTube, or anywhere else where audiences gather. Sometimes you will have only a phone to do so.

Three terms are especially useful in considering this adaptation by the journalist and their team: "transmedia" storytelling, "multimedia", and "crossmedia".

Transmedia storytelling

Transmedia storytelling is a process whereby elements of a story are distributed across "multiple delivery channels" (Jenkins 2006). Henry Jenkins, who coined the term, was interested in the way it was used deliberately in the creation of fiction, such as the Matrix franchise, where information—different stories from a single "story world"—was distributed between films, animated shorts, comic books, and games. But the same principle applies to news reporting where different information about the same story might be reported on Twitter, Facebook Live, radio broadcasts, and a dedicated news website.

Election coverage and reporting of major sports events provide perhaps the best examples of planned transmedia journalism. In these cases, for example, a news organisation might:

- Tell some stories about the event through scheduled broadcasts on its TV channel
- Provide brief alerts through mobile notifications via its app
- Livestream interviews and pieces to camera from venues via its pages on Facebook, Instagram, or other platforms
- Provide behind-the-scenes insights via Snapchat or Instagram Stories
- Publish threads of analysis, or blow-by-blow accounts on Twitter
- Host a Q&A on its Facebook page or an "Ask Me Anything" (AMA) on a Reddit forum
- Create video explainers for its YouTube channel
- Create image-led content, including quotes or facts of the day, for Instagram
- Host a podcast discussion on audio platforms such as Spotify, Anchor, and Apple Podcasts

In these events, the organisation has enough advance notice of the event to consider how to play to the strengths (and audiences) of different platforms, while the events are newsworthy enough to justify the considerable investment of resources that might be involved. These forward-planned projects are what the academic Kevin Moloney describes as "native" transmedia stories (Moloney 2022).

In contrast, unplanned breaking news can provide the basis for a form of "feral and uncoordinated" transmedia journalism (Moloney 2013). In these situations, we might "read" the story by consuming different parts of it told in different places, and by different people, including journalists across multiple platforms.

A third form of transmedia story is the "emergent" story, which begins life in one medium, but then encounters success that leads to follow-up stories across other platforms. One example given by Moloney is a New York Times investigation into taxi licensing: although it started as one story, the traction it gained led to many further stories being told about this "story world" across multiple platforms (Moloney 2020).

Crossmedia and multimedia storytelling

Transmedia storytelling is often summed up as "many stories, many media forms, many channels". In contrast, *crossmedia* storytelling is described as "one story, many media channels" (Moloney 2019)—in other words, while there may be adaptability in the *medium* being used, there is less adaptability in the *story* itself. A TV interview re-edited for social media, for example (by making it shorter, adding captions, and perhaps converting it to vertical video), would not be described as transmedia because the story is fundamentally the same.

The fact that that video wasn't created *for* social media may cause it to be less effective or engaging: the composition of the shot may not work as well; the staging may feel too formal; or there may be a lack of other elements that audiences would expect, such as emojis or interaction. But still, a clip re-edited for social media will be better than none at all, and may be the only realistic option within the constraints that the team has to operate in.

The third term—*multimedia* storytelling—refers to stories that combine text and other media within the same narrative. For example, you might write an interview feature but embed a video or audio clip from the interview at a relevant point; you might embed a gallery of images taken by yourself or a photographer. But these are all in the same article—not spread across different platforms. Again, these possibilities require an adaptability from the journalist in their approach to the interview and to consider what non-textual material they might need to gather at the same time.

The rise of crossmedia, transmedia, and multimedia storytelling does not mean that you have to be an expert in *all* of these media or platforms, but you *should* have media literacy in as many as possible: in other words, a good online journalist should be able to see a story and understand how that story could be told in different ways across different platforms and media.

The person who eventually films the video, or creates the interactive element, may be someone else within the team. But the *ideas* should come from every member connected with the online newsroom. And, of course, there will be occasions where you are the only person on the ground able to put those ideas into action, so you should at least have the basic ability to record good audio or video from your phone—always grab a decent photo at the scene, write for social media and engage with people online, handle data, and understand how interactivity works. In short, all the chapters in this book!

Adaptable content

It is not only the journalist who benefits from being adaptable: *information needs to be adaptable as well.*

If you are creating video, audio, or visual content for example, you might consider allowing or inviting users to embed it on their own platforms (embedding is turned on by default on YouTube, but can be disabled), or making it available for repurposing.

Creative Commons licences are often used by media organisations to facilitate repurposing content: the Creative Commons project allows anyone to specify the terms under which another user can reproduce, or adapt, their work (find out more at creativecommons.org), and their licences are integrated into popular platforms such as YouTube, Vimeo, Jamendo, SoundCloud, Flickr, Medium, and WordPress (meaning you can specify in your settings that you want content to be available under a particular Creative Commons licence).

The non-profit news organisation ProPublica has been using Creative Commons since its launch in 2008—publicising the fact on a page titled "Steal Our Stories". Four years into the project they noted that the strategy, designed to give their reporting greater reach, had directly led to over four million page views in just one year—equivalent to a boost of 29% in readership. "We've found it an invaluable aid in building our publishing platform", they wrote, "in reaching additional readers, and in maximizing the chance that the journalism we publish will have important impact" (Tofel and Klein 2012).

Not long after ProPublica's launch, Al Jazeera became the first broadcaster to release news footage under a Creative Commons "Attribution licence", meaning that it could be used for both commercial and non-commercial use (ProPublica's licence only covered non-commercial use). The organisation hoped the move would "introduce our outstanding coverage to an even wider audience across the world … news outlets, filmmakers and bloggers will be able to easily share, remix, and reuse our footage" (Steuer 2009).

And two years later, *Wired* magazine made headlines when it began releasing all of its staff-produced photos under a Creative Commons licence to mark a decade of the project.

This not only generated great publicity for the brand but promised to help improve the website's visibility on search engines: one writer described it as "one of the greatest link marketing schemes ever" (Mims 2011) because anyone using their images would link back to the Wired.com website, boosting their Google rank.

Other organisations have found other benefits: for the non-profit Global Voices, which aims to give a voice to communities around the world, the licence allows their reporting to be "translated and disseminated freely", helping its work reach across borders (Creative Commons 2011).

Sharing the *data* behind stories is another way to make your stories adaptable: with access to that data, users can make new charts, infographics, and tools from it, or find new stories. These in turn may be interesting, informative, or useful to your audience—and move the story forward (see the chapter on community management for more).

The Guardian Datablog was a particular innovator in this regard: sharing data with readers who would then make their own visualisations and share them on a group that the newspaper had set up on the photo-sharing website Flickr. Nowadays, teams will often use the website GitHub to share their data—and code—allowing others to reproduce the results and even improve the scripts. One of the features of GitHub is that you can easily make a copy of someone's project by "forking" it to your own account, which means a reader can work on the same code and data that the journalist used. There's even a Twitter account—@newsnerdrepos—which tweets when a newsroom opens a new "repo" (repository, i.e. a folder for a new project) on GitHub.

S is for scannability

Users of news websites are often task-oriented: they may have arrived at your webpage through a search for something specific, or because someone has shared it with them for a particular reason. If they don't find that something fast, they will go elsewhere.

How do they find that something? Research in 1997 suggested that 79% of web users scanned pages (Nielsen 1997), looking for headlines, subheadings, links, and anything else that helps them navigate the text on screen. By 2006, this scanning behaviour was established enough to be known as the "F-shaped pattern" (Nielsen 2006): reading first across the top of the page, then across again a little further down, and then vertically down the left edge of the page.

Of course, the tendency to scan across a page is not limited to the web. Over hundreds of years, print newspapers and magazines have developed a number of design elements to help people scan the page.

Online news borrows from these traditions, but because it is a medium where users are *active*: scrolling, clicking, and zooming as they interact with the page, scannability is key to effective online journalism. There are a number of techniques that enhance the scannability of any webpage:

- Clear, *unambiguous headlines* and subheadings: avoid cryptic or pun-based headings.
- A focus on *the first two or three words* in the headline, intro, and subheadings. These should relate to the keywords that your story relates to, such as key people, organisations, places, or events.
- A strong *image* at the top of the story—not only does this grab the attention of the reader, it will also be used as a thumbnail by social media platforms when someone links to your story. Use horizontal images rather than vertical images.

- A clear *summary* that tells the story quickly. In other words, the "inverted pyramid" structure recommended in traditional newswriting. Avoid "setting the scene" unless you are writing a longform piece.
- Using *subheadings* to break up an article. These should be mini headlines signalling the content to come and giving the reader numerous entry points into the text.
- *Bullet or number lists*: see how this bullet list caught your eye as soon as you looked at the page? These work brilliantly online—any chance you get, use them.
- *Indented quotes*, sometimes called "blockquotes": users often look for direct quotes. Indenting any quote that runs over one line works well to signal at a glance that you have spoken to sources.
- *Numbers*: numerals stand out against text and allow people to quickly find sections of the story which relate to hard figures. In print, the guidance is normally to write numbers below ten as a word. However, some online guidelines ignore this to maximise the opportunities for using numerals. Check your publisher's style guide.
- *Emboldened words*: this is a good way of highlighting key phrases or entities in your piece and again gives the user entry points into the text. Use it sparingly for the first time a name, organisation, place, or concept is mentioned. Never underline text for emphasis: underlining should only be used for links.
- *Hyperlinks*: again, this is a quick indication that you have used background material and linked to it.
- *Embedded material*: most content management systems now allow you to embed tweets, Facebook, or Instagram updates, YouTube videos, documents, and presentations. Sometimes this is more effective than simply linking.
- *Breaking up text* with images, galleries, video, audio, maps, and other media. These can help the reader get a feel for the story visually, such as the people and places involved, any data (through charts and infographics), dates (timelines), and key quotes (which can be turned into images).

The last technique—mixing text with other media—is now common practice in online newswriting. Look at articles in a news website like USA Today, the Mail Online, or News .com.au and you will see they are peppered with non-textual illustrations throughout. The ultimate effect is to draw your eye down the page and engage you for longer. Just as a good text article used to mix quotes with facts and background, a good online article does all that *and* mixes in images, tweets, or videos. And the data suggests it works: one analysis of over one million articles found that "articles with an image once every 75—100 words got double the amount of shares of articles with fewer images" (Pinantoan 2015). Note, however, that you need to get the balance right: articles with even *more* frequent images got fewer shares.

How to write a good link

Links are the lifeblood of the web—and one of the first things people look for when they visit a page: not because they want to leave your site (yet), but because they want to see what value your webpage offers. What they don't want to see as they scan down the page is this:

> Click here

It doesn't matter what sits on either side of those two words—"Click here to read" or "to find out more click here"—because that's not what users will immediately see. (It's also bad for accessibility if someone is using a screen reader to navigate links).

A link should make sense on its own. It should be succinct and unambiguous. Overheid .nl's guidelines on "Writing good link text" give a bad example:

> The SP refers to statements which the mayor made in March.

Is this linking to the SP? The referral? Or the statements? They instead suggest:

> The SP refers to statements which the mayor made in March.

For the same reason, you should always *deep link* wherever possible. A deep link is a link to a *specific* page within a site, not its homepage.

Another common mistake that people make when linking is to use a URL, like this:

> For more information, go to http://verylongurls.com/somefolder/pageofblah.html

As a general rule, you should avoid inserting a URL into your article: not only do they repeat the mistakes mentioned above (a link should make sense on its own—and a URL does not), but they also make the sentence look ugly. Always link words, not URLs.

Finally, if you are linking to anything other than a webpage—for example, PDFs, images, Word documents, or spreadsheets—it should be made clear: "In the report (PDF)".

Closer look: Accessibility and scannability

There is a further benefit to making your online journalism scannable: accessibility.

People with limited vision or blindness use screen reading software to read webpages. This will generally read out headings and links first. Adding clear headlines and subheadings means they won't have to listen to 300 words before they hit the part they want.

The biggest blind users of the web are search engines. Search engines, quite logically, place higher importance on headings, subheadings, links, and bold text. It helps them index your content, so if you are helping blind users access your content you are helping search engines understand it too.

I is for interactivity

Interactivity is as core to online journalism as sound is to radio journalism or moving images to television. One of the most basic examples of this is the *link*, which allows users to interact by clicking through to related information.

Links improve content online in all sorts of ways, including scannability (see above), search engine optimisation (see below), and driving "recirculation"—readers moving from one story on your website to another—especially when images are linked to related stories (Collier and Stroud 2018).

Linking is a tool for providing transparency around the journalist's sources—and, by extension, trust. A 2021 Gallup/Knight Foundation survey of US news consumers found that 83% of 35—54-year-olds, and 65% of those aged 55 and older, said that linking was "very important" in determining whether or not they trusted a news organisation (Fioroni 2021), reinforcing earlier research that found hyperlinking to be the most highly rated tool in providing transparency (Karlsson and Clerwall 2018). More broadly, research in 2017 found that "content with both a greater number of links and with shorter links yields better results in terms of levels of perception, comprehension and, above all, user behaviour" (Arias-Robles and Garcia-Aviles 2017).

A journalist can communicate more succinctly through intelligent use of linking: the sentence "police said in a Facebook post", for example, can be written as "police <u>said</u>" instead, where "said" is linked to the post that would otherwise need to be attributed. The link serves both as a clear signal that the information comes from an online source and information about where that source is.

Embedding: The new linking

An alternative to linking to source material is *embedding* it: on content management systems such as WordPress and Medium, the user only has to start a new paragraph and paste the direct URL of a social media update or YouTube video for it to be automatically turned into an "embed"—in much the same way as a writer can insert an image in the middle of a story to break it up. And tools like Scribd and Slideshare allow you to embed documents for direct interaction within a story, too.

Embedding has a number of attractions: as well as providing potential visual illustration for your story, it allows users to more instantly interact with the material involved. An embedded social media update, for example, can be shared or "liked", or the account followed (or unfollowed!). Embedded video and audio can be played directly. It's also legally safer than using a screenshot of the same material (Adornato 2017).

In the past, publishers were concerned that linking would encourage users to leave their site—but embeds address that concern. Instead, the addition of such content may lead the reader to spend longer on the article than they otherwise would: watching or interacting with content that is embedded in it. In some cases that embedded content might be produced by the same journalist or another within the media organisation (in stories where a reporter was live tweeting, for example). As a result, embedding has become "a routine journalistic practice" (Oschatz, Stier, and Maier 2021).

But there are also reasons why you might not embed source material.

One reason is that the material may be deleted: in one survey of embeds in 2016, it was found that 10% had been "modified or removed by their author since the article's publication" (Albeanu 2016). If that happens then you will be left with a gap on your page where the embedded material should be (an embed is only a "window" on to the live content, so the original author retains the ability to remove it at any time)—or worse, content that has been edited to misrepresent what was said. For this reason, some news organisations, or some stories, will instead use a screenshot of the social media post in order to ensure that there is a permanent record of the material.

Another consideration is how the embedded material affects the narrative structure of the story: too many embeds can result in a disjointed structure that is hard for the reader to follow, so it's vital to have text passages in between each embed that keep progressing the story.

There may be ethical considerations relating to the nature of the material being embedded, if it is potentially offensive, for example, or has implications for the organisation's editorial independence (embedding rather than quoting or paraphrasing a statement in context, for example).

One piece of research into the way tweets by Donald Trump were presented in news coverage, for example, found that among Republicans, compared with quotes, "embedded tweets were unique in eliciting positive emotions which mediated higher ratings of Donald Trump's warmth and competence" (Dumitrescu and Ross 2021), potentially because of non-textual information such as the author's profile image; likes and retweets signalling community support; or elements that would not be part of a quote, such as hashtags. In other words, by embedding the tweet, you may be sacrificing editorial control over certain elements around how the words are presented.

Concern over the impact of embedding on editorial integrity is echoed by Utah professors Logan Molyneux and Shannon McGregor: "Passing along tweets as the official record grants authority and legitimacy to Twitter, not to sources, and certainly not to journalists" (Molyneux and McGregor 2019). There is a risk, they say, of treating social media updates from officials as a form of "convenient access" where journalists merely amplify what is said, rather than checking whether it is an accurate representation of what is happening, and where elite sources hide behind social media updates rather than engaging with journalists directly.

Another ethical issue to consider is the impact on an individual's privacy of embedding their tweet if that person is not a public figure. BuzzFeed's editorial guidelines, for example, say that:

> We should be attentive to the intended audience for a social media post, and whether vastly increasing that audience reveals an important story—or just shames or embarrasses a random person. We should not automatically or even typically comply with a poster's original intention—but we should be aware of it.
>
> (Hilton 2019)

The mistake that's often made here is to assume that something is either public or private. In reality, there is a sliding scale between the two. When in March 2014 one Twitter user asked her followers "What were you wearing when you were sexually assaulted?" the answers were public to anyone who might search for them—but publishing those responses in an article generated a backlash. Why? Because tweeting to a few hundred followers is not the same as a tweet being published on BuzzFeed, and many assumed the journalist had not sought permission to use the tweets in this way.

As it turned out, the journalist *had* sought permission. And the way that BuzzFeed chose to handle the "public" material is useful for others to learn from. In a note at the top of the story, they explain "All users featured here gave BuzzFeed permission to post their responses; some asked that their names, photos, or both be blurred" (Testa 2014), and the tweets were not embedded: screenshots were used instead.

BuzzFeed's News Standards and Ethics Guide has a section specifically devoted to embedding (buzzfeednews.com/article/shani/the-buzzfeed-editorial-standards-and-ethics-guide), which notes that "in the case of sensitive subjects—sexual assault, LGBT, and racial oppression, for example—we should be aware of and respectful to the fact that many ostensibly public Twitter users consider themselves part of distinct communities" (Hilton 2019) The guide encourages reporters to contact users in these cases.

There are many more features of interactivity beyond linking and embedding—you can read about these in the dedicated chapter on interactivity in this book—but the key question to ask in web writing is *what might a user want to do* while they read your article? And then think about using links, embedded media, and other interactive technologies to help them to do that.

C is for community … and conversation

Conversation and community have always been the lifeblood of journalism. Good journalism has always sought to serve a community, whether it's a local paper campaigning against the closure of a hospital, or a magazine surveying its members to identify their biggest concerns. Commercially, journalism has always needed large or affluent communities to support it. And good journalism—whether informative or sensationalist—has always generated conversation.

Now, in a hyperlinked world, community and conversation are more important than ever. Communities contain contributors who can lead you to a story or a key piece of information; communities contain keen moderators who can help maintain the standard of discussion; they even contain editors who will highlight mistakes, omissions, and new details to be incorporated into a story.

Writing for the web, therefore, can often be improved by a consideration of how it connects with that community (see the chapter on community management for more).

Conversation is king

During the mid-2000s, the academic Jay Rosen noted that journalism had moved "from a lecture to a conversation" (Rosen 2004). It is a useful phrase to remember: you should be asking yourself when writing, "Am I engaged in a conversation—or am I writing a lecture?"

There is a tendency in online publishing to talk about "content", and occasionally (although less often now), you will hear media executives say that "content is king". But you underestimate your audience and its conversations at your peril. Perhaps one of the most successful media companies so far, Facebook, built its business around conversation, and before its rise, the most popular use of the internet was not content services, but email.

People don't merely want to consume content online—they want to use it, produce it, and exchange it.

Conversation and community are closely linked: conversation leads to community, but it is difficult to have a conversation without a community to begin with. Writing for the web, then, must involve taking part in—and stimulating—conversations in a number of ways:

- *Comment* on stories and social media updates, post on forums, correct and update wikis, and converse on social media.
- *Link* to sources (they will often be notified about the link by a 'pingback', or by website analytics tools that can tell them where traffic is coming from).
- *Listen*. That means reading blogs, forums, and other media in your sector.

Closer look: Nine common mistakes when writing for the web

The following is a checklist covering common mistakes made by first-time web writers. Check this against your own content: if you're not doing any of them, see if you can make your content better by revisiting some of the techniques outlined in this chapter. Are you:

- Getting straight to the most newsworthy, interesting piece of information in your first paragraph (unless it's a longform piece)?
- Linking to your source whenever you refer to a piece of information/fact?
- Linking phrases (e.g. "a report") NOT putting in full URLs (e.g. "http://university.edu/report")?
- Indenting quotes by using the blockquote option?
- Using brief paragraphs—starting a new one for each new point?
- Using a literal headline that makes sense in search results and includes key words that people might be looking for, NOT general or punny headlines?
- Splitting up your article with subheadings?
- Ending your post with a call to action and/or indication of what information is missing or what will happen next?
- Embedding linked media such as tweets, Facebook updates, YouTube videos, audio, or images?

Closer look: Choosing a focus for a journalistic blog

Starting a blog as a journalist is a good idea: it gives you the discipline to write regularly and builds knowledge on a particular subject. It also makes you think about audiences and helps you to build a relationship with that audience. If you are persistent and dedicated, you can even build up a large enough following, or a strong enough reputation, that publishers might approach you about partnerships or employment opportunities.

However, to make your blog successful you need to make sure it has all the qualities of good journalism. That means it should be well researched, original, and published for a wider audience, rather than your immediate social circle.

There are three particular types of blogs that can help you ensure you meet those standards: the niche blog, the "behind-the-scenes" blog, and the "running story" blog.

The *niche* blog focuses on a specific subject—the more specific the better. Blogging about solar energy, for example, is likely to be more effective than trying to blog about "environmental news"; it will make you stand out more, and give you more focus. If you cannot choose a niche to begin with, then try to focus more and more as you develop knowledge of a field.

The *behind-the-scenes* blog can provide a useful space for reflection on the stories you are covering, and why you made the decisions you did on the angle you took, the people you interviewed, and so on. You can use it to post information that didn't make the "final cut", and raw material such as full interview transcripts or audio, video, images, and even spreadsheets. The "Inside The Guardian" blog, for example (theguardian.com/help/insideguardian), and the New York Times Open (open.nytimes.com) are just two examples, providing an insight into the working practices of editors and building trust with users, while journalist Claire Miller uses her blog to share advice.

The *running story* blog sees the journalist report regularly as they take on some form of challenge. Examples might include learning to drive or giving up smoking, making a significant journey, or even eating a recipe for each letter of the alphabet. A more feature-based form, this can be very successful but obviously has a limited shelf life.

Of course, these three broad types are only examples, and you might combine aspects of each—writing a niche blog that includes reflective postings and a running story. Or you might do something entirely different. The key thing is: just do it. You can tweak and improve as you go.

Avoid blog formats that don't give your journalistic skills enough opportunity to stand out: *reviews* blogs, for example, are extremely common, but the proliferation of reviews online means that journalists are almost never hired based on their ability to write one. *Opinion*-based blogs suffer from the same problem. *Personal* experiences can be interesting to blog about if they are newsworthy or touch a nerve, but it's unlikely you'll have those on a regular enough basis to justify a *professional* blog dedicated to the subject. Giving yourself the challenge of seeking out stories and thinking of creative ways to tell them will be much more worthwhile.

Closer look: Which blog service should I use?

There are a number of blogging services available. *WordPress* is one of the most widely used platforms, and many news organisation content management systems are WordPress-based, so it's worth gaining experience in using it.

If you want to write analysis or longform reporting, *Medium* is worth considering: the platform also allows you to curate or contribute to "publications" if you want to collaborate with others. Its social features mean that engaging with other users through comments can help you to build your network.

Avoid general website creation tools like Wix: these are not designed for regularly updated sites based on new content.

Search engine optimisation

Search engine optimisation (SEO) is the practice of optimising your content so that search engines can best understand it and are more likely to suggest it in response to a relevant search query. This does not mean that we are "writing for search engines": we are writing for people. It is people's behaviour—clicking through to your articles, reading them, sharing them, and linking to them—that shapes how highly search engines rank your content. Search engines not only store information about the content of your webpage, but how many people link to it, how many people click on those links, and even how long they spend on the page.

It starts with the "spiders". Search engines like Google and Bing use "spiders" (computer scripts) that follow links ("crawling") across the web and store information ("indexing") about the pages that they find (detailed below). That information on millions of pages is then stored in a massive database, which is regularly updated.

When you conduct a search, the results are ordered on a search engine results page (SERP). What order those results come in—and which comes top—depends on two key factors: *relevance* and *importance*. The relevance is based on the terms that you typed in, and what the search engine knows about you (for example, where you are in the world, whether you are on a mobile phone or laptop, what you've searched for previously). Importance is based on the webpage itself: a webpage that has been frequently linked to and updated, on an authoritative site, is going to perform well. SEO means making sure that the search engine understands that your page is relevant to the search (through content) and improving its importance (how much people use and link to it).

When someone searches for something that you've reported on, the search engine uses hundreds of signals to decide how prominently to show your article. These are known as *search algorithms* and are being constantly tweaked to improve their performance. Every so often a company like Google will announce a major change to an algorithm: for example, in 2011, the "Panda" update was introduced to tackle "content farms" (websites that tried to publish a lot of poor-quality content in order to sell advertising). In 2012, the "Penguin" update cracked down on sites that paid or organised for other sites to link to them, and in 2014, the "Pigeon" update prioritised local results when relevant. In 2015, the more simply named "Mobile" update gave an advantage to mobile-friendly sites, and in 2018, another update made page speed a ranking factor if you were searching on mobile. More recent updates have drawn on artificial intelligence technologies to better understand language and context.

Google releases changes every day, and announces larger changes every month or so, so it is important to follow industry sources like Search Engine Land to find out when new changes are announced.

The precise details of algorithms are closely guarded, but broadly they measure three things: the content of a webpage; the code underpinning it; and the context surrounding it (Table 4.1). I'll explain each in detail below.

SEO level 1: Page content

If your page contains *keywords* that are *relevant* to a search query, then it is likely to be ranked more highly than another page that has less relevant content. Keywords are just that: key words that people tend to use when searching for something. Understanding what terms people are likely to use for something, then, is an important skill: when the Japanese volcano Mount Ontake erupted, most people outside Japan searched for "Japan volcano", not "Mount Ontake". As a result, most news reporting used the former phrase over the latter.

> **Watch this:** Gannett Media SEO expert David Stone talks more about the importance of choosing the right keywords in a video tutorial for journalists: youtube.com/watch?v=fFYeoTWr8Xo

Table 4.1 SEO checklist: content, code, and context The following table provides a list of things to consider relating to each of the three levels of SEO

Element	*Considerations*
Content	• Keywords in headlines and subheadings • Keyword position in headline and story • Unique/exclusive content • Content that people are likely to engage with, share, link to, etc.
Code	• URL • The <title> tag and <meta> description • Heading tags (don't use bold alone to indicate headings) • Filenames of images and other media • <alt> descriptions of images • Mobile optimisation and load time
Context	• Inbound links • Site PageRank • How recently content was published • How frequently the topic is covered by the website • How much users engage with the content

The *position* of the keywords is important: an article that mentions the Oscars in the headline is likely to be more relevant to a search for "Oscars" than an article where the word is only mentioned in the final paragraph. For similar reasons, it is important that relevant keywords are used in the first paragraph.

Also important are subheadings, tables and lists, links, and bold or italic text, but avoid repeating the same keyword over and over again: this is called "keyword stuffing" and is penalised by search engines.

Headlines and the colon

Even the position *within* the headline or subheading is important: having a keyword within the first two words is better than having it at the end of the headline. This has resulted in an increasing use of colons in headlines, with headlines such as these:

- Mediterranean migrant deaths: EU has "moral duty" to act
- Tropical storm Megi: Philippines death toll rises to 123 as landslides bury villages
- Morning sickness report: 1000 abortions a year due to an extreme form of illness during pregnancy

You can see that this technique is incredibly useful in getting the keywords to the front of the headline.

An online headline will generally be different to the headline that was written for print. For example, the front page print headline "A very lucky £184 m dip!" (about a lottery win) is punchy, and "LUCKY TIP!" is punny but neither works well online, where one newspaper changed the headline to "EuroMillions £184 million winners Joe and Jess Thwaite reveal the incredibly normal way they celebrated their jackpot win".

Note how the use of keywords makes it much easier to find in search engine results—and to understand.

However, this does not necessarily mean the end of the amusing headline. Hashtags in particular have given a new lease of life to puns in headlines. When homes were flooded with sewage in South London, social media users coined the hashtag #poonami, leading to headlines like "#Poonami Flows Through Kennington, South London After Sewage Pipe Burst (PICTURES)". The pun is acceptable because *people were searching for it* after seeing it on social media, so it had become a *relevant* keyword in itself. You'll notice, though, that the headline also manages to fit in plenty of other keywords too.

Headlines also often focus on media: if your article has video, audio, images, a liveblog, map, or an infographic, then that might be important to highlight in your headline. A headline like "Video: Calais residents protest for Jungle migrant camp to go" not only helps distinguish your coverage from other reports, but chances are that some people are actively searching for video (it is *relevant*). Likewise, "Infographic: How Apple's iPhone matches up with Samsung's Galaxy" tells us that we're likely to be able to understand this article more quickly than non-visual versions. A similar approach is to use *calls to action* like "watch", "meet", "join", and "hear"—see the chapter on writing for social media for more.

Trending topics

Knowing the right keyword to use is a combination of knowing your audience and using the right tools. Google Trends (google.com/trends), for example, allows you to compare relative search volumes for different phrases (to add more than one phrase click *Compare*). Check the country and time range matches your country and a recent timescale to get a more accurate result. Google's Keyword Planner (ads.google.com/intl/en_uk/home/tools/keyword-planner) will likewise suggest the most popular searches based on the word or phrase you type in (try a search for your own publication and scroll down to "Additional keywords to be considered" to find out what other things your readers are searching for).

On social media, Trends24 (trends24.in) allows you to identify trending hashtags, while Trendsmap.com shows which terms are trending in different places around the world. YouTube's trending page can be found at youtube.com/feed/trending. For Facebook and Instagram, journalists can register to use Facebook's Signal tool (signal.fb.com), which shows trending topics on both platforms. Some newsrooms also have subscriptions to similar tools like Crowdtangle and Storyful that cover multiple platforms.

Sometimes trending topics and user search behaviour can shape content itself: newspapers now routinely publish factual pieces with headlines like "What is the time of the anti-racism protest march?" for the simple reason that people are searching for that information. It's a reminder that journalism isn't just about surprising stories, but also about answering basic questions that readers need answering.

SEO level 2: Code

The code used on an article page contains all sorts of extra information about its contents that can help search engines. For example, the <h1> tag means "level 1 heading" and should be used for any top-level headings like a headline or website title. There are also tags like <h2>, <h3>, and so on for lower-level headings and subheadings. If you are making something into a heading by only making it bold, then that's not a very effective way of telling a search engine "this is a heading": it just thinks it's bold text.

Code is particularly important for images, video, and audio. Remember that search engines can't "see" or "hear". Instead, they use a number of clues to try to understand multimedia. This includes:

- The filename: try to avoid using default names like "IMG5634.jpg" or "241216.mov" and change it to something descriptive like "LionelMessi.jpg".
- Captions: make sure these use keywords as outlined above.
- If you are embedding media you've uploaded to services like YouTube, Vimeo, Soundcloud, or Audioboom, make sure you've edited the title, description, category, and tags to include keywords as outlined above.
- Any text near the media, such as the paragraph before and after.

Another important element in your webpage code is the <title> tag, which indicates the page title: this is normally (but not always) what is displayed in search engine results (Sullivan 2021), rather than the headline—and can be written accordingly. The MailOnline website is a good example of this: while articles often have a long headline like "Peter Kay delights audience as he makes rare public appearance on stage at Ivor Novello Awards—after five years away from the limelight", the title tag on the story, and therefore how that story appears in search results, will be much shorter ("Peter Kay delights audience as he makes rare public appearance").

If your article has a *meta description*, that allows you to specify what text you want shown *under* the title in search results (if the search phrase isn't in the meta description, however, the search engine may extract a different section from the story). This can increase clicks, which, in turn, affects your ranking (see the section on context below)

The *URL* is particularly important. If you are registering a URL yourself, try to pick one that contains keywords relevant to your field: something like basketballscores.com is going to have an immediate advantage over something like basketcases.com (although the latter has more personality, which might be more effective in building an audience longer term). Beyond that, most media organisation content management systems—and free ones like WordPress and Medium—allow you to edit the end of your URLs for SEO. Journalists are encouraged to use this end part of the URL to list keywords that may not be possible to include in the visible headline. The Guardian article "Do your homework if 'back to school' means a first phone for your child", for example, has a URL ending first-mobile-phone-child-right-handset-high-school.

The *speed* at which the page loads is now an increasingly important part of SEO: so much so that it has its own acronym: WPO, or web performance optimisation. Similarly, having a mobile-friendly version of pages will increase the likelihood that it is in search results for users on mobile devices.

Using *tags and categories* is thought to have little if any impact on SEO, but it does improve navigation (readers being able to click from one article to others with the same tags or category) and create extra "landing pages" (the category page), which can appear in searches. Categories tend to be broad "sections" that you cover regularly, such as "boxing" or "health"; tags tend to be specific people, locations, or organisations mentioned in the article such as "diabetes" or "Wayne Rooney".

SEO level 3: Context

The final, and most important, element of search engine optimisation is the context that your page sits in. This includes things like the site that it sits on, how recently and how often the page has been updated, and where it is located. But most important of all is how many people link to your webpage, and what keywords they use when linking.

Underpinning all of this is the original Google algorithm, known as PageRank. Named after co-founder Larry Page, PageRank counts how many other pages link to your page, and how high a "quality" those links are. A link from a long-running and well-established site like the BBC is considered much higher "quality" than, for example, your friend's webpage that was only set up last week, and that quality is itself measured using PageRank. Put another way, the higher the PageRank of sites linking to you, the higher your PageRank will be in turn.

Don't try to pay for, or swap, links, or take part in "link exchange" programmes. This is called "black hat" SEO: many of Google's algorithms are designed to detect if a site has done this and it will issue big ranking penalties if it thinks you have. Likewise posting links yourself back to your site on forums and comments will not work—these typically include a "nofollow" tag that tells search engines to ignore links.

The best way to have lots of people linking to you is, of course, to write fantastic, compelling, unique content that others want to share and link to. No amount of SEO techniques can avoid the need for great journalism.

Likewise, you can affect some of the other contextual factors by simply being dedicated. Publishing regularly, and persistently, for a long time on a core set of topics is a good strategy for improving your SEO. Search engines look for the same things we all do—evidence that you care.

Chris Moran, head of editorial innovation at *The Guardian*

Chris Moran has been head of editorial innovation at The Guardian *since 2020, having previously held roles in the organisation as strategic projects editor and audience editor.*

What tips would you give to someone writing online?

The golden rule is to have a sense of who you are writing for. And this becomes more important when you're writing more than one piece. Always know what you expect of a single individual reader and what you would like them to get through in an ideal situation. Don't fall into that trap of just "coverage".

At an individual level, there's one other really pernicious habit: a writer will say "I'd really like to write about this super-niche area". And if it's exciting or interesting, the commissioning editor will go "Brilliant. Write 2500 words because anybody who's interested in this will read all of it". And it's not true.

What you do as soon as you make that contract between editor and writer is you're almost certainly making that writer so comfortable that they're not thinking about the reader any more, really.

I see it a lot with cultural pieces right across the industry where they don't even bother to introduce who this person is and why anyone should care about them because the assumption is that only people who already know about this person will read about it.

And so you do two things: you kill the engagement with genuinely interested people because it's baggy and it's dull and it's trying to be encyclopaedic. And you kill interest from all general readers who might otherwise discover something really interesting because you haven't explained why anyone should care.

That I think is a really useful thing: think about the general reader. There's no shame in that. It doesn't make you a monster because you want to communicate enthusiasm about something to other people—in fact, it's the opposite: a great chance to uncover something. So: never forget that you're writing for a human being.

What myths are there about writing online?

One of the myths is that you can't write a headline that works in both search and social. You absolutely can—we do it every day, on every piece, and we have done for ten years. That's not to say you couldn't wring out some more optimisation if you went really specific [on particular keywords] but we've found that the effort required for that isn't really worth it.

It's not exactly a myth, but I really hate "curiosity gap" headlines. Even really good editors who are quite digital-savvy can come to us and say: "We've got a great one here—it'll really tease them in". Yes, you can get massive reach on a curiosity gap headline if you're lucky but almost certainly the attention time will collapse under the weight of people leaving very early (bounce rate).

The simple reason for that is the reader doesn't know what the story is about: the first time they know what it's about is when they arrive at the page. If it's really relevant to a wide audience, you almost certainly would have been better putting the topic in the headline. And if it's not, well, you are effectively playing a confidence trick because it's insanely niche. Then you're letting yourself down in a different way: you're just annoying people.

Every now and then maybe [it works], if you see one that's just too good to miss. But the simple thing is that we don't have time to click on something on Twitter when we don't know what it's about. And if you're interested in developing a genuinely loyal audience over time who keep coming back to you then I would question whether it is a strategy you should apply at scale.

What role does Facebook play in your publishing approach?

Facebook remains probably our third biggest referrer now, after Google and Apple News. But it's a lot down, it's much smaller than it used to be. We still continue to run our Facebook page for the Guardian, because it's not just about the reach in total. We have a bunch of people who subscribe to us on Facebook who are absolutely loyal readers.

Interestingly we are not just putting articles on there that we think will do brilliantly with the Facebook algorithm. We are obviously thinking about it as a platform and the readers who are there but we also want to represent a really clear idea of what the Guardian stands for, and if we only started feeding our celebrity content through that—well, we wouldn't be drawing people into the kind of journalism we want them to be reading on a regular basis and developing a regular habit of. So we may well put things in there that aren't going to go bananas but that have to be there to represent what we stand for.

One of the nice things about Facebook as well is that—and this is a really important point about social media versus search engine optimisation I think—if you don't have a search term [to focus on] you can make something fly on Facebook in a way that you almost can't guarantee on Google. For example, an interview with a really interesting person who isn't in the news: we had an interview with an actor where you could optimise that as much as you like for search, but it's incredibly niche. But with a great line from the interview on Facebook, that can sing—and it did.

Social media optimisation

As social media began to become as important a source of traffic as search engines, a similar skillset of "SMO" (social media optimisation) began to emerge aimed at identifying ways to improve the discoverability of content on social media.

SMO can refer to two different things: either optimising material posted *to* social media, or optimising website content itself so that it is *more likely to be shared by others on* social media—and in an ideal world—"go viral". In this chapter, we will be focusing on the latter (optimising social media updates is covered in the chapter on writing for social media).

If SEO attracted criticism for "writing for machines", SMO has been blamed for the rise of "clickbait": headlines that promise something they can't quite deliver, characterised by headlines that promise "You'll never believe…" something. Edward Hurcombe, the author of *Social News: How Born-Digital Outlets Transformed Journalism*, argues that early concerns about clickbait were shaped by fears about new technologies, and a desire to keep newcomers out of journalism:

> [It] has always articulated something about social media more broadly: that they are sites tainted by the everyday, the mundane, and the inconsequential, and that they are suspicious because they are popular. That these platforms belong to a different sphere than "real news".
>
> (Hurcombe 2022)

The success of clickbait led social media companies like Facebook to alter their algorithms in response: in 2016, Facebook announced it was "further reducing clickbait" in their newsfeed. Their algorithm would now look for any headline that "withholds information" and "exaggerates the article to create misleading expectations" (Peysakhovich and Hendrix 2016).

The technique of writing a headline that makes a reader curious enough to click is known as the *curiosity gap*. Like many online techniques, it is not new: in broadcasting, the "teaser" is well established, while the "real life story" magazine genre, for example, is based on generating a similar form of curiosity (examples on the website reallyreallife.tumblr.com include "I swapped a bowl of pasta for a BABY").

However, it is not the technique that is the problem: it is when the story cannot deliver on what is promised: Facebook's previous attempt to identify clickbait looked for when a user had "liked" and then quickly "unliked" a story in their feed or spent very little time reading it. That is a frustrating experience you do not want to be giving your readers. Instead, you want to be making sure that you have a story that people will want to share because it is just a great or important story.

If you do have that great story, then "teaser" headlines can work well on social media. In his research on curiosity, George Loewenstein not only argues why curiosity is so effective (first a lack of knowledge is identified, and then we seek to "cure" that), he also outlines five curiosity triggers (Loewenstein 1994). These are:

- Questions or riddles ("Can You Die from a Nightmare?")
- Unknown resolutions ("You'll never guess…")
- Violated expectations ("...will surprise you")
- Access to information known by others ("Dustin Hoffman Breaks Down Crying Explaining Something That Every Woman Sadly Already Experienced")
- Reminders of something forgotten ("40 Things That Will Make You Feel Old")

If your story has any of these, it may be worth leading on that in your headline.

While teaser headlines have been getting all the attention, however, web publishers have also been moving to longer headlines that give you the whole story all in one go. The MailOnline is one of the best-known practitioners of this technique, which headlines such as: "Myleene Klass under fire for claiming she released giant crab on Hampstead Heath after it stowed away in her luggage when she flew back from Pacific island of Mogmog".

The reason for such a long headline is partly based on the opportunity to include more keywords—in this case, "Myleene Klass", "giant crab", "Hampstead Heath", "Pacific island", and "Mogmog". But user testing has suggested these longer headlines also work well in getting people to click through.

Jonah Peretti and the Google penalty

Jonah Peretti is perhaps the best-known name in the field of "going viral". Soon after he launched BuzzFeed, the site was wrongly penalised by Google and dropped out of search results. Without any traffic from searches, Peretti was forced to focus entirely on social media traffic. He has continued to do so since, with enormous success.

A famous presentation from Peretti (Saint 2010) outlines some of the techniques that BuzzFeed uses. These include targeting the "bored at work network" (note how a strong sense of audience forms the first part of any strategy), and creating something that is "easy to understand, easy to share, and includes a social imperative".

Similar lessons have been drawn by other people. Annalee Newitz, for example, highlights the "Valley of Ambiguity" (Newitz 2013) where harder-to-understand journalism formats risk not being shared: longform opinion essays, science news on discoveries that are hard to interpret, and political news with a complex backstory all fall into this valley. But the same stories might be told in more engaging ways by using more socially successful formats such as debunking, explainers, or investigations that reveal a hidden truth.

The "social imperative" identified by Peretti—something that motivates the person to share—has also been explored by others. One study concluded that "Content that evokes high-arousal positive (awe) or negative (anger or anxiety) emotions is more viral. Content that evokes low-arousal, or deactivating, emotions (e.g. sadness) is less viral" (Berger and Milkman 2012). Similarly, Alfred Hermida writes about other research that suggests people are more likely to share news that disgusts them: "Sharing disgust provides an emotional release. It also is a way of confirming with others the boundaries of what is socially acceptable" (Hermida 2016).

Highlighting something wrong with the world, or celebrating something which is right, will be familiar themes for anyone who has ever written a human interest story. At the heart of the best real-life story is something universal. But there are other types of stories that do well too: content that is informational, or which asserts the user's identity, for example. Lists of things that you only know if you come from a particular city, for example, or "40 Things That Will Make You Feel Old".

These list-based articles have become so common that they have their own name: the *listicle*. These can range from the frivolous and humorous ("11 Random, Amazing Food Videos We Can't Stop Playing on Repeat") to the serious ("12 Charts That Explain Why You'll Never, Ever Be Able to Afford a Home"; "16 Absolutely Outrageous Abuses Detailed in the CIA Torture Report"). They can also work well as a form of *curation*, rounding up the best or most important information about an issue or event (see the community management chapter for more on curation).

Lists have always been a staple feature of magazines and newspapers (rich lists are one long-running example, along with end-of-the-year or beginning-of-the-season lists of the best music, fashion, and films), but websites have discovered that they perform especially well online, partly because the headline alone immediately promises two of the five qualities of web writing: brevity and scannability. Slideshows and galleries are further list-like formats that can provide an introduction to an issue or event (Lawlor 2013).

The role of content strategy

In the 20th century, a journalist had relatively few decisions to make about how to treat a story: the medium was already decided, and the lengths and formats limited. Online, however, the dizzying array of choices can cause a certain degree of anxiety. Many publishers have developed *content strategies* to prioritise this decision-making process: identifying their objectives and deciding which types of content and formats might best meet them.

For individual journalists, a similar process can be a useful approach to ensure you can make decisions quickly and confidently.

Such a strategy begins with the same principles as good journalism on any platform: knowing who you are writing for and why. If you know who your audience is, you have a good idea of what information is most valuable, what knowledge to take for granted, what style is appropriate, and where and when is best to reach them.

As for "why", you are writing for them: this might be a combination of editorial and commercial imperatives: on the editorial side, you might consider whether your audience wants to be primarily informed, entertained, or educated, for example. On the commercial side, objectives might range from reaching a wider audience to targeting more specific ones; and from focusing on "clicks" to a more sophisticated focus on "engagement".

Everything else is based on that who and why. But your content strategy itself also needs to consider its own how, what, where, and when.

"How?" Thinking about format

The nature of the story influences the format you might use to report it. Does the event take place over a geographical area, and will users want to see the movement or focus on a particular location? Then a map might be most appropriate.

Are things changing so fast that a traditional "story" format is going to be inadequate? Then a liveblog may work better (see the chapter on live and mobile reporting).

Is there a wealth of material out there being produced by witnesses? A gallery, portal, or aggregator might all be good choices.

Is there some complex science or backstory that needs to be understood? An explainer or backgrounder can work well.

Does the story involve a lot of facts or data? Consider an infographic or some sort of data visualisation (see the chapter on data journalism).

Have you secured an interview with a key character and a set of locations or items that tell their own story? Is it an ongoing or recurring story? An audio or video interview may be the most powerful choice of format (see the chapters on video and audio).

Are you on the scene and raw footage of the event is going to have the most impact? Grab your phone and record—or live stream.

"What?" Thinking about medium

Format does not necessarily determine the medium: a liveblog can be text-only or image-driven; an interview could be audio, video, or mixed media. A podcast can be video ("vodcast") as well as audio-only.

"Where?" Thinking about platform

A liveblog's reporting might be done through Twitter, on your own website, or both. Video can be published directly on Twitter or Facebook, on YouTube, Instagram, or Snapchat, or on a website or a combination of those.

The platform has an impact on your choice of style (see the chapter on writing for social media for more on this), on the audiences you might reach, and the sort of engagement you might get: remember that platforms like Facebook or Twitter are not just "channels" for pushing out content, but different places where people engage with you and with each other, exchanging information that can become part of your reporting (whether you want it to or not). See the chapter on community management for more on this.

> **Watch this:** Now This News' Editor-in-Chief Ed O'Keefe talks about telling the same story across different platforms in an interview with MediaBriefing: https://www.youtube.com/watch?v=gVemUNXkbVQ

"When?" Thinking about timing

Just because you can publish your story instantly does not mean that you should. News organisations often adopt publishing schedules online so that stories that are not time-sensitive can reach the biggest audience. For example, websites tend to experience the largest traffic during the morning rush-hour, lunchtime breaks, and late evening before people go to sleep. Toronto tabloid *Twelve Thirty Six* was so focused on this that it named itself after the optimal time for publishing its email newsletter.

This is sometimes called "dayparting"—a phrase borrowed from broadcasting. It might involve an editions-based schedule around the times 9 am, midday, and 5 pm (Davies 2016). There may also be particular days of the week where content might perform best: is your article a bit of Friday afternoon fun, something to be used over the weekend, or an article to kickstart the week first thing on a Monday?

But if it's time-sensitive, get it out now!

In addition, different types of content perform better at different times of the day. The *Washington Post*, for example, found that photo galleries (without sound) performed better during the day while people were at work, while video was watched more in the evening when users might not have to worry about colleagues hearing what they were watching (Doctor 2011).

Finally, the type of device can also vary based on the time of day: the editors of the *Wall Street Journal*, for example, noticed at one point that the proportion of traffic at 7 am was double what it would be three hours later (Albeanu 2014). This has led many email newsletters to be published in the morning, while social media publishing tends to also focus on commuting times (see the chapter on writing for social media for more on timing).

Summary

Writing for the web requires a complex skillset: for a start, it is not just "writing" you are doing, but rather choosing what combination of text and other media might be the best way to tell your story for your audience, at the best time, and on the most appropriate platforms.

You need to be able to spot the story angle that will engage people on social media and inspire them to share it with others—or to identify the keywords that will help the right people find it on search engines. Clarity in writing is not just about the story itself but making sure the code underpinning it is accessible too.

The sophistication of these options has led to enormous creativity and diversity in journalistic storytelling over the past two decades: the use of links, embedded media, GIFs, and galleries have brought stories to life, while interactive forms like live chats, quizzes, database-driven storytelling, and immersive longform features provide ways to bring stories to new audiences. Alongside all of this, blogging has undergone its own transformation, influencing the informal tone of much writing online and a new culture of engagement and transparency.

But that proliferation of options can also be confusing, so publishers and journalists now have to be much more strategic in making these decisions. An effective content strategy is a key element in enabling you to make the right decisions quickly.

With that content strategy helping you, it is important to experiment with all the storytelling techniques you have at your disposal: from distilling a story in a GIF or employing effective SEO to designing multimedia interactive experiences. Be brave, take risks, and accept that sometimes things will not quite work out—but that's OK: you will learn from each experiment and be a better storyteller in the long run.

Activities

1. Write a content strategy

Write a strategy to help you decide how best to report your stories. It should include who your audience is and what platforms they use and when. Then based on that think about the types of stories they might need you to report and the sorts of formats and media that might best suit those stories. Don't assume you know all the answers: test different approaches (times, platforms, formats, media) and see which ones do best!

2. **Edit an article for BASIC principles**

Take an article you've already written and use the techniques detailed in this chapter to improve it by considering each element in the BASIC mnemonic:

- Brevity: can you split paragraphs as soon as a point is made to make them punchier and easier to read? Check if anything can be removed from an article and it still makes sense—can it be shorter?
- Adaptability: have you thought about telling your story through a different medium? How might a reader want to use or reuse your content? Research Creative Commons licences to find out how you can add one to your story, video, or audio.
- Scannability: does the story use subheadings and other techniques for scannability such as images, blockquotes, and lists? Have you made sure that the first few words of the headline convey the topic quickly?
- Interactivity: are you linking and embedding whenever there is an opportunity?
- Community and conversation: are you inviting interaction or thinking about how the reader can continue the conversation elsewhere?

3. **Edit an article to optimise it for search engines (SEO)**

Identify the keywords that your article, video, or audio relates to, and make sure that those are in the headline and intro—as well as subheadings, image captions, and alternative descriptions.

Use Google Trends to identify what phrases people are using to search for your topic—is that the same language that you are using? If not, consider editing your writing accordingly.

Edit the URL if you can, and make sure that the story is appropriately tagged and categorised.

Think about how people are going to discover this story—could you bring it to certain people's attention in order to build links?

4. **Identify the qualities of socially successful content in your field**

Look for a list of the "most read" or "most shared" stories of the year—or find an area on a news website showing trending stories (The New York Times's is at nytimes.com/trending, BuzzFeed's at buzzfeed.com/trending and The Guardian's is at theguardian.com/most-read/news).

What qualities does that content have? Does it engage the reader emotionally? Is it useful or informational? Does it use techniques like the curiosity gap or listicle format? See whether some types of content are more shared on certain types of social media.

5. **Brainstorm blog ideas**

Brainstorm ideas for the following:

- A blog in a specialist area—does anything else cover this? Could you pick a more specific niche?
- Five posts for a "behind-the-scenes" blog that reflects on your work as a journalist
- A "running story" blog—what challenge could you accept?

Search for similar blogs on Medium and WordPress. How does your blog fit into that field? What makes it different? How can you engage with that community through linking and comments?

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Useful websites

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Facebook Signal (registration required): Signal.fb.com
Google Trends UK: Google.co.uk/trends
Search Engine Land: searchengineland.com/
Search Engine Journal: searchenginejournal.com
How to Write the Perfect Headline: The Top Words Used in Viral Headlines, Buffer Social: https://blog.bufferapp.com/the-most-popular-words-in-most-viral-headlines

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5 Writing for social media

Chapter objectives

This chapter will cover:

- What social media is and why it is important for journalists
- How to be professional on social media
- What to write about on social media
- What works well on social media
- Using GIFs, emojis, and memes
- Building accessibility and inclusion into your social media updates
- Specific considerations on visual social platforms Instagram and Pinterest
- Dealing with harassment and trolls
- The importance of measurement and experimentation

Introduction

There is a contradiction at the heart of all social media: almost everyone writes for social media all of the time—and yet a relative minority knows how to do it *professionally* and *successfully*. It is a unique challenge that requires a range of skills, some discipline, and a little insider knowledge.

Having professional social media storytelling skills—and an extensive social network—has become essential for the modern journalist. The LA Times, ProPublica, HuffPost, and BuzzFeed are just a few of the brands that require journalists to write tweets and text for other platforms alongside each article when submitting it for publication (Benton 2014), while young journalists such as The Guardian US's Mona Chalabi, 7News Melbourne's Sharnelle Vella, and Vice's Sophia Smith Galer have supercharged their careers by effective use of Instagram, Twitter, and TikTok, respectively (Rosen 2019, Tobitt 2021, McMahon 2021).

Not only are reporters expected to manage their own social media accounts, but an increasing number of new jobs have been created to manage the social media accounts of media organisations.

The reason is obvious: social media platforms like Facebook and Twitter are where our audiences are— depending on the country, between a third and a half of people use it to access news in any given week (Reuters Institute 2022). And it can help us build

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relationships with those audiences: research has suggested that interacting with readers on Twitter leads to lower levels of perceived bias in the news media (Zúñiga, Diehl, & Ardèvol-Abreu 2016) and higher credibility (Tandoc 2019).

Social media is also where our sources, colleagues, and bosses spend much of their time—so any reporter who wants to be accessible to those sources, or just to impress potential employers and colleagues, takes social media seriously.

The number of social media platforms—and messaging and chat applications—has mushroomed. From LinkedIn, Myspace, and Facebook in 2002, 2003, and 2004, to Twitter and Tumblr in 2006 and 2007, WhatsApp and QQ in 2009, Instagram and Pinterest in 2010, Snapchat in 2011, six-second video app Vine in 2012, video streaming tools Meerkat and Periscope in 2015, TikTok in 2016, and social audio platform Clubhouse in 2020, the list demonstrates the extent to which journalists have had to keep up with perpetual change—and how much they should anticipate continuing to have to do so.

The use of those social media apps has also exploded. In 2007, when Ofcom first asked people in the UK about their social media habits, just 22% of respondents had a social media profile and only 30% of those logged in at least once a day. Within a decade, three-quarters of people had one (Ofcom 2017). And by 2022, one in five users had *multiple* profiles on at least one platform (Ofcom 2022).

That—and the move to consumption on mobile devices—has had a major impact on news consumption. Between 2016 and 2022, the Reuters Institute's Digital News Report, which looks at media consumption in dozens of countries around the world, found that the proportion of people saying social media was their *main* source of news rose from 12 to 28%, overtaking direct access to websites and apps in 2021.

This broad trend masks a lot of regional variation: in countries like Thailand, Kenya, and The Philippines, over half of consumers said they got their news mainly through social media in 2022—but the figure was as low as 9% in Japan, where aggregators and search engines played a much bigger role. In countries like the UK and Norway, there remained a strong habit of direct access.

And there is variation between platforms, too. Facebook has dominated historically, but in 2021, falling usage saw it drop into second place below YouTube, followed by WhatsApp and Instagram (Reuters Institute 2022). Twitter may rank behind those but its use by journalists and speed during live events means it enjoys an importance disproportionate to its public usage.

Writing for social media is not only different to writing for websites—there can be differences in writing techniques between different social media platforms, too. In this chapter, we'll explain just how.

Starting out: Creating a professional social media account

You may already have a number of social media accounts for personal use—but a *professional* social media account is a very different thing, and you should approach it as a completely new challenge.

Perhaps one of the most common mistakes made by people starting out in journalism is failing to understand the distinction between professional and personal use of social media. Table 5.1 outlines just some of those distinctions, although in reality there is a lot of "grey areas" that professional journalists might negotiate.

The two most important distinctions to focus on here are *audience* and *purpose*. One of the things that defines professional reporting is the fact that we are writing for a specific audience for purposes related to our job, rather than for our friends and our own purposes.

Table 5.1 Distinctions between professional and personal use of social media

Professional use of social media is usually…	*Personal use of social media is often…*
Aimed at a wider audience	Aimed at people who already know you
Seeking to represent events fairly	Subjective
Attributing claims clearly	Not always attributed
Factual (sometimes strategically opinionated but in an informed way)	Often opinionated
Accurate	Sometimes vague
Free of typos and grammatical mistakes	Sometimes ungrammatical/contains spelling mistakes
For the audience's benefit	For your benefit
Mainly about stories	Mainly about you
Seeking to build trust	Assuming people trust you
Consistent and regular	Irregular and occasional
Legally safe and ethically informed	Not considering legal or ethical issues
Accessible and inclusive	Not always accessible
Employing genre conventions	Not generic
Succinct	Sometimes rambling
Verified (or clear about the need for verification)	Not always clear about verification
Read by current and potential employers	Not meant to be read by employers

That audience shapes what information we include, and what knowledge we take for granted: we might assume our *friends* know about a particular celebrity when talking about them on social media, for example, but when using the same platform professionally for a *wider* audience, we may need to describe that celebrity (e.g. "the singer Beyonce") so they can understand the story.

Identifying our audience also shapes *how* we communicate: when using social media in a personal capacity we might assume our followers share the same values and beliefs and trust us implicitly—but people who encounter us in our professional role might have different belief systems, and not trust us unless we can support statements with evidence. Remember that our role as journalists is not to persuade—it is to *report* (the facts).

Accessibility reflects this too—when updating social media for our friends, you might not even think about adding alternative descriptions to images (so that they can be read by people who use screen readers) or writing in plain language, but professional social media use means we have to consider both (Sehl 2020).

In terms of *purpose* for a professional account, we are building *professional* relationships—for example, by establishing our authority in a field through accuracy and attribution, and our professionalism in writing succinctly, accurately (without errors), and fairly.

An analysis by Kelly Fincham notes that the most common theme in news organisations' social media guidelines is the need to avoid opinion and commentary:

> Journalists [are] repeatedly advised that they must "refrain from expressing personal opinions on controversial subjects" … The persistent message is that journalists should avoid expressing any opinions and that such commentary is seen as damaging to the news brand's reputation.
>
> (Fincham, forthcoming)

"Fairness" is used by the Washington Post in their guidelines (as an alternative to objectivity), on the basis that it is more easily understood. Fairness involves making sure that important or significant facts are not left out; making sure that all information is relevant; being honest; and providing the opportunity for individuals or organisations "to address assertions or claims about them made by others" (Washington Post 2020).

It also hints at the importance of diversity and inclusivity. Earlier guidance, for example, advised to "be sure that your pattern of use does not suggest, for example, that you are interested only in people with one particular view of a topic or issue" (Inside Social Media 2009), while The New York Times advises reporters to "aim to reflect a diverse collection of viewpoints" on social media. "Consistently linking to only one side of a debate can leave the impression that you, too, are taking sides" (New York Times 2017).

You should be careful about sharing opinions on social media—the majority of audiences in most countries think journalists should "stick to reporting the news on social media" (Reuters Institute 2022), although this varies by age group, and most organisations' social media guidelines have some guidance along these lines (you can find a list of links to different organisations' guidelines at the end of this chapter).

These processes are also followed to help us build our *brand* as a journalist. Holton and Molyneux (2017) define brand journalism as "a set of activities that create an identity for an individual journalist and then promote that identity by building relationships". That identity—your brand—would include adjectives including "professional", but "professional" doesn't necessarily mean *formal*: the best writers on social media are able to use it informally, without losing the professional values that are vital to their role. For example, you might report updates in a way that is witty and accessible, comprehensive and detailed, irreverent, visual, or aural. You might provide "behind-the-scenes" updates. The *style* in which you share information is part of your branding, and it's important to decide what that style might be.

Branding occurs in other ways, too: Molyneux et al. (2019) identified three branding "levels" that journalists combined in their use of social media—individual, organisational, and institutional (Table 5.2). At an individual level, the reporter might use it to build their profile and develop relationships as outlined above; but at an organisational level, they might also use it to express collegiality with co-workers (by linking to or praising their work, for example); and at an institutional level, they may support or collaborate with other journalists (by drawing attention to problems they are facing or engage in professional conversation, for example).

Table 5.2 Three levels of branding and related personal and professional motivations (from Molyneux et al. 2019)

	Individual branding	*Organisational*	*Institutional*
Personal motivations	• Gain respect and renown • Develop relationships	• Collegiality with co-workers	• Support other journalists (solidarity under pressure) • Encourage collaboration
Professional motivations	• Preserve my job • Grow my following • Increase my value	• Please my boss • Adhere to policy • Attract attention to the organisation • Promote co-workers	• Uphold journalistic values • Promote other journalists

Review any personal accounts

Once your professional social media account is set up, you should review your personal social media accounts too. Look at those accounts through the eyes of sceptical sources and hostile audiences: sources will often try to find out more about you on social media in order to make a decision about whether to agree to an interview or other cooperation.

Equally, people who don't like what you are reporting may look through your social media history in order to attack your credibility—for example, suggesting that you are not objective because of previously expressed views or because of membership in an online group (avoid belonging to online groups that have a particular agenda or campaign on an issue). Even accepting a Facebook friend request from an individual in the news can imply that you are, well, "friends", and therefore have a conflict of interest when reporting on them or their organisation.

The BBC's social media guidelines, for example, apply to both the professional and personal social media accounts of its employees, saying: "Nothing should appear on your personal social media accounts that undermine the perception of the BBC's integrity or impartiality" (BBC 2022) while The New York Times also says it considers all social media activity by journalists to come under their policies (New York Times 2017).

You may want to delete old social media updates if you feel they will undermine your work as a reporter. Tools such as Tweet Delete and Tweet Deleter will delete updates based on their age or specific keywords. Other platforms are trickier, but search for "bulk delete updates" and the name of the platform for guides to settings and tools that you can use. The Guardian's social media guidelines go as far as to "strongly encourage" its staff to "regularly" delete old updates (The Guardian 2022).

Even private messages and accounts should be used with care: in 2013, for example, Bloomberg social media director Jared Keller lost his job after another journalist shared screenshots of a private conversation where he had complained about his job (Loguirato 2013), and many organisations' guidelines say you should assume private messages can be seen by anyone. If something you want to say privately may be used against you in future, use a phone or meet in person.

Edit your profile

Once you have set up a professional social media account, it is worth spending some time on your profile to make sure that it presents the same appearance of professionalism as your updates.

First, it is worth considering the username you are choosing to reflect the byline you have on any stories you write. Nicknames like "@cat_fan" or "@friendly__samosa" are going to be harder for people to find, while numbers and punctuation like underscores make usernames harder to remember.

If someone already has your preferred username then consider adding a suffix like "journo" or "news" to your name, or the news organisation you are working for, to create the new username: Twitter's Joanna Geary was @bhamjoanna when she worked for the *Birmingham Post*, and then @timesjoanna and @guardianjoanna before she joined Twitter and became simply @joannauk.

The profile picture and any header or banner image across the top should be an image that conveys your professionalism: a professionally taken image is just one option; images of you doing your reporting (interviewing or in a newsroom) can also work well. Avoid images of you with friends or having a good time outside of work, as this will undermine your professionalism.

Your biography entry should be clear and simple. Try to avoid describing yourself as a "student journalist" if you're already publishing material online. Instead, consider naming the websites and outlets that you contribute to in your biography. You might say "freelance journalist writing for X, Y, and Z" or "Sports editor for X" or even "writer" or "blogger", and the name of your own site. This also shows that you take your own publication seriously. It is absolutely vital that you check closely for typographical or grammatical errors (the same applies to all your updates).

The most important part of your biography is the link. It should take followers to the best place to find your work: if you write for one site, then link to your author page. If you write for a range of publications, then you should be linking to your own personal site that you (hopefully) regularly update with links to your work. Sites like Muck Rack and About.me allow you to quickly create profiles of work. If for any reason you don't have any work online to show (what are you waiting for?) then link to the most detailed social media profile you have: a LinkedIn profile is often the most professional option.

Remember that many social media platforms allow you to include more than one link in your profile. Twitter, for example, will turn any @ names (such as brands you work for) into links to their profiles.

Finally, make sure that you are following people and have posted some updates. A lack of either suggests a lack of interest in the platform. With Twitter in particular it's worth "pinning" a tweet—this means it stays at the top of your profile page on Twitter (to pin a tweet click or tap on the icon at the top right of a Tweet and choose "Pin to your profile"). Choose a tweet that you feel helps people understand who you are—your biggest story, for example, or the one you're proudest of.

Professional journalist accounts versus "brand" accounts

So far, we've been talking about your new account as a professional journalist's account. However, you might also want to set up a "brand" account: these are accounts that act as a voice of a particular publication or project. For example, if you (or your employer) were publishing a new email newsletter called "The Vegan Gardener" you might want to set up social media accounts associated with it, with a username like @TheVeganGardener.

The "brand" accounts will have a slightly different voice to your professional account. It will be important to decide before you publish any updates what that "voice" is and create guidelines so that anyone operating the account knows how they should write for it.

In many ways it is like operating a puppet: it should be possible for different people to do it and no one to notice. For that reason, brand accounts are often simpler in the way that they operate, steering clear of informality and sticking to updates about the latest stories and news developments—although that doesn't have to be the case—while pointing to individual journalists' accounts or hashtags for more personality and behind-the-scenes insights (e.g. "Follow @paulbradshaw on the hashtag #ojhandbook3 for live updates from today's event").

A Facebook profile or a Facebook page?

Facebook profiles (created when you first set up your account) have long had a limit of 5000 "friends", so some prominent journalists have decided to create an official Facebook page instead, allowing many more "likes".

Pages also allow you to gain insights into your followers and use apps (for example, to run contests).

However, profiles also have a number of advantages: there is a suspicion that they perform better than pages when it comes to being seen by users (this makes sense given that people tend to engage more with people than brands), and an update to Facebook's algorithm in 2016 gave greater weight to friends and family updates than updates from pages. Also, only profiles can comment on other profiles, join groups, or comment on group posts.

You can also overcome the 5000 friend limit by enabling the "follow" or "subscribe" option so people can follow your updates without having to add you as a friend.

LinkedIn has a similar feature: its "Creator mode" changes the "connect" button to "follow". Becoming a creator also means you are able to use LinkedIn Live and LinkedIn Newsletter, and gives you access to extra analytics.

What shall I write about?

Andy Carvin, one of the best-known journalists on Twitter says of his feed:

> I get uncomfortable when people prefer my Twitter feed as a newswire. It's not a newswire. It's a newsroom. It's where I'm trying to separate fact from fiction, interacting with people. That's a newsroom.
>
> (Ingram 2012)

If you are struggling to think about what to write about on social media, come back to that quote, where Carvin mentions two key elements of any good social media feed:

- Separating fact from fiction
- Interacting with people

In addition, I would add the following things that happen in newsrooms:

- Keeping up to date with developments
- Making observations
- Asking questions

The last two are really just forms of "interacting with people", but they are worth identifying because they are particular types of interaction that work well on social media.

"Curating" the news

"Keeping up to date with developments" is the simplest way to start writing for social media: as a journalist, you should be a voracious reader (and listener and watcher) of news in all its forms—and social media is the perfect platform to share that.

But keeping up to date with developments as a journalist doesn't just mean news reports: it also includes press releases and announcements, livestreams and live broadcasts, official reports and documents, new statistics, and new analysis. All of these also can be useful to your audience—and establish your authority in your field.

This sharing of "things you are finding out" has a particular name in journalism: *curation*. See the chapter on email, chat, and curation for more on this.

Think before you retweet: The role of verification on social media

> Don't just spread information. Be careful. Be skeptical. Add context.
>
> (NPR's social media guidelines; NPR 2021)

The two roles that contribute most to social media—curating content from elsewhere and separating fact from fiction—can come into conflict if you are not careful about what it is that you retweet. It can be embarrassing when others point out that an update you have shared is not actually true.

The New York Times, for example, advises its reporters to exercise caution when sharing scoops or provocative stories from other organisations that the New York Times has not yet confirmed because it can be interpreted as confirming the story (New York Times 2017). NPR's guidelines say that being transparent about what has and hasn't been confirmed is key, with the "quote tweet" function being especially useful to add context and make clear it is from another source.

Before you retweet, like, or share any update from another user, take a moment to check if you are confident it is true. For example:

- If there is a link in the update have you clicked on it and checked that it is what the update says it is?
- Is the link on a reliable site? Again, sometimes satirical websites are mistaken for real news, or hoax websites are set up to fool journalists.
- Does the story sound 'too good to be true'? If so, be particularly cautious.
- Is the account reliable? Sometimes journalists fall for hoax accounts or satirical accounts pretending to be famous people.
- If an image is included, use Google's reverse image search feature to find out where that image has been used before.
- Engage with the source and ask further questions first, for example, "Where did you hear about this?" or "Have you got a link to more details?" If they do not respond, assume that they cannot provide more details and be extra sceptical.
- Consider adding a caveat to your own update, for example, "This sounds too good to be true. Does anyone have any more details?" or "Not sure if this is true, chasing more. If you have details, please let me know".

Look out for out-of-date material too. In the wake of terrorist attacks in Paris in November 2015, for example, a seven-month-old story about attacks in Kenya became the top story on the BBC website with 7.5 million views coming from social media. Many—although not all—of these were people mistakenly believing the attack had just happened or using it to illustrate that the media was ignoring terrorist attacks outside Europe (despite the story coming from the BBC!). Read the section on verification in the liveblogging chapter for more on useful techniques and tools to use.

What to do when you get it wrong

If you do make a mistake, it's important to acknowledge that quickly and take steps to correct it. Don't delete the update—it can suggest that you are trying to cover up your mistake and prevent you from reaching the same people who saw or shared it (by adding a clarification in a linked update, for example). If you can edit the original, then write "Correction" along with any clarification. Make it clear what wasn't correct in the original post. An example given in the guidelines of the Associated Press is:

> Correction: US Embassy in Nigeria says bombings could happen this week at luxury hotels in Abuja (previously we incorrectly said Lagos).
>
> (Associated Press 2022)

You should check if your original incorrect update is being shared elsewhere and alert the people doing so that you have since issued a correction. Be humble: thank the person who drew your attention to the error and try not to be defensive: it will be quicker to acknowledge you made a mistake, and pledge to learn from it, than to get embroiled in attempts to justify your actions.

Interacting with people

The former creative content manager for Twitter Mark Luckie once noted that:

> Journalists who tweet 20% fewer links—either links to their own stories or to other online content—and 100% percent [*sic*] more mentions, including handles and @replies, actually grow their following by more than 17% over the long term.
>
> (Glaser 2013)

Interacting with people means first listening to them: make sure you are following key people in your field (see the chapter on search for more on how to find them), and you should have an idea of what they are doing or what is important to them.

Having **your** *personality*

Personality on social media is a hard thing to get right. Some people confuse having a personality with having an *opinion*. In fact, it's more about *style*. Many aspiring journalists hope to be opinion columnists at some point—but having a strong opinion is not the same as having one that people want to *read*.

Typically, opinion columnists are paid to do their job because they have two qualities that set them apart from the mere wannabes: first, they speak with authority (because they do their research); and second, they speak with flair (because they hone their writing until there's no one better). They also don't waffle: every word is made to work for its place.

The same principles apply on social media: what can be duller on social media than having an opinion? EVERYONE on social media has an opinion! So what else do you have? Can you share some interesting evidence? Or can you express something in a way so colourful and memorable that people will pass it on? Try to write drafts of each update and improve upon them before publishing. A writer should not treat 280 characters any differently than they would 800 words, and your first draft should never be the last.

One journalist who was commissioned to write a column (and a book) as a direct result of her Twitter account is *Mirror* reporter Susie Boniface. Boniface tweeted anonymously as @fleetstreetfox, and over time built a significant following based on three key ingredients: first, she shared original information on the industry gained as an insider; second, she wrote from a specific angle: that of a self-declared "foxy feminist"; and third, she had a distinctive way of writing: bold, sarcastic, and sharp-tongued.

Aim for all three—angle, information, and style—and you can do well—but a strong voice without anything new to reveal or a perspective to tell it from is only a third of the recipe.

Separating fact from fiction—or adding context

Using your social media account to separate fact from fiction is one of the most valuable services you can perform as a journalist. You might find a claim by a politician or celebrity that is not supported by the facts—and make that part of your update.

Adding context to a story is another way you can add value: if someone has made an important announcement, can you provide the background to that? The timeline leading up to it? A key statistic? If someone is saying more money is being spent, is that accounting for inflation?

You can invite others into your process. For example, if a politician is claiming that a protest was "violent", you can ask people who were there whether that was their experience (you will still need to verify their claims, too). Or you might appeal to legal experts to clarify a point of law.

When doing this you need to make sure you are not merely asking other people to do your job—contribute something to the discussion first if you can.

Social media and the law

The same laws apply to social media updates as to any other publication on the web—but without editors to provide a check, there is more potential to make mistakes.

In particular, you should be aware that libel and contempt laws apply to social media—including any statements that you retweet or quote in your own social media coverage. So if you repeat a defamatory statement made by someone else you can be liable too.

Likewise, technically copyright law applies on social media too (although there have been few cases to establish case law). This is especially strong when it comes to news photography, so don't be tempted to take a photo from a news site and use it in your own update without permission. This is different to linking to a news story where an image might be "pulled" into your update as part of a "preview card": as the publisher will have created this themselves, effectively giving permission for this use, this is fine.

Laws will differ from country to country so make sure you have some awareness of the laws in the territories where you are publishing your updates. Laws in the US, UK, Australia, and Canada, for example, differ significantly on issues like "fair use" when it comes to copyright, so if you read a guide to "image copyright on social media" make sure it's about your country.

Aside from legal considerations, there are ethical ones as well. Make sure you are familiar with your organisation's guidelines on social media use—and if there isn't one, create one! The Online News Association provides an online "Build your own ethics code" tool at ethics.journalists.org that includes a section specifically on social media (ethics.journalists.org/q/social-networks)—you'll need to register for free first.

Social first or social last?

It is important to consider whether you are approaching your journalism in a "social first" mindset, or treating social media as something that comes "after" the story. Different news organisations have different policies on this—and sometimes change them. For example, in 2014, the *New York Times*'s Michael Roston noted that letting reporters deliver some news first on social "helps them connect directly with an interested audience" (Roston 2014), but since 2017, the organisation's social media guidelines have stipulated "We generally want to publish exclusives on our own platforms first, not on social media" (New York Times 2017).

Breaking stories on social media, however, is only one way of using social media journalistically before you publish stories. The New York Times guidelines acknowledge "the value of using social media to provide live coverage and to offer live updates" (see the chapter on liveblogging for more on this) as well as other "instances when it makes sense to post first on social media". It advises checking with supervisors for guidance. Equally, posting context to a story broken by another journalist, updates as you travel to interview someone for a non-breaking news story, or background research you encounter as you prepare a feature, would not be considered breaking news.

The first consideration in writing for social media, then, is to think about how you might report on stories using social media *before* you have written full articles. It can be useful to think of your social media account as an *ongoing* liveblog of "My life as a journalist": sharing updates about what you're doing, updating interesting news from your field and colleagues, and interacting with others. The key thing is not to treat it as merely advertising.

Social media is not (just) about promotion

Imagine if you only ever used your telephone to call people up and demand that they read your latest article: it would be repetitive and annoying, and after a while, people would stop taking your calls.

Social media is no different: it is, after all, *social*. And this means interacting with other people, rather than merely shouting at them (in 2015, Facebook recognised this by stating that they would begin downranking pages posting content that was "too promotional").

Of course, *one* of the reasons that journalists use social media is in order to get people to read their articles. But you will vastly increase the chances of people reading your work if you adhere to two pillars of basic good practice.

Rule 1: Be interested in other people if you want them to be interested in you

This is the most basic rule of social relations: we all know the bore who only ever talks about himself and never asks what's going on in your life. And as a journalist it's simply unforgivable not to be interested in other people: after all, that's your job!

In social media you can show your interest in a number of ways:

- Retweet, share, or re-blog updates from other people you think your followers will find interesting or useful (but be careful not to do this in a way that implies you are biased).
- Reply to people when you want to know more about something they've posted about.
- Reply to people who ask you questions.
- Send messages (public or private) to individuals who you find interesting. It might be that you want to know more about their job or an experience they've had.
- Follow some people when they follow or message you. Obviously, you don't have to follow everyone, but following those who look interesting or who you think might need to privately message you is a simple way to send out a signal that you are interested in

what they are saying. If you follow a lot of people, you can always use Twitter lists to split them into smaller more manageable groups.

Rule 2: Serve your audience first, not your ego

If you use them correctly, social media platforms can be a place for you to build a sizable audience. But in order to do that, you must make your social media account useful and valuable to that audience.

A simple way to do this is to share the best journalism in your field today. It doesn't matter if that journalism happens to be by you, a colleague, or someone on another website. Research suggests that people are more likely to click on your links if you tweet a mix of your own and content by other people.

You can also serve your audience by sharing links to background material, which might be official reports, statistics, key quotes or images, audio, or video.

And, of course, you can serve an audience by responding to their questions and inviting suggestions for questions you might ask or angles you might cover in pursuing a story. Remember that these invitations can be open (i.e. not directed to anyone in particular) or you can include the names of individuals (for example, their @name on Twitter or simply their name on Facebook) to direct that invitation to them.

Harassment and trolls

Harassment, particularly abusive "trolls", is a significant problem for journalists (NUJ 2020)—but even more so for women reporters and those from minority groups (Trionfi and Luque 2019, UNESCO 2020, Harki 2021, Posetti et al. 2021), and those covering issues such as race, sexuality, and gender.

PEN America define online harassment as the "pervasive or severe targeting of an individual or group online through harmful behaviour" (PEN America 2018), and it can range from acute harassment (verbal abuse related to a particular story or issue) to chronic harassment (more sustained, and often from the same social media users) to escalatory harassment (more personally aimed and directly threatening) (Holton et al. 2021).

Research by Jenny Kean and Abbey Maclure emphasises that it's important to differentiate between legitimate criticism on journalistic grounds and unacceptable personal attacks. "If the accuracy of a story is being called into question and you choose to respond", they advise, "remain factual—but don't expect to have the last word, as you can never win a 'Twitter spat'" (Kean and Maclure 2021).

Personal attacks, they say, should be blocked, ignored, and muted, and any threats or abuse should be documented and reported to management, using internal processes that are in place. The guidelines for journalists at The Guardian say:

> If you feel at all threatened or overwhelmed by other users on social media, we have information and support in place to help you. If you are the subject of continued or co-ordinated attacks, please take a break from social media and talk to your editor or manager.
>
> (The Guardian 2022)

More broadly, Kean and Maclure recommend keeping work and personal social media accounts separate, and not using work social media accounts outside office hours. If you need to take time away from social media, don't be afraid to ask for an editor's support to do so. "Know it is okay to be upset and that abuse is not acceptable and should not be part of the job" (Kean and Maclure 2021).

The International Press Institute (IPI)'s OnTheLine programme (ipi.media/programmes/ontheline) provides one of the most comprehensive resources to help newsrooms deal with online harassment, including an online course. It recommends regularly speaking about online abuse in editorial meetings: "The objective is to normalize discussions about online harassment in the newsroom", they say. "Journalists should feel comfortable coming forward with their experiences and concerns" (IPI: undated). Along similar lines, Kean and Maguire recommend speaking about online abuse with family, friends, or colleagues to "take a bit of the heat out" (Kean and Maclure 2021).

Hateful speech is just one of the tactics that trolls use online—online impersonation, "concern trolling" (demeaning messages masked as "helpful" advice), cyber-mob attacks (harassment by a group), and doxing (the publishing of sensitive personal information online) are just some of the others. See the Online Harassment Field Manual's glossary of terms (onlineharassmentfieldmanual.pen.org/defining-online-harassment-a-glossary-of-terms) for advice on how to deal with each one.

There are many other resources to help you and your colleagues with online safety and harassment. These include:

- TRFilter is a free tool that syncs with the user's Twitter account, automatically recognising and flagging harmful comments: trfilter.org
- The Dart Center provides a tip sheet for journalists and newsroom managers on dealing with online hate speech and harassment at dartcenter.org/resources/dealing-hate-campaigns-toolkit-journalists
- The Committee to Protect Journalists provides a template for risk assessment that includes sections on digital security and psychological security at cpj.org/wp-content/uploads/2020/08/CPJ-Emergencies_Risk-Assessment-Template-2.pdf
- The Online Harassment Field Manual can be found at onlineharassmentfieldmanual.pen.org
- Trollbusters provide an infographic at yoursosteam.files.wordpress.com/2017/01/tb_infographic_watermark.jpg
- The International Women's Media Federation (IWMF) has a Know your trolls course at learn.totem-project.org/courses/course-v1:IWMF+IWMF_OH_EN+001/about
- The Library of Congress has collected resources on "Laws Protecting Journalists from Online Harassment" in 12 different countries at blogs.loc.gov/law/2019/12/law-library-report-addresses-laws-protecting-journalists-from-online-harassment/

Closer look: Social media's secret recipes: Algorithms

Just as Google and other search engines use a special calculation to decide what results to show on the first page when someone enters a search term, social media services use similar calculations to decide what updates to show you and when.

These are called *algorithms*. Algorithms are closely guarded by social media services because they don't want publishers and spammers trying to cheat and "game" the system to get their content to the top. Despite this, many companies conduct regular experiments to try to work out the ingredients that the algorithms use to rank content. For example, they might compare the performance of updates with or without video or images or links, or post at different times of the day or with different text.

Algorithms are constantly tweaked by social media services (once a week at Facebook, for example) based on their own experiments to see what content users find most relevant and what works best for their adverts, and also the signals that indicate someone is trying to 'cheat' the system.

As a result, you'll find a whole industry of "social media optimisation" companies that monitor data on performance, and statements by social media companies and publishers, carefully. Social dashboard service Hootsuite, for example, maintains a page on "How the Facebook algorithm works" at blog.hootsuite.com/facebook-algorithm; one on Instagram at blog.hootsuite.com/instagram-algorithm; and one on Twitter at blog.hootsuite.com/twitter-algorithm. They also have regularly updated pages about the algorithms on LinkedIn, TikTok, and YouTube.

Changes in algorithms can have a big impact. Many "viral content" sites, including Upworthy and Distractify, saw their traffic plummet when Facebook made changes to its algorithm in December 2013 to emphasise particular qualities that it judged to be indicative of "higher-quality" content. And when Facebook announced changes to its algorithm in 2018 to prioritise updates from friends and family over content from brands and publishers, the US digital publisher LittleThings saw its traffic drop by three-quarters—and stopped publishing. "No previous algorithm update ever came close to this level of decimation", the company wrote in a memo (Tobitt 2018).

What works well on social media

Social media platforms are an enormously competitive environment for journalists, so there are particular strategies that can help make your content stand out from the rest.

Visuals—and accessibility—are key

Strong images have performed an important role in journalism for over a century—so why should social media be any different? As early as 2012, an analysis of thousands of posts on Facebook Pages showed that photos received 53% more Likes and 104% more comments than the average post (Corliss 2012), and a decade later, LinkedIn was reporting that posts with images received twice as many comments as text posts (LinkedIn 2022). Within news specifically, research published by Twitter found that adding a visual to a news tweet increased the likelihood of it being retweeted by 27% (Rogers 2014)—and it's even more likely to be retweeted than videos (Quicksprout 2021).

Then there is the fact that the newest social media platforms, such as Instagram, TikTok, and Pinterest (see below), are almost entirely visual.

Visuals don't have to be photographs, you can also:

- Make images of text (e.g. key quotes)
- Use charts and maps
- Create infographics or timelines
- Take screenshots
- Use illustrations
- Add memes and GIFs (see the section below for more)

"You need to create (or choose) images that add value to your readers", writes Canva's Andrianes Pinantoan. "Or are worth them sharing to their own audience. For example, Quote images are the most shared, but they don't particularly add value. Yet, they always make sense to be shared to an audience" (Pinantoan 2015).

A number of tools have been launched to help communications professionals create images that are optimised for social media. Canva (canva.com) in particular has built an important role for itself in the social media ecosystem as the go-to tool for generating graphics quickly at the specific dimensions used by different social media platforms. You can find a list of various social media platforms' image sizes by searching for Sprout Social's "Always Up-to-Date Guide to Social Media Image Sizes" (Arens 2022).

When you upload your image, make sure that you add an alternative description to ensure that you are not discriminating against blind or partially sighted users (who may be using screen reading software). Twitter, Facebook, LinkedIn, and Instagram all allow you to do this after you have uploaded an image by tapping on an "edit", "ALT", or "add description" button.

For images of text, simply copy the text from the image itself. For photographs, describe what the photograph shows. For charts and maps, describe what they show (for example, "There were 2000 crimes in Greytown, twice as much as Redville") or copy the list of labels and figures from the table it is based on (e.g. Crimes per town: Greytown: 2000; Redville: 1000).

Consider colourblind users when creating images for text, or charts and maps, too (around one in every 20 people are colourblind): avoid using colour to convey meaning and use tools like Vischeck (vischeck.com) to test what the image will look like to people with one of the three types of colour blindness. The contrast between colours should be enough for people to read, too: you can use contrastchecker.com to tell you if your colours don't reach the threshold that is required.

Closer look: Instagram

Instagram is a difficult social network for many journalists to get their heads around because it is primarily visual rather than textual. The *New York Times*'s first Instagram accounts were set up for subjects with a history of visual storytelling: food, travel, and fashion, followed later by sport, its video team, marketing department, and events team. But you can use the platform for less obviously visual fields, too: Kazakhstan journalist Jamilya Maricheva created an account (@ProTenge) dedicated to reporting corruption in public procurement and managed to draw 80,000 followers. “Thanks to her reporting”, wrote the Global Investigative Journalism Network, “her team has managed to stop suspicious procurement purchases worth US$500,000” (Hrytsenko 2022).

The content itself doesn’t even have to be visual: the *New York Times* has used Instagram’s carousel feature (which allows you to post multiple images in a single update that users swipe through) to successfully experiment with PowerPoint-style slides of text and bullet points. “When there’s either an important, complicated news story or something that [would benefit from] context, there’s a real good journalistic reason to do this kind of thing”, deputy off-platform editor Jake Grovum told NiemanLab (Tameez 2021).

Instagram stories don’t have to be short, either: the Wired photo-feature “Left Behind in a High-Speed World”[1] tells the longform story of a teacher in Mississippi across 11 Instagram posts accompanied by long passages of text.

The BBC is one of the biggest news accounts on Instagram, and its head of social Jeremy Skeet puts its success down to a formula of four key things: a strong focus on the audience; regular posting; creating more explainers; and using text on images. The account reportedly "regularly drives more than 700,000 clicks back to the News site every week—more than five times higher than [three years earlier]” (Tobitt 2022).

If you already work in a newsroom, a good way to get started on Instagram is to share strong imagery or images from the archives: some accounts focus entirely on historical photos. Another approach is to seek out live events, share photos, and engage with others doing the same (for example, liking or commenting on good photos).

Profiles and interviews can work well on Instagram: a striking photo of the subject draws you in to read the accompanying text. Practical content, such as picture-led how-tos, can also work well—but make sure that users can follow from one step to another by using hashtags, for example. Strong or important quotes from news stories can also be made into standalone visuals.

It is worth searching online for tips on creating photos and videos for Instagram and recommended apps designed to help you create visuals, such as looping videos, turning photos into animated GIFs, timelapses, and combining text with images. See the chapter on video for more on creating video for social media.

Closer look: Pinterest

Pinterest can be a significant traffic driver if you are publishing in a particularly visual market. For magazines like *Martha Stewart*, *Elle Décor*, and *Country Living*, it has been a particularly important traffic driver. Pinterest describes itself as a place to discover and save creative ideas—which means that it’s a natural fit for publications about home decor, design, gardening, food, art, and fashion.

But that doesn’t mean people aren’t ready to stumble across news on the site. BuzzFeed and the *Guardian* both get over ten million monthly views on the platform, while the website Refinery29 has expanded from using the site to focus on fashion and beauty to using Pinterest to tell stories about personal finance and housing.

The site can be used to share not just visuals, but also articles, audio, and video, and the best way to get started with the platform is to use it as another platform to share your stories. Here are just some examples of approaches you might adopt:

- Use boards in the "Saved" section in much the same way as your website might use sections: HuffPost (pinterest.com/thehuffpost), for example, have boards for Home & Living, Money, Work/Life, and so on.
- You might be even more specific: the Daily Mail have individual boards for Kate Middleton, Taylor Swift, and Beyonce, as well as "Australian Celebrities".
- Create boards for individual stories—especially visual ones—such as the Guardian's "A tribute to Andy Warhol" or British Vogue's "Awards Season 2022".
- Create boards based around visual material: many publishers have an "Infographics" board, for example, while the Wall Street Journal created a board dedicated to election graphics.
- Set up boards dedicated to individual correspondents and columnists (the *Washington Post* columnist Carolyn Hax and *New York Times* columnist Nicholas Kristof both have dedicated boards on their publication's Pinterest page).
- Create a "behind-the-scenes" board for photos from the newsroom or individual reporters.
- Focus on useful collections, like Marie Claire Australia's "Wedding Inspiration" board, the Gay Times's "Queer Quotes", or the *Telegraph*'s "Tech Gadgets".
- Approach Pinterest as a direct revenue generator if your publisher uses ecommerce: its "shoppable pins" allow people to purchase items in an image (used by the German sneaker blog Highsnobiety).
- Boards can be used to share user content, too: Al Jazeera's *The Stream* collected together videos from users on one page so they could be watched and shared in one place.
- They can also be used to invite users to share content: Al Jazeera's Crowdsourced News board "is open for you to share your pins with us—anything you think is newsworthy, that we're covering or not" (pinterest.co.uk/aljazeera/crowdsourced-news).

You might even set up entire accounts dedicated to specific sections and interests, such as Washington Post On Parenting or The New York Times Style Magazine.

The media company Meredith has a dedicated Pinterest team that creates content for a number of different publications on the platform. Lorraine Goldberg, director of social strategy at Meredith, says the team considers what topics are trending on each publication's site as well as what's popular on Pinterest—but also looks at the "long-tail effect": for example, creating winter holiday content that they wouldn't create for other platforms (Flynn 2019).

In recent years, Pinterest has expanded beyond curating material from around the web, into the creation of new material: in 2021, "Idea Pins" were launched, allowing users to record videos, upload images, and create lists and text, in a vertical format similar to Snapchat and Instagram Stories (see the chapter on online video for more on this format).

If you run a website, consider claiming it on the platform (help.pinterest.com/en/business/article/claim-your-website). This means that your profile picture and a "follow" button will appear next to pins from your site, and you will have access to analytics on pinned content.

Making your updates inclusive

When Twitter introduced voice-recorded tweets in 2020, it was forced to apologise for not including support that would make the results accessible to people who were visually impaired, deaf, or hard of hearing. The mistake highlighted the tendency of technology companies to overlook users with disabilities—and moved Twitter to establish two new teams dedicated to accessibility across the organisation's products (Beykpour 2020). A year later, the company announced it would add automatic captions for videos in tweets, with Facebook Live and Instagram having already rolled out the same feature.

Accessibility is part of the broader issue of inclusivity—making your work accessible to as many people as possible—and it's not just limited to alternative descriptions of images and captions for video or audio. Considering inclusivity in your reporting means creating different ways for different people to access and engage with it, and addressing barriers that might exist.

For example, writing clearly and plainly (and avoiding jargon or slang) is one simple way to make your content more accessible—and something that journalists are encouraged to do anyway. The BBC's guide on considering diversity and inclusion when writing for social media points out that:

> Using clumsy or offensive language can easily alienate individuals or communities. Bear in mind that people use variations of language to describe themselves and their communities. Avoid reinforcing stereotypes, for example, defining someone by their gender or race.
>
> (BBC 2022)

Avoiding the overuse of ALL CAPS (which can be problematic for screen readers) and trying to place hashtags at the end of updates (screen readers will read out the "hash symbol") are other techniques to consider (Sehl 2020). For hashtags with more than one word, try to use CamelCase, where the first letter of each new word is capitalised (e.g. #BlackLivesMatter) so that screen readers will be able to distinguish between them.

You can find more information about individual platforms' accessibility tips at the following links:

- Facebook: facebook.com/accessibility and on Twitter at @fbaccess
- Twitter: help.twitter.com/en/using-twitter#accessibility and at @TwitterAble and @TwitterA11y
- Instagram: help.instagram.com/308605337351503
- TikTok: tiktok.com/accessibility

Further useful tools on inclusivity are listed at the end of the Hootsuite post "Inclusive Design for Social Media" (blog.hootsuite.com/inclusive-design-social-media), and the BBC's guide on "Diversity & Inclusion Social Media Essentials" can be found at bbc.co.uk/creativediversity/article/diversity-and-inclusion-social-media-essentials.

Emojis and emoticons

The need to keep communications short online and in text messages has led to a range of creative solutions. The first wave consisted of emoticons—characters which, when used together, look like facial expressions, such as ¯_(ツ)_/¯—but these have been superseded by "emojis": small graphics that more directly represent a range of icons, symbols, and expressions, rather than relying on combinations of alphanumeric characters such as :-). Emojis proved so popular that in 2015, Instagram allowed them to be used as hashtags.

Emoticons and emojis can help reduce ambiguity in text-only communication and can also make messages more intimate or personal. Some analysis has even suggested that they might also increase interactions on Instagram specifically (Quintly 2019).

Emojis are typically used in two main ways: to convey the emotion of an article (for instance, a "crying with laughter" emoji to indicate an amusing story); or to convey ingredients within the story (for example, a judge emoji to illustrate a story about a court case). Sometimes both are used: the HuffPost UK mobile alert "Cecil The Lion's Son Xanda Shot Dead In Zimbabwe By Big Game Hunter" ended with the crying emoji (emotion) and the lion emoji (illustration).

They can also be used as bullet points: an "emoji factfile" on Welsh singer Lucie Jones used a birthday cake emoji, house, and dog in this way to prefix facts about her birthday, hometown, and pets.

Before using emojis, it is worth establishing whether your audience is familiar with the language being used. Some key questions to ask include:

- Does the intended audience use emojis themselves?
- Would they expect you to use emojis or emoticons? Or would they expect you to be more professional?
- Is the use appropriate to the subject matter? (For example, is it a serious story—which may not suit emojis—or a playful one?)
- Is the use justified by the demands of the medium? (For example, do you have a limited number of characters on Twitter?)

Finally, you should consider whether the use of emojis might make your content less inclusive: remember that your emoji will have to be read by a screen reader (in this sense they are better than emoticons) and some emoji descriptions might not match what you think they are: ❤, for example, is "Heavy Black Heart", and 🙏 is "Person with Folded Hands", not "praying" or "a high-five" (check the "unicode name" in the emoji's entry on Emojipedia.org to find out what the description is for any particular emoji). Make sure it's also a widely recognised emoji and one that is visible in both dark and light modes.

Other accessibility guidelines to follow when using emojis are: avoid using them to replace words; try to place them at the end of the update; and avoid using more than three.

As always, it comes down to professional judgement—but when done in the right context it can be fun. The BBC found their most successful experiment on WhatsApp was when they asked users to show how they felt about the Indian elections by using emojis, while both the Guardian and HuffPost live tweeted Barack Obama's 2015 State of the Union Address in emojis using special Twitter accounts @emojibama and @HuffPostEmoji.

A last thing to be wary of with emojis is that the same icons do not always look the same on Android and Apple phones: make sure you check on both before you publish.

Memes and GIFs

One way to make your update more visual is to use memes and GIFs. When we talk about "memes" in publishing, we are really referring to *internet* memes: "a particular idea presented as a written text, image, language 'move,' or some other unit of cultural 'stuff'" (Knobel and Lankshear 2007)—more specifically, images and phrases that develop a life of their own online.

Some are already well-known—you may have seen a version of the "Distracted boyfriend" stock photo or a meme with the words "One does not simply" over an image of Sean Bean in Lord of the Rings—but others might simply be meme-like.

What does meme-like mean? Well, memes have come to be associated with particular generic qualities: the use of certain familiar images, such as those mentioned above, is just one. Another might be the use of particular fonts (Impact in white with a black border is quite common), or placement (one line of text running above the image, and another below).

In his book *Social Media*, Graham Meikle argues that each meme

> has its own rules and its own grammar … An individual meme is a tiny genre of text in itself, and is also a kind of game that anyone can join in … The rules of each game, each meme, are simple enough to be picked up immediately.
>
> (Meikle 2016)

There are dozens of sites dedicated to memes that can help you get a feel for their "rules" (Know Your Meme provides a whole database). Some also provide tools for combining text and images to create your own: I Can Has Cheezburger is one of the best-known, Imgflip is another, and Canva provides meme templates too.

The narrative structure of a meme best suits stories with a "setup" (the text above the image) followed by a "twist" (the text below), such as stories where people didn't behave as expected. Or you might use them to illustrate the ups and downs of your own reporting to make behind-the-scenes insights more entertaining.

Memes can also be integrated into updates through the use of GIFs: Twitter has a "GIF" button that makes it easy to choose GIFs from a library, as do many chat apps—and research by Twitter showed that tweets with a GIF gained 55% more engagement than those without (Alton 2019).

These are often used to illustrate emotional reactions such as appreciation (Meryl Streep standing to applaud or Leonardo Di Caprio raising a glass), confusion, shock, or sadness. But you can also create your own GIFs to illustrate a story in a different, more literal way.

If you have a video clip in your story, for example—or one that relates to it—you can create a GIF from that using a YouTube-to-GIF creator (you may need to put it on YouTube first). If your story involves interactive elements, or an interactive chart, you can use screen capture to create a short clip that you convert to a GIF. And if you have a group of images (photos, graphics, charts, etc.) you can create a GIF that flips through those in sequence to give your reader an idea of what to expect in the story.

TikTok is a good example of a social media platform that has been built on memes by making it easy for users to reuse songs and audio to create their own contributions to a particular meme. Journalist Sophia Smith Galer's biggest hit on the platform as a BBC reporter, for example—liked by over 400,000 users—drew on the then-popular "sea shanty" meme to tell the story of a tanker stuck in the Suez Canal (tiktok.com/@sophiassmithgaler/video/6944316550128110854)

Case study: TV2 Østjylland's meme-driven Instagram strategy

Louise Petterson and Kristine Helms are the Head of News and Art Director at Danish broadcaster TV2 Østjylland. Instagram (instagram.com/tv2ostjylland) was part of the mix at the organisation—but they were acutely conscious that the organisation could no longer rely on traditional approaches to storytelling that journalists were used to.

Instagram and memes: A new audience for TV journalism

The organisation's graphics department had already been experimenting with Instagram when it hired Kristine Helms as its art director, and the focus explicitly turned to visual memes—images that tap into a common visual culture and are designed to be shared.

"We had to try to communicate in this language that young people understood", says Louise Petterson. "But it was also important to us, because we are a public service, that it had an element of journalism in it; that it wasn't just entertainment. It had to be journalistic stories that we wanted to communicate, just via memes or graphics".

Kristine, noting how much time younger audiences spend on those platforms, feels that there is a huge opportunity to be grasped:

"[For example] I'm the target audience and I really love memes and somehow I know everything about the Kardashian family and everything about pop stars—and I don't really care about those things, but I just know them because I see so many memes about them".

"Therefore I thought it would be cool if people, without even noticing, could know a lot more about our local area".

As a result, she says, her friends—"and this is why I think it's working"—now say they understand TV2 Østjylland much better than before. "They didn't really hear about it before".

Louise puts it more strongly: "They considered us to be dusty and old, and we didn't have anything for them".

"The beauty", continues Kristine, "is when young people write 'we love TV2 Østjylland' [in the comments] because they don't expect it from us. We put a lot of material on Instagram but the things people share—it's the memes—so that's where we can be seen by more in the target group".

Meme journalism challenges: Copyright, culture, and speed

Adapting meme techniques to a journalistic environment comes with particular challenges. The time pressures in news, its unpredictable nature, and the legal aspects of trying to tap into a common visual currency all present different challenges.

"There's always a grey zone", says Kristine. "Some news stories you can't make a meme out of. Now [with more experience] we have more of a feeling when hearing about a story: this is not a meme or this is a good meme".

"The stories that are easy to make a meme out of are the stories that everyone has heard of before—and that's the hard part, it's hard to tell something newsy that's new for them. We might know that this story will not get as many likes as this story but we have to use them both: it's not always about likes".

The team also faced dilemmas around copyright, Louise says:

"We do not own the copyright for the images that were used in these memes—these are pictures that are spread all over the internet".

"In the start we tried to be 'right' about the copyright", adds Kristine. "But you cannot really do anything funny if you have to own all the pictures, or use stock photos, because they are not funny.

So you have to use these pictures that everybody knows from movies. It's really a grey zone but we couldn't really join the meme [culture] without joining that grey zone".

Louise agrees: "There has to be this identification immediately: when you see it you have to know what it means, and there are some very powerful pop culture references that you can draw on. And you have to do that if you want to speak the language".

"If you are not using the language like it should be, that the target audience is used to, they will know that 'We do not want to be associated with that'".

Memes that a target audience will understand

Another challenge that TV2 Østjylland faced was making sure that the memes would resonate with their own target audience.

"Our older target group like the memes we make", explains Kristine, "but they don't necessarily know the inside jokes that younger [users of memes] would".

"Every time we take one of these images we have to know that [our target group will understand them]. I always think: if my mum read this, would she think it was funny? Because she hasn't seen it before".

"So a lot of the time we use a reaction [image] because it's easy to read. So that's why we use a lot of kids and animals because they are just more likeable".

"But often when you see memes on the internet it's more like something from The Office or Game of Thrones—and we also use that a little bit—but it's something with a context, and that's the hard part with our target group because they don't have the same context".

Video sets your content apart

Half of the time spent on Facebook and Instagram is spent watching video (Meta 2022). And that video does not have to be complicated: a brief piece of raw footage is enough to give a flavour of the scene, or you can choose to upload a short video interview directly to social media as a snippet from the larger article it is embedded in or taken from. You can livestream video directly—and you can film yourself (a "piece to camera", or PTC), although remember that you should be the vehicle for the story, rather than the subject of it (see the chapter on online video for more tips on ideas and production).

Captions are a vital element in social video—partly for accessibility, but also because a majority of people watch social video with the sound turned off. Equally, however, it's important to make sure that video content is accessible to blind users, too—so make sure that video content makes sense when it's only listened to.

Sell the medium or format of the linked content

If you're writing an update that links to content (or writing a headline that will work on social media too) consider specifying the medium or format involved: you might begin or end with "video" (as in "Video: players arrive at the stadium") or "photos"; "mapped" or "infographic"; "interview" or "live"; "gallery" or "audio". At the start, a colon can be very useful; at the end you can use a dash (as in "Players arrive at the stadium—video").

Sometimes you might imply the medium or format more subtly, with a *call to action* (CTA): this would involve starting with "Watch", "See", or "Listen". But you could also invite them to "Join" (a live chat or liveblog), "Meet" (if it's an interview), and "Find out" (with explainers or backgrounder).

Why might we do that? Partly because we recognise that the medium is a unique selling point of the story and that users often make a choice based on the medium itself ("I like galleries").

But it's also about abundance and scarcity: on the web, comment and opinion are abundant—and in comparison, original information is scarce; audio or visual content is scarce; live-ness is scarce. Above all, attention is scarce.

The reason why we brand our content with "VIDEO", "LIVEBLOG", "INTERVIEW", or "LISTEN" is the same reason we might brand it with "EXCLUSIVE" or "PHOTOS" in print.

Use quotes and digits where you can

Perhaps surprisingly, when it comes to news *tweets*, quotes and digits can be more effective than videos in leading to retweets. It may be that quotes indicate original information (rather than the reporter's second-hand understanding) and digits indicate facts (rather than opinion). Again, it's all about scarcity and standing out from the noise on social.

When reporting on stories, then, it is important to look for key quotes and facts that you come across—whether that is in reports that you are reading, in conversation with sources, or in your own articles. And, of course, quotes and numbers work particularly well when presented visually.

Don't just repeat the print headline: Tell the story

Print headlines are designed for a different medium and even web headlines aren't always designed for mobile or social. When you're telling a story on social media, rewrite the headline accordingly: headlines that tend to sum up the story clearly work well here.

For example, when the *New York Times* tweeted the print headline "The Rock 'n' Roll Casualty Who Became a War Hero", it received 74 retweets. But when rewritten as the more straightforward "He got kicked out of both Nirvana and Soundgarden. Then he became a war hero", the tweet received 567 retweets.

Using @ names and "tagging" accounts

The @ sign is used on social media in a number of ways. Not only can you use the @ symbol to address a public message to someone else, but you can also use it to copy them in on a message or to refer to them in the same way as you might link in a web article.

It is important to understand the distinctions between the three uses. Here are some examples of how it might be used on Twitter, for example:

- @paulbradshaw where are you?
- Train delayed. May be late @paulbradshaw
- Just met @paulbradshaw, what a lovely person!

The first update is directed *only at* that person. For a number of years, this would not be seen by your followers unless they followed both you *and* the person mentioned. However, in 2016, Twitter changed this, and your followers will see that message regardless.

The second update is *directed at everyone* but *also specifically* directed at the users named—on Instagram and Facebook, this is called a "mention". It means that while your followers might see the update in their timeline, the tagged user @paulbradshaw will *also* see your update in his "notifications" or "activity" feed.

The third update is *about/linking to* the user named—on Instagram, Facebook, and TikTok, it is called "tagging" them. Using the @ sign in this way means that anyone reading that update can click on that @ name and find out more about them, even following them if they wish—and as above, it means that the person will see your update in their notifications/activity feed.

If you want to talk about someone, it is wise not to start a tweet with their @ name (their "handle") for the reasons outlined above (it looks like it is directed at them).

Sometimes you may wish to ask questions in public in this way so that the recipient is aware that you are expecting them to explain themselves not only to you but to your followers as well, for example, "Can you explain why the homeless are being criminalised, @ ChiefConPSNI?" This is quite a confrontational approach, however (akin to being questioned in front of a potentially hostile crowd) so should be used with care.

As well as using the @ sign to mention or tag a person in the text of an update, you can tag images (and videos on Instagram and Facebook) to indicate that the person is in it or to credit them. This cannot be done in videos on TikTok, however, where you would have to use the video caption instead (or in the comments section). Note that Twitter, Instagram, and Facebook all have privacy settings that allow you to prevent people from tagging you in images, so if you cannot tag someone, it is likely they have used those settings to do so (and you may consider using this privacy setting yourself for security purposes).

Keep it short and update regularly

Just because you can write more than 280 characters on Facebook or LinkedIn doesn't mean you should. Short posts—below 50 words on Facebook (Hutchinson 2019) and 25 on LinkedIn (Shleyner 2018) tend to be recommended. On Instagram, an analysis of 5.9 million posts suggested 1—50 words as the best length (Quintly 2019).

In contrast, on Twitter, ironically, research seems to suggest that longer posts might be better for engagement (Gessler 2020).

Action helps too—more verbs, fewer nouns—and "positive sentiment", that is, surprise or pleasure, tend to work well too.

One analysis of the most followed journalists on Twitter concluded that tweeting every day and a "flurry of tweets about events" were two of the major factors in their followings (Breese 2014).

And Instagram chief Adam Mosseri has said that two posts per week on the platform—and two Stories per day—is "ideal for building a following on the app" (McLachlan 2022).

Updating regularly shows users that you care about the account, and also helps build up a history of engagement (people liking or sharing your posts), which makes it more likely that they'll see your updates next time (it's one of the factors in whether an update gets shown to a user). Search for "social media calendar templates" to find examples to help you plan regular content.

Closer look: Twitter threads

Like hashtags and the @ sign, Twitter threads began life as an invention by users frustrated at the limitations of the service: in order to add more information to a tweet, some users began to reply to their own tweets, creating a connection between the two updates. When Twitter saw this, it decided to make it easier for people to do: in 2017, the platform announced it was launching "Threads"—a "plus" button would appear once you have started writing a tweet that would allow you to compose further tweets. These tweets would then be connected to each other to form a coherent sequence and could be composed as a group *before* publishing (allowing you to go back and edit earlier tweets in a thread before publishing them all), pushing them live, when ready, with a single click of the "Tweet all" button. Once published, you can add further tweets to a thread by looking for an "Add another tweet" button on the thread's last tweet.

Unlike individual tweets, which must stand alone as a self-contained story, threads give you an opportunity to plan a more complex narrative structure. A good word to consider here is "series": it should have an overarching arc that takes you from the first to the last tweet, but each tweet also makes sense on its own—because people may encounter your thread through any of its parts (and you also want to make each part worth quoting or retweeting on its own).

Like any genre, it's important to read lots of examples and get a feel for any conventions that have been established. For example, it's common to begin with THREAD, in upper case, or the "thread" emoji 🧵, with each tweet numbered to indicate that it's part of a wider thread.

You might also notice certain story formats recurring, such as:

- Lists (a thread version of a listicle, for example)
- Behind-the-scenes threads
- A series of questions, with answers
- Checklists and how-to guides
- A well-told story (for example, the story of someone you interviewed)

Experiments with Twitter threads suggest that they get more impressions and engagement than single tweets with a link—but that engagement tends to be much higher with the first and last tweets in any thread (Lua 2018).

The first tweet in a thread is especially important: it should normally establish some sort of "hook". This might be an opening question (that you will answer over a series of tweets), or a summary of what is about to be listed ("Here's what you need to know about…"). It might be an anecdote that highlights a problem (that you will then explore) or a teaser that makes the reader want to know more ("Today we publish an exclusive investigation into X. Here's how we did it…").

A good way to end a thread is with a link to somewhere that people can read more (for example, the full story, or simply a page on your site where you cover the topic) or to invite responses ("Have you had a similar experience?" for example).

Threads have also spurred the creation of various tools for recombining the parts into a single story: replying to a thread tweet with @threadreaderapp in your tweet, for example, will lead the Thread Reader service to create a dedicated webpage containing the "unrolled" thread and tweet you a link to it.

Engage to get engagement

One of the most important measures that most social media algorithms use to judge whether to show an update to someone is how much it (or material like it) has been engaged with. That engagement can take a number of forms: "likes" and other forms of reaction, shares, replies, votes, clicks on links, and time spent reading or watching are just some.

You may be tempted to explicitly ask people to like or share your content—but this is not advisable when you are a journalist: in terms of our "brand", it would give the impression that the reporter is more driven by ego or profits than serving the audience.

A simpler way to encourage engagement is to ask questions: an analysis of almost 400,000 tweets on Twitter found that people were 21% more likely to respond to a tweet with a question (Quicksprout 2021), while question posts on Facebook ranked second for engagement, below video posts (Hutchinson 2019). Polls are another way to ask questions, and you can create them on almost every social media platform (in Instagram Stories and TikTok, polls are accessed in the stickers option—and you can use the emoji slider too). However, these should not be used to gauge public opinion (your followers will not be representative of the public as a whole) and so they are best used for lighter subjects.

Conversely, you might invite users to ask *you* questions. For example, if there's a big issue in the news on a particular day, you can offer to explain particular aspects to your audience that they want to ask about. Or if you're doing an interview, you can invite people to suggest any questions they want answered. Instagram Stories allow you to do this through the Questions sticker.

More broadly, you can improve your engagement by just being social and engaging with people on the platforms you are using—following them, replying to and sharing their updates (making sure that you remain professional in the ways detailed above), and just generally being curious and interested in people. Identifying hashtags relevant to your audience and joining in discussions on those hashtags is one useful strategy to consider in this respect.

Beyond your own engagement, it's also useful to consider what types of content people might share or like: *useful* content, for example, is especially likely to be liked or shared;

and *exclusive* content will always win out over reporting information that's already been covered by other journalists.

Engagement also extends to video: an update to Facebook's algorithm in 2019 saw them prioritise video that people watch for longer than a minute—especially over three minutes.

Choosing and using hashtags

A hashtag is any word immediately preceded (without a space) with the hash symbol: the hashtag #nursechat for example (but not # nursechat with a space). The convention was first suggested by Twitter user Chris Messina in 2007—Twitter initially rejected the idea as being "for nerds" (Edwards 2013), but when users started using the tags to refer to news events, the platform began to integrate it into their technology, making hashtags clickable.

Now Twitter and other platforms even publish guidelines on using hashtags. These include:

- "You cannot add spaces or punctuation in a hashtag, or it will not work properly" (Twitter 2022).
- "Hashtags are especially effective when you're connecting with an event or occasion. But once Tweeted, they become clickable links and can distract your audience away from your content, so be careful to not include more than one or two" (Twitter 2021).

It is also worth remembering that hashtags have to include at least one text character—they cannot be composed entirely of numbers.

To be effective you will want other people to use the same hashtag—so the shorter it is, the easier it will be for them to do (and the fewer characters it will use up).

Hashtags are extremely flexible devices. They can be used in all sorts of ways, here are just some:

- To connect your update to a news event (e.g. #sandiegofire, one of the very first hashtags)
- To identify a "channel" or discussion. Examples include #nursechat or #FF ("Follow Friday": a regular recommendation of people to follow)
- To categorise or classify your content (e.g. #fashion on Instagram or #funnyvideos on TikTok)
- To attach it to a wider trend (e.g. #photooftheday on Instagram or #tiktokdance on TikTok)
- To link coverage (e.g. multiple Instagram posts or tweets about the same story)
- To identify a place: this can be a big city like #Birmingham but more often it is used for more specific areas like #Brooklyn or even an area code
- For branding purposes (e.g. to identify a campaign or coverage as yours). For example, during the annual budget announcement, the BBC use #BBCbudget to distinguish their coverage (and for users to distinguish their conversations) from others'
- To express an emotion (e.g. #confused)
- To indicate consent for your content to be used in some way (e.g. being aggregated into TV, print, or online coverage)

Various tools can be used to identify relevant hashtags to a particular audience or topic: Hashtagify.me and Hashtags.org are two of the oldest: type in an existing hashtag and the services will suggest related ones. But try not to add too many hashtags: Twitter recommends no more than two (Twitter 2022); LinkedIn recommends a maximum of three (Sehl 2019); and Instagram between three and five (McLachlan 2021). Anything more may look "spammy".

However, hashtags don't just exist online: they are often used to indicate that viewers of television programmes can take part in discussions online or to do the same for readers of newspapers and magazines. One *Sun* newspaper piece on a rugby "love cheat", for example, invited readers to share their opinions with the hashtag #scrumbag.

During major events, hashtags can also serve a graphical purpose: Twitter announced the introduction of "hashflags" in 2010 for the FIFA World Cup: when users used special country code hashtags (such as #ESP for Spain or #FRA for France), a flag for that country would be displayed alongside it. They have since been extended for other events including Ramadan and Eid, Eurovision, the NBA finals, the cricket world cup, and elections.

For Instagram Stories, TikTok, and Snapchat, you can use a sticker to add a hashtag, too (you can also add location stickers to bring it to the attention of people interested in that area). Facebook does support hashtags, but they are not widely used and are thought to have no impact on the success of updates.

Should I post more than once? It depends

When it comes to Twitter, the advice is not to be afraid to tweet the same story more than once: in fact, at BuzzFeed UK, journalists are expected to tweet their own stories three times, changing the wording in order to test what works best (see the section on measurement below). Michael Roston, a staff editor for social media at the *New York Times*, tested the approach by tweeting the same story during weekend hours and overnight. The tweets on Saturday and Sunday performed particularly well:

> What that meant to us was that a story that was of great interest to readers on a Tuesday afternoon is likely to be of interest to readers grazing Twitter on a Saturday night who didn't see it the first time around.
>
> (Roston 2014)

The key is to make sure that you change the wording or images each time.

But Twitter is a relatively straightforward platform to judge. Other social media platforms have more complex algorithms where posting multiple times may actually reduce the chances of each one ever being seen—one experiment by the Chicago Tribune with "recirculation" (as it's called) on Facebook found that "it's an approach that objectively failed" (Gessler 2018).

The social media management tool Buffer was set up to address just this problem: users can "buffer" social media updates that they want to share (normally links), and the service would automatically post those at what they have judged to be optimal times and frequencies (14 times per day for Twitter, twice a day on Facebook, and once per weekday on LinkedIn). You can change the default settings, and it is worth doing so once you have a better idea of how your particular audience behaves. You can also schedule posts in advance on Twitter, or on tools like Tweetdeck and Hootsuite.

Think about timing

Timing isn't the only factor that social media platforms use to rank content (in 2016, Twitter changed from "most recent first" to a "show me the best tweets first" algorithm, for example, while Instagram reintroduced the option to view updates in chronological order in 2022), but it is an important factor—and it can have a knock-on effect on other factors too. After all, if you publish at 3 am and no one engages with the update, then it's even less likely to build the popularity that it needs to be ranked highly later on.

What time is the best time? Well, that depends on what research you are reading.

One blog post by the makers of the social media management tool Hootsuite looked at data from 30,000 posts and found 10 am on Tuesdays, Wednesdays, and Thursdays was best overall, with further breakdowns for particular platforms (Cooper 2021). In the same period, however, Sprout Social looked at data from 20,000 users of its social media management tool to produce a report that suggested the best time to post on Twitter for media organisations was 6 am and 9 am on Mondays, and 7 am on Tuesdays (Arens 2021).

Reports like these can be useful to get a general feel for audience behaviour but there are two key factors to consider: first, a social media platform may have changed its algorithm since the analysis was conducted; and second, they tend to relate to such a wide range of content (much of it is focused on measuring marketing content, rather than journalistic material) and audiences that they may not apply to the content that you are producing in particular, or the audience that you are trying to reach.

The *Guardian*'s Chris Moran says the problem isn't limited to industry reports:

> You can dig really deeply into the data on [what stories are performing particularly well at different times of the day] but it can be really disrupted by the natural patterns of your publishing.
>
> Often you'll get people saying "On a Saturday morning people want lifestyle" and of course there's a truth to that—we all understand that truth of waking up in the morning, grabbing your iPad and reading our *Blind Date* feature—which we do launch really early on a Saturday morning and always does amazingly well. But you can't launch all your lifestyle content at that time—that would be weird.
>
> So, frankly, in terms of what time you should [publish an update], the best advice is: when the audience is awake and when there's a good spot in your general output for it.
>
> (Moran 2022)

If you do have a gap in your social media output for a new update, you might also want to think about what you want your audience to do with that. One piece of research, for example, found that 5 pm was the best time on Twitter for retweets, but 6 pm was the best time for clickthrough rates (CTR): in other words, the rate of people clicking on links to read an actual article. Why? The suggestion was that at 5 pm people are travelling and more likely to be checking Twitter and retweeting. At 6 pm people are getting home and actually clicking on links to read them. So which is it that you want?

So although timing is important, the best way to find out which times are best for *your* audience is to *test* social media updates *with your audience*. Readers of health industry magazines may be night owls; business audiences may be most active on social media during the 7 am commute. If you have a Twitter Media Studio account, you will find an estimate there (under Insights, in Audience), and Twitter Analytics will allow you to download data you can analyse to see when you get the most engagement.

Ultimately, writing great content is the most important rule of all

Although all the factors mentioned previously—timing, media, interaction, brevity—can help increase the chances that people see your content, the best way you can optimise your work is by creating *really compelling stories.*

Many social media platforms will measure what people do with your content: not only whether they share an update, or click through to a linked story, but also how much time they spend reading or watching your content—even if that's on another site.

And if they spend a lot of time on your content, then research shows they're more likely to come back, which means they will keep seeing your updates.

The importance of experimenting and measuring

Experimentation and measurement are central to understanding what is effective in writing for *your* audience on social media.

The measurement part is relatively easy. But experimentation is more important. Because while you can use measurement to find out which updates perform the best and worst, it requires experimentation to tell you *why.*

Measurement can be done by anyone, but experimentation requires creativity and strategy. What you test through experimentation is up to you: you can experiment with new ways of telling stories on social media. You can choose to test the timing of updates; the use of media such as images, video, or audio. You can test different images or text.

Commonly you experiment by trying to rule out various factors that could influence the results: if you are testing timing then you might leave the text itself unchanged between each update. If you are testing different text you may try to keep timing as close together as possible, and so on.

Measuring your audience

A number of tools will tell you when your followers are most likely to be online, or what sorts of words tend to appear in their biographies. Followerwonk, for example, will analyse the followers of any Twitter account and tell you when they are most active, where in the world they are, and what words appear most often in their biographies, among other things.

To analyse traffic on Instagram you will need to convert your account to a (free) business or creator account, which will give you access to its Insights tool. Alternatively, you can use third-party tools like Hootsuite Analytics and Iconosquare. TikTok also requires you to switch to a business account to access analytics on audience by country and follower activity. On LinkedIn, you can access analytics on followers of any pages you run, visitors, and competitors. Facebook Insights will give you a demographic breakdown of fans of any pages that you run, and its most popular time periods.

One thing to beware of is analysing those that already follow you rather than those who you *want* to start following you (and might be online at a different time). It is important to analyse both your own account and those of direct competitors (if you can) to see whether you could be doing anything differently.

Measuring performance

Facebook Insights provides a range of metrics on your page's performance, from reactions (e.g. "likes") and visits to things like "reach" (how many people an update actually reached—including those who haven't necessarily liked your page) and *engagement* (a combination of reactions, clicks, comments, and shares). You can look at overall trends and individual posts or videos.

LinkedIn's Insights provide metrics on individual posts and overall engagement on any company pages that you run. Under your "profile" menu you can also access a section called "Who's viewed your profile", which tells you that but also who's viewed your posts and how you rank for profile views.

TikTok's performance stats include your top posts and specific metrics such as comments, views, shares, and likes. Pinterest analytics provides access to similar metrics as well as average play time, ten-second plays, pin click rate, and saves. Instagram Insights is more limited, mainly focusing on engagement, while third-party tools provide more detail.

Twitter Analytics shows you the most successful tweets for the last few months, but more importantly, it gives you raw tweet-by-tweet data that can be downloaded and analysed for any specified period (you can also do this in Facebook Insights). This requires some spreadsheet skills (see the data journalism chapter!) but does give you a lot of control. Twitter is perhaps the best-served social network of all when it comes to third-party tools, with the likes of Twitonomy and Mentionmapp showing data on activity and engagement.

Summary

Social media has become such an important part of journalism that being able to write for the medium can be considered as important as being able to write for the web. This is partly because in many ways writing for social media is about writing for mobile, given how much social media consumption is done through our mobile phones and tablets.

It is vital to be professional in the way that you use social media because sources will inevitably judge you based on what they find on your various social media accounts. That means retaining your scepticism as a journalist and seeking to question and verify what you hear through social media. But you should also try to be human and inject your own personality into what you do.

Remember that you are using social media to serve a community, just as you might serve a community through your reporting online, in print, or on air. But you have the ability to interact with that community too, so be interested in them and you will often find that interest repaid.

Some key principles to bear in mind when writing for social media include the following:

- Update regularly—always be looking for things to share
- Experiment with different approaches—and measure the results to see what works best
- Time updates carefully for when your audience is most likely to see or use them
- Look for visuals to illustrate your update—including emojis, GIFs, and videos
- Share raw video or audio where you can—consider "native video"
- Use direct quotes and numbers when you can
- Tell the story simply and clearly—don't merely repeat headlines

And finally, it is worth emphasising that there are many different social media platforms with different qualities and user bases, and that those qualities and audiences sometimes change. Keep up to date with those changes, but most of all, experiment and be creative. You won't know if something works until you try it.

Activities

1. Post the same story four times on Twitter using four different techniques outlined in this chapter (for example, one with an image or GIF, one with emojis, one with @ names or hashtags, numbers, or quotes, one at a different time, and so on). See which one gets the most engagement and try to work out why that might be. Remember that there could be more than one reason: what other experiments could you conduct to narrow down which reason it is?
2. Use a tool like Canva.com to create a visual for a key quote in one of your stories. See if it performs well on social media (don't forget to add an alt description).
3. Set up an account on all the major social media platforms and dedicate a day to using each one to share stories, videos, or images while you work. How do they differ?
4. Use a meme creation tool to make a meme illustrating a recent news story. Have a few attempts with different stories to see which ones work best.
5. Download your Twitter analytics for the last month at analytics.twitter.com (you'll need to be logged in first). See if you can identify the tweet that had the most engagement. Try to identify which tweet had the most clicked-on link, and which tweet had the most replies or favourites. You will find the skills outlined in the data journalism chapter useful here.

Note

1 www.instagram.com/p/9eEdzalWhz/

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Further reading: online

Social networks are constantly tweaking their technology—both for commercial (for example, trying to compete with new entrants or getting people to spend more time on the service) and editorial reasons (preventing people from "gaming" the system with poor-quality content).

These changes can have a big impact on how you approach writing for social media, so it's important to keep up to date with the company's own blogs and industry coverage. Here are some links to check regularly:

AdWeek Social Times: adweek.com/socialtimes

Clubhouse blog: blog.clubhouse.com

Facebook documents: scribd.com/facebook

Google official blog: blog.google

Instagram: About: about.instagram.com
LinkedIn Pressroom: news.linkedin.com
LinkedIn official blog: blog.linkedin.com
Medium blog: medium.com/the-story
Meta newsroom (Facebook and Instagram): about.fb.com/news/
Meta for media: facebook.com/MetaforMedia
Meta Journalism Project: facebook.com/formedia/mjp
Pinterest Newsroom: newsroom.pinterest.com
Upvoted: The Official Reddit Blog: redditinc.com/blog
Snapchat newsroom: newsroom.snap.com
TikTok Newsroom: newsroom.tiktok.com
Tumblr Staff: staff.tumblr.com
Twitter blog: blog.twitter.com
Twitter Create - News: create.twitter.com/en/industries/news
YouTube official blog: blog.youtube

Social media guidelines

The following social media guidelines are worth reading to see what news organisations expect from their reporters:

- Associated Press (AP): Social media guidelines https://www.ap.org/assets/documents/social-media-guidelines_tcm28-9832.pdf
- BBC: Guidance: Individual use of social media https://www.bbc.co.uk/editorialguidelines/guidance/individual-use-of-social-media/
- BBC: Guidance: Social media https://www.bbc.com/editorialguidelines/guidance/social-media/
- BuzzFeed: The BuzzFeed News Standards and Ethics Guide https://www.buzzfeednews.com/article/shani/the-buzzfeed-editorial-standards-and-ethics-guide
- CBC: Use of social media https://cbc.radio-canada.ca/en/vision/governance/journalistic-standards-and-practices
- ESPN: Social media guidelines https://www.espnfrontrow.com/wp-content/uploads/2017/11/NOV-2-RECEIVED-UPDATED-SOCIAL-MEDIA-GUIDELINES-10.221.pdf
- The Guardian: Social media best practice: Guidelines for freelance contributors https://www.theguardian.com/info/2020/may/29/social-media-best-practice-guidelines-for-freelance-contributors
- New York Times: Social media guidelines for the newsroom https://www.nytimes.com/editorial-standards/social-media-guidelines.html
- NPR ethics handbook: Social media https://www.npr.org/about-npr/688418842/special-section-social-media
- Washington Post: Policies and standards https://www.washingtonpost.com/policies-and-standards/
- UNESCO: Social media guidelines: a handbook for media professionals and journalists in the Caribbean https://unesdoc.unesco.org/ark:/48223/pf0000265638

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6 Email newsletters, chat, and curation

Chapter objectives

This chapter will cover:

- Special considerations when writing for email newsletters and chat
- Writing alerts and push notifications
- Curation in journalism
- Different types of email newsletters
- Aggregation in journalism
- Ethical and legal considerations when curating
- Structuring an email newsletter
- Accessibility for emails
- Email newsletter tools
- Measuring the performance of newsletters with analytics
- Finding newsletters
- Chatbots

Introduction

Both email newsletters and chat platforms have seen a significant explosion in the last decade. In the US, one in five people read an email newsletter at least once a week, and for almost half of these, it is their primary way of accessing news, while worldwide, 17% of consumers use chat apps at least once a week to get news (Newman et al. 2022).

The two platforms have a lot in common: both offer a direct line to readers, rather than the communal experience of social media, and both tend to adopt an informal style involving GIFs and emojis. Both rely on users choosing to sign-up; and both tend to be scheduled around a particular time of day or week. Significantly, both also tend to use *curation*—focusing on useful links to existing content—or a personality-driven style.

For many publications, email in particular is a major part of their publishing operation: more than nine out of ten high-traffic news outlets use newsletters (Pew Research Center 2021), and the likes of the Washington Post and New York Times serve millions of readers on the platform with over 50 newsletters each week. In some organisations,

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the revenue from newsletters pays for dozens of staff, in others, it is a way of attracting and retaining paying website subscribers or testing new products and markets (Davies 2017).

The growth of email newsletters has been one of the big industry stories of the last decade: in 2017, the email newsletter company Substack launched with millions of dollars of investment, poaching big-name journalists to publish on the platform. In 2020, Medium introduced its own newsletters feature, and social media companies moved quickly to add email capabilities to their platforms, too. Twitter acquired the newsletter website Revue and integrated it into the platform; Facebook launched its own newsletter platform, Bulletin, in 2022; and LinkedIn introduced newsletters too.

A few years earlier, the same rush was taking place in the chat app space, as news organisations began tentatively experimenting with platforms such as WhatsApp, WeChat, Kik, and Telegram. Some used these channels to provide simple news alerts using the same techniques that they used for writing for social media (see the chapter on writing for social media for more), but the most successful experiments with chat took advantage of its ability to create a direct interaction with audiences.

CBN radio in Brazil, for example, used WhatsApp as a way for listeners to report news directly to them, while the Washington Post used it to set up a group chat for expats to discuss the UK election. The BBC used it in West Africa for coverage of the Ebola crisis where it was hard to get reporters on the ground and users could share first-hand accounts of developments in the area.

The BBC's Trushar Barot said they looked for three things when using chat apps:

> One, a market that we're big in, or generate a lot of interest in. Secondly, where we think a particular app has got quite a lot of strength in terms of its user base. And thirdly, finding a big story that's happening [there].
>
> (O'Donovan 2014b)

These led the BBC to use WhatsApp and WeChat in India; Mxit in South Africa; BBM in Nigeria; and Viber in Nepal.

With the volume of users and content on social media platforms growing to a scale that makes it increasingly hard to be heard, both chat and email offer a fresh start—at the smaller scale that had originally made social media so appealing. Digital editor Natalie Fahy describes it as "back to basics social media—there's no algorithms to contend with, or things just whizzing by on a timeline. You are sending a message with your best stories onto people's homepage every day at the same time" (Granger 2018).

Writing for email and chat: Visual, personal, mobile

Many of the principles of writing for social media (see Chapter 5) apply to email and chat too: visuals are important; numbers and quotes stand out; and the style should be more informal—but still professional. "Talk directly to your reader as you would a friend or trusted colleague", Medium's guidelines suggest (Medium 2022).

As with all forms of writing, it is important to consider your audience and the contexts in which they are receiving your reporting. It is most likely that someone is viewing an email newsletter or chat update on their mobile phone, for example—so you will need to grab their attention quickly.

Emojis are often used for this effect. Although their impact has reduced somewhat through overuse, they can be much more efficient than words at communicating the tone and content of your material up front. Every character of the words that follow should be essential, too.

More broadly, you should be careful not to abuse the direct line you have into people's inboxes and alerts: be ruthless in focusing on only the most important information—you don't want people to unsubscribe because they feel harassed or overwhelmed.

Newsletters and BASIC principles

For email newsletters specifically, the BASIC principles of writing for the web outlined in Chapter 4—*brevity*, *adaptability*, *scannability*, *interactivity*, and *conversation*—apply too: keeping sentences and paragraphs brief is especially important, as your reader will probably be reading on a mobile phone screen. The New York Times's Clifford Levy says:

> We're conscious of short paragraphs and sentences, of what's pleasant to read on a phone screen. For example, in the morning briefing, there are few news items that are more than one or two sentences long. If you want more information, you click on the links.
>
> (Wang 2015)

Adaptability plays a role in the way that newsletters must consider using different media for different elements. Strong images are an important feature of email newsletters, and if the subject is particularly visual, they may be the main focus of the whole product. Animated GIFs can work well—and don't overlook video, too: vertical video in particular has been found to perform much better within emails (Tinflow 2016).

Scannability is useful for the same reason: use subheadings, images, line breaks, bold and italic text, and other devices to break up text.

Interactivity—in the form of links—is central to newsletters that are based on curating the best content from around the web (see below).

And the role of *conversation* in email should not be forgotten: readers are typically given a way of contacting the editor at the end of each newsletter, and might even be able to reply directly (this applies to chat, too).

Chat "broadcasts" and channels versus chat groups

Chances are that you are already part of a group on a chat app such as WhatsApp, where everyone can post to the group, and see each other's contact details. But most publishers and journalists use a different type of group: in WhatsApp, this is called a Broadcast List; in Telegram, it's called a Channel.

Broadcast lists and channels' major advantage is privacy: users cannot see who else is receiving updates, and messages look like direct messages. This is especially important for legal reasons: news organisations are not allowed to share subscribers' details where permission to do so has not been granted. You can also get access to analytics such as how many people have viewed your updates.

On Telegram specifically, there is another advantage: there are no limits on the number of members of a Telegram channel. WhatsApp lists, on the other hand, are more limited, and the platform has previously announced that it will stop accounts using them for "bulk messaging, or non-personal use" (WhatsApp 2019)—although many publishers continue to use the platform to update groups of readers.

There will need to be some way for subscribers to add themselves to a list: The Telegraph's two-minute WhatsApp audio briefing uses an online sign-up form; Nottinghamshire Live includes an invitation at the bottom of articles to sign-up by texting a particular number with the word "news". Telegram channels have a sign-up link you can direct users to. For legal reasons you should also always make it clear how recipients can unsubscribe from your updates, normally by deleting your number or asking to be removed from the broadcast list.

Look for tutorials online to find instructions on how to set up a broadcast on the latest version of the app.

Four typical purposes of a newsletter or chat list

Newsletters and chat channels tend to fit into one of four categories:

1. Curation-based (digests and round-ups and alerts pointing the audience to "what you need to know")
2. Personality-driven (based on the authority or expertise of the author(s), often specialist correspondents)
3. Behind-the-scenes (project- or role-based insights and updates)
4. Objective-based (helping the subscriber to achieve something)

Examples of *curation-based* formats include focusing on the "top" or "essential" news; a "briefing"; the "best of" a particular type of content; or tips and resources. The New York Times's Evening Briefing and Today's Headlines, for example, are two of a number of general round-ups that the publication offers in this category, but it also offers subject-focused newsletters such as the Education Briefing and Science Times, and event-focused newsletters like Wildfire Tracker. During major news events, such as the coronavirus pandemic and the Russia-Ukraine war, it will dedicate newsletters to those too.

On chat platforms, curation—in the form of a daily update of the key story or stories—is the default format. The Telegraph's The Briefing provides a two-minute audio round-up twice a day, followed by a message with links to the articles, for example, while Journalism .co.uk's daily Telegram update selects four stories to share. Many other outlets focus on one or two of the most important stories each day.

Personality-driven newsletters are often very similar to opinion columns in tone (some merely reproduce an online column in email format) and, like opinion columns, require the author to already have some authority in the field (typically built through years covering it, or working within it at a high level). Jessica Grose On Parenting and On Tech with Shira Ovide are two examples from the New York Times.

A *behind-the-scenes* newsletter works best for journalists in roles that throw up regular talking points, or where the job is inherently interesting. Quibbles and Bits, for example, a newsletter from the BuzzFeed copydesk, provides regular insight into the team's sub-editing decisions and editorial style, while The Guardian's Inside Saturday newsletter lets feature writers "take you behind the scenes of their stories". NPR's newsletter for its Invisibilia podcast simply offers "bonus content relevant links, music credits and more".

Objective-based newsletters are very practically focused. They are often similar to "how-to" articles or series in format: BuzzFeed's 4 Weeks To 5K Challenge newsletter, for example, sent subscribers three workouts every week—content that could just as easily have been published as a series of articles.

These broad categories might also be combined: it's possible to publish a personality-driven curated newsletter, for example, or a round-up that includes an original practical tip of the week. But typically, a newsletter will have a primary focus on one of these categories.

Notably, the four types of newsletters correspond closely to three of the top four reasons that subscribers give for using email newsletters. Convenience is the top reason, but the diversity and range of stories provided—in other words, curation—is the second highest, identified by 30% of subscribers, followed by the tone or writing of the author (provided by personality-driven newsletters), and "unique content" (Newman et al. 2022), provided by behind-the-scenes and objective-driven newsletters.

The balance can vary from publication to publication: at the New York Times, the balance between curation-based newsletters and opinion-based newsletters is roughly even; at The Guardian, curated newsletters outnumber personality-driven ones three-to-one—but at both you can count the number of behind-the-scenes and objective-driven newsletters on one hand.

Publication-style newsletters versus story-style newsletters

Some newsletters are like publications, with thematic sections providing breadth; others are more like a single story, where one theme is explored in more depth.

Curation-focused newsletters tend to use the publication approach, gathering together useful information for their audience in different sections every week (see below for more on structuring this type of newsletter). There may be an "image of the week", for example, followed by "What we're reading", and finally, "What's happening this week".

Having a consistent structure makes the format extremely efficient: you know exactly what you need to gather for every issue, making it possible to allocate a different editor on some issues with minimal disruption.

In contrast, personality-driven, objective-based, and behind-the-scenes newsletters tend to adopt a "story-like" approach, sacrificing breadth for greater depth.

- In personality-driven newsletters, the story revolves around the insights, authority, and expertise of the writer, normally relating to one event from the week.
- Behind-the-scenes newsletters tend to focus on the story behind one article, an issue the team has to deal with, or a challenge that the project faced that week. They are often short—no more than a few paragraphs in length—so they are typically fleshed out with some curation, such as links to the best stories they've worked on that week or read.
- Objective-based newsletters tend to tell a practical story every issue, which focuses on how to achieve a particular objective.

Techniques for writing opinion columns, how-tos, and behind-the-scenes stories are well covered in online guides and books on feature writing. But curation is a skill that has evolved significantly with the growth of online journalism. It's an evolution that deserves particular attention, and a skill that we explore throughout the rest of this chapter.

Curation in journalism

It is only in the 21st century that "curation" started to be used widely in the journalism industry—until then its use was largely limited to the world of museums, libraries, archives, and art galleries to refer to the process of selecting, ordering, and presenting artefacts, for example, in exhibitions.

But that didn't mean that journalists weren't *curating*: editors and publications have a long history of selecting, ordering, and presenting material that they feel will be of use or importance to their audiences, from articles at the end of each year rounding up the ups and downs of the previous 12 months, to the magazine *Time*, which was pitched to readers around the concept of pulling together stories from newspapers around the world (Owens 2018).

For decades, newswire services like Reuters and Associated Press have sent stories to newspapers for editors to select, order, and present those which they felt were relevant to their readers. With the invention of the world wide web, there was an opportunity for a new generation of editors to apply similar *curatorial* skills without subscribing to newswires. The Drudge Report was one of the most successful of the first wave of such sites (Anderson 2011) and the rise of blogging platforms expanded curation further, led by brands such as Boing Boing and Slashdot. Mainstream media operations soon began to incorporate the same types of content into their websites. As one history of Boing Boing tells it:

> A journalism grad used to cut their teeth by starting at a weekly newspaper and then working their way up. These days, they're just as likely to snag an entry level gig at a New York media company and spend their days repackaging GIFs and videos first surfaced on Reddit.
>
> (Owens 2016)

Journalism professor and consultant Jeff Jarvis summed up the philosophy succinctly with the mantra:

> Do what you do best. Link to the rest.
>
> (Jarvis 2007).

Journalists were coming to realise that the information environment had changed: before the web, only newsrooms had access to news feeds from across the globe and journalists would have to re-report material they thought their audiences needed to know. Now, their readers were just a click away from stories around the world and there was no need for journalists to spend time re-writing those stories. It was more efficient to link instead, and use the time saved to uncover truly new stories that others, in turn, might link to.

New tools made curation easier: Flipboard made it possible for users to curate stories from around the web into their own magazine, which could be shared with others, while Pinterest allowed people to create visual collections of content that they found interesting (see the chapter on writing for social media). Video playlists could be curated on YouTube, and tweets on Twitter Moments. All found a place in journalists' toolkits as they experimented with new ways of telling stories—everyone was an editor now.

Another new way of telling stories, the listicle, was also gaining in popularity, spreading from new entrants such as BuzzFeed to more traditional news brands, becoming the go-to format for curating everything from the wittiest tweets about the latest celebrity mishap and the best recipes on Instagram to potential action on the climate crisis and the number of promises a government had broken.

But whereas blogs had operated a strict culture of attribution and linking, journalists at news organisations too often failed to understand the distinction between curation and plagiarism.

And whereas curation in the pre-internet era could more confidently assume the material being curated had been through an editorial process that ensured it was true, curation in the modern era could make no such assumptions.

Curation versus plagiarism

Curation is all about highlighting, combining, and building on material created by other people—so it is massively important that you don't end up *plagiarising* that material.

Plagiarism is the practice of presenting someone else's work as your own, typically by presenting it without credit or acknowledgement. Plagiarism can be unintentional: if you forget to say where a piece of information comes from, you are letting people assume that you obtained it yourself—when you didn't.

For this reason, linking is an absolute must when curating material from elsewhere: a link immediately lets the reader know that this is material from somewhere else. But it is also a must because it helps the reader *access* that material quickly. If you fail to link you will both annoy the reader and leave yourself open to accusations of unethical behaviour.

Linking is a way to *implicitly* attribute (the user can check to find out who the source is) but it is also important to *explicitly* attribute each piece of content—to *say* who or what published or wrote the piece of content you're highlighting. This can be done by simply adding the source in brackets after the title, like so:

<u>Can your favourite pub afford to keep the lights on this winter?</u> (New Statesman)

Or you can attribute by using verbs like "told", "according to", and "reports", like so:

<u>It's going to be a cold winter</u>, according to the Met Office
<u>Sales of pink lipstick are up by 88%</u>, The Guardian reports
Gordon Ramsay <u>told ABC News</u> that he has stopped swearing

The policy at Vox, for example, is "simple", says Ezra Klein:

> Any time we use work created by someone else, we need clear attribution to the original author and a link back to the source. When appropriate, we should do more than that: we should add to the conversation with new facts, ideas, or reporting.
>
> (Klein 2015)

Copyright and curation

Although attributing each item you curate is important to avoid plagiarism, attribution alone isn't enough to avoid breaking copyright law. Copyright becomes especially important when it comes to images: photography enjoys special protection under copyright law, so if you are using any images created by other people make sure that you have permission to use them (see the section on Creative Commons and copyright in Chapter 4 for more on this).

For other pieces of media, a lot will depend on the context—and any court cases that have established legal precedent. Embedding social media content in articles is a widespread practice, for example—but people have brought copyright claims over embedded content, and the courts have found in favour of both complainants and publishers.

Two cases in 2020 highlighted the difficulties: in the first, the parent company of the website Mashable was sued in the US for copyright infringement by a photographer whose work was included in the story "10 female photojournalists with their lenses on social justice", but the judge found in favour of the publisher's argument that Instagram's Terms of Use Policy "clearly granted it a sublicense to display the photograph" and that the photographer had not chosen to make the content private (Edelstein 2020). In the second case, Newsweek was sued by a photographer over an Instagram post that was embedded in one of their articles—but the judge found that Instagram's terms were vague, and Newsweek was forced to settle with the photographer (Poritz 2022).

Notably, both these cases involved photography. Non-photographic material carries less legal risk, while platforms such as YouTube provide more control for users to prevent or enable embedding for individual videos. But it is important to consider any potential copyright issues in stories using curated material, including exemptions under copyright law in your country for using material (in the US, "fair use" exemptions include criticism, comment, and news reporting; in the UK, there are "fair dealing" exemptions for criticism, review, or quotation, and for the purpose of reporting current events—except for photographs). Note that YouTube provides a dedicated copyright page (at youtube.com/howyoutubeworks/policies/copyright) but this only refers to US copyright law—when researching copyright make sure you are looking at laws that apply in your country.

Linking is the most risk-free form of curation as it will almost certainly fall under the exceptions listed above. The main risk to consider is linking to any material that is itself infringing copyright (for example, illegal copies of TV shows). Seek legal advice if you are in any doubt.

Accuracy and curation

When selecting material to be curated for a piece of journalism you are effectively staking your reputation on the quality of that material: readers will assume that you have checked that material and are happy with its quality and accuracy. So if it doesn't live up to that promise—or worse, turns out to be entirely false—that will reflect on you.

As a result, it is important to use professional judgement when choosing to include material in a curated newsletter or other product. Is the source authoritative? Do they have a vested interest in the story they are telling? Are there other (independent) sources that confirm the original story? Can you confirm details through phone calls and other basic reporting?

In particular, watch out for:

- Advice from people who do not have qualifications in the field (such as health advice from someone without a medical qualification, for example, or dietary advice from someone who isn't a dietician).
- A conflict of interest regardless of a person's qualifications: if the person has products or services to promote, they cannot be considered independent and impartial.
- Rumours based on references to "a friend". Rumours are often used to build someone's status on social media or to spread misinformation. Unless you know the person and can verify their connections in a particular sector, don't report the rumour.
- "Too good to be true" stories: if it sounds unbelievable, don't believe it until you've confirmed it through other reliable sources.
- Material that appears to confirm your own beliefs or those of a particular group of people: some websites operate by telling people what they want to hear, "cherry picking" quotes and data to support a particular point of view. If they are using quotes, find the source of those quotes and read them within the context they were made (if the material doesn't link to its sources this should make you more sceptical). If they are using data, find the original data and any accompanying explanations. Also look for other analysis that has been done with it and use the techniques in the data journalism chapter to analyse it yourself.

Remember that most social media accounts that appear to be updated by celebrities are actually maintained by public relations people, and should be treated as PR, not real life. The same applies to accounts maintained by organisations and brands: any claims should be reported as claims, not fact.

Check the section on verification in the chapter on liveblogging (another form of curation) for more techniques to use in checking material that you have found online.

The ethics of curation

The selection and ordering of material involve important ethical considerations. If you are using social media to source material, for example, it's important to be aware of your own "filter bubbles": the way that content is shaped by your past user behaviour (what searches you conducted; which results or social media updates you clicked on) and the accounts that you follow.

Whenever we use a search engine or social media platform, we are rarely seeing a "raw" view of the material that's available: in fact, it has *already* been "curated"—by algorithms. As a result, it is important that a journalist actively seeks out a more diverse range of content and perspectives by asking questions including:

- Are we only choosing material from people in our network—or have we sought out other sources?
- Is gender represented accurately in the material?
- Is ethnic diversity represented? Sexuality and disability?
- What is the age range like in the content that you've identified? You may need to look harder to find voices that aren't in your own age group.
- What roles do different voices play in your material? Do certain types of voices get consistently used higher up? Do some voices play a "quirkier" role? Are there stereotypes or power dynamics being replicated in the way that content is selected and ordered?

Once you've assessed your curation against those questions, look for ways to address imbalances, stereotypes, and blind spots (the chapter on online sources has more tips on this).

Aggregation versus curation

In his book *Aggregating The News*, Mark Coddington defines news aggregation as:

> Taking news from published sources, reshaping it, and republishing it in an abbreviated form within a single place.
>
> (Coddington 2019)

He argues that there is no distinction between curation and aggregation and that the term "curation" is only used as a way of avoiding critical examination. Or, as Matthew Ingram once put it: "It's called curation if you like it, aggregation if you don't" (Ingram 2012).

This is a valid point. However, in the news industry, a clear distinction between the usage of the two terms does seem to have emerged, with "aggregation" preferred when the curation is done automatically, based on an algorithm or pre-selection of feeds.

Some major news websites have built their entire platform on aggregation: Techmeme (techmeme.com) was founded in 2005 as an aggregator of technology news. It introduced human editors three years later alongside its algorithms, and later expanded into media industry news with MediaGazer, political news aggregation with Memeorandum, and celebrity news with WeSmirch. Metacritic (metacritic .com) and Rotten Tomatoes (rottentomatoes.com) have been aggregating entertainment reviews for over two decades.

How to get started with curation

Curation is unusual in journalism in that it cannot provide original or exclusive stories: by its very nature it involves relying on material already "out there". This creates an immediate problem for the journalist: how can we say that curation is "news" if it's not *new*?

The answer is that the "newness" in curated products such as email newsletters and chat lists must be that you are shining a spotlight on information that your audience hasn't the time or ability to find out themselves.

When planning a curation product, it can be useful to consider the seven ways in which journalistic curation mirrors traditional curation practices listed by journalism professor Mindy McAdams:

- Selection of the best representatives
- Culling, so that there are enough items—but not too much
- Providing context
- Arrangement of individual objects, so that they might complement each other
- Organisation of the whole (both the museum curator and the journalist are considering the narrative "journey" through the items being shown)

- Expertise (you should have some in the field you are curating)
- Updating (will you add new items as things develop) (McAdams 2008)

It is also important to consider what *value* you are adding as a journalist. After all, you're competing against thousands of amateur curators publishing content every day—so what makes your work professional quality? Some common reasons might include:

- Filtering: are you curating a list of "the best" or "most important" in some category? The "things you need to know"?
- Comprehensiveness: are you curating everything there is, with nothing left out? (Bear in mind the point about culling above).
- Synthesising: are you combining things to add valuable context, such as background or factchecking? Are you juxtaposing different items to create new insights or fresh perspectives?
- Variety: are you providing different perspectives on the same issue? Different media?
- Illustration: many listicles add images or GIFs to illustrate the textual information they are curating—or turn text into images.

Which one you choose will depend on who your audience is. A general reader starved of time won't be attracted to comprehensiveness—but an audience of obsessives may be drawn to it. A general reader might need context; someone already familiar with the subject might need fresh insights.

Your curation product should have a clearly identified audience. Here are some examples:

- The New York Times's "The Morning" newsletter is aimed at a wider, but educated audience with the proposition to "Make sense of the day's news and ideas" (New York Times 2022)
- ABC's "Your Money Explained" is aimed at a smaller audience of people interested in personal finance. This audience is likely older than HuffPost's "Money and Living" email.
- Your audience might be identified by an important stage in their life: the "How Not To Raise a Jerk" newsletter is aimed at parents, while people who are planning to get married are the audience for the newsletter of *Brides* magazine.
- Some newsletters focus on those with a particular emotional need: ABC's The Bright Side is a "fortnightly collection of stories that aim to inspire, engage and create hope where there is uncertainty" (ABC 2022).
- Your audience might have a shared cause that they feel passionately about: newsletters like HuffPost's "Women and Power" are aimed at readers interested in stories related to gender and feminism. "Race/Related" from the New York Times and HuffPost's "Black Voices" focus on race issues.
- Some curation products are aimed at those working within a particular industry. The Times Educational Supplement (TES) offers very specific newsletters for those teaching particular subjects such as history or geography.

Knowing your audience helps you to identify what they already know (and therefore what information would and wouldn't be new to them) and what problem you are solving for them.

Have clear criteria for your curation

It is important to know what criteria you will adopt when choosing material to be included in your newsletter. The blogging platform Medium, for example, say they choose material that will "add to the conversation" or "demonstrate originality", listing seven categories of material including "timely stories with original news value"; "diverse and undiscovered voices"; "interesting topics that don't organically get a lot of traction"; and "innovative or experimental storytelling" (Medium Support 2017). Twitter's curation guidelines and principles specify that its Moments section looks to feature "compelling, original, and diverse" material, seeking to "represent a variety of viewpoints" (Twitter 2022).

You might decide that you will only include items that are "essential"—or those that are "original". You might focus on "useful" content or material that is "authoritative" and comes from those with expertise in the area. Whatever your criteria, write it down, refer to it often when making decisions about whether to include something—and stick to it.

Curation formats beyond email and chat

Newsletters aren't the only curation format in publishing. "Best of" lists have been a staple of newspapers and magazines for decades, and have found a new lease of life online with the facility to embed the music, film, or TV clip that you have chosen to include: if your list relates to anything visual or aural you should be embedding videos, GIFs, or audio clips for each item.

The curated list has become so widely used as a format online that it has been given a new name: the listicle (see the chapter on writing for the web). This can be used to distil a certain number of "things you need to know" about a topical issue or "things that happened" at a newsworthy event; it might pick the most entertaining highlights from a discussion, like BuzzFeed's "21 Brilliant British People Problems" (based on "highlights from" a Reddit thread) (Shepherd 2012). Or the background to a topical event, such as The Telegraph's listicle "The 20 times the Conservatives tweeted promising not to raise National Insurance".

Explainers also use curation to provide the background to current events. Stories like "The Motherboard Guide to the Gig Economy" (Vice) and "Myanmar Coup: What You Need To Know" (HuffPost UK) round-up secondary material to provide vital context for those who want a deeper understanding of what has led up to recent news stories—with plenty of links.

Photo galleries have also been around for decades—but now publishers are able to use Instagram carousels or Pinterest boards to easily curate collections of images for online readers (see the chapter on writing for social media).

And liveblogs are not only used for original live reporting: sometimes they are used to "round-up" the key stories from around an area or issue throughout the day (see the chapter on liveblogging for more).

Identifying your UVP

Newsletters are more than just stories—they're products. And products need a clear "user value proposition" (UVP). This typically explains three things:

- What problem you are solving for your readers
- What value you are adding
- Why your product is better than the competition

The most common problem that curation products attempt to solve, for example, is the reader's lack of time to read lots of different sources of news to find the most important stories. But some newsletters and chat channels solve other problems: it might be "raising a child" or "saving the planet", for example.

The value added by a curation product might be one of those listed above—filtering, comprehensiveness, synthesising, variety, and illustration. Some newsletters add original content such as a brief interview or behind-the-scenes insights alongside the round-up of featured stories. For some, the value lies in the witty style or subject knowledge of the "host".

Finally, your UVP needs to set out why your product is better than the competition. Terms like "exclusive", "must-read", "behind the scenes", and "the news all your friends are talking about" are examples of this—as are references to reporters and teams specific to your organisation, such as "from Book World editor Ron Charles" or "curated by Post editors". You might also distinguish yourself from competitors through your tone—it might be entertaining, irreverent, or witty, for example.

Look at newsletter pages to see examples of how publishers craft a succinct UVP: The New York Times's newsletter Debatable, for example, offers to "Broaden your perspective with sharp arguments on the most pressing issues of the week". This has all three elements of a UVP:

- The problem you are solving for your readers: "Broaden your perspective"
- The value you are adding: "with sharp arguments"
- Why the product is better than the competition: "the most pressing issues of the week" (rather than what other publications might think is important)

Being clear about the *purpose* of the email publication—and making that clear on the subscription page and the email itself—is an important step to ensuring that people open and use it. The New York Times's Evening Briefing, for example, offers to tell you about the "10 most important things that happened today", while the curation-based nature of BuzzFeed's JPG, newsletter, is given by its strapline: "Your lens to the internet's most powerful photographs".

Typical purposes for email newsletters include: highlighting only the "most important" recent news, or the "best of" a particular type of thing; providing useful resources and tips for people in a particular sector; or giving behind-the-scenes insight and analysis. Trying to do more than one of those things all at once may dilute the usefulness of your product.

Closer look: The email sign-up page

When you set up a newsletter you'll need a way for people to subscribe to it. This is called the sign-up page. Most newsletter providers give you the ability to edit the sign-up page—and it's worth spending some time on to make sure it does the following:

- Say how often the newsletter is—people will want to know they're not going to get spammed
- Show them how popular or liked it is by including subscriber numbers or a quote from a fan
- Does the button say "send"? Change it to "subscribe" or—better still—something that emphasises the value and personality of what they're going to get, such as "I'm in!" or "Send me the latest gossip"
- Allow them to see previous issues (the archive) if possible—this feature can normally be turned on in your newsletter settings
- Keep it simple: you don't want unnecessary text or images getting in the way of a sign-up

Once you've created a sign-up page, make sure that there are links to it on your publication homepage and any social media account bios, and consider pinning an update about it to the top of your profile. Set a reminder to post on social media whenever a new issue goes out—with another link to that sign-up page—and to post about highlights from the newsletter too. Link to the sign-up page each time.

Planning and structuring a curation-based email newsletter

You will see certain generic features appearing in curation-based newsletters again and again. These include:

- A graphic masthead of some sort
- The title of the newsletter
- An introductory section, often written by the "host" of the newsletter, who may also be pictured
- One or more sections that gather content into particular themes
- A credits and links section that points to places where the reader can find you on social media and the web
- A "call to action" that invites the user to share, respond, or subscribe if someone else has passed the email on to them—with a link to the subscription page
- A link to unsubscribe if they want—this is a legal requirement in many countries

Mastheads tend to be a maximum of 600 pixels wide and no more than 200 pixels high, leaving enough room for the user to see some of the newsletter on the first screen of content. Look at examples to see how others do it.

The title should be formatted as a top-level heading. It can be the same as the subject line that appears in the email inbox—but doesn't have to be, because unlike the subject line, you can assume that someone is already reading—so you can use more characters and be more concrete.

The introduction often uses a reporter (or two) as the "host". It has two main purposes: to make the reader feel welcome, with a greeting establishing the informal tone of the newsletter, and to highlight why the reader might want to read the rest of the email. Between those two parts, it might also include some sort of summary of the week or day since the last newsletter, with links where relevant. The style of writing is important: having a distinctive voice that stands apart from junk email and connects directly with the reader is crucial to building relationships. Always imagine that you are writing for one person. An image of the host(s) can also help reinforce that personal element.

The bulk of the newsletter is then made up of different sections. You will notice certain types of sections used by many different newsletters, including:

- Round-ups such as “What we’re reading” or “What happened this week”
- Items chosen by someone, such as “Editor’s picks”. There might be more than one section like this, with each covering different fields, BuzzFeed’s As/Is newsletter, for example, has “Style & Beauty”, “Culture & Trending”, and “More From BuzzFeed” as its three sections
- An image, quote, tweet, or video of the week
- A short interview or profile
- A first-person reflection on one story
- Opportunities or jobs if the audience is in a certain industry
- Events, or some sort of diary or calendar, such as “Out this week” or “Don’t miss…”
- A “reading list” at the end of the email to make finding links quicker

The ordering of these sections is important: you want to create a clear reader journey through the newsletter. For that reason, you will often find events placed after other sections, towards the end, and more original content pushed to the front. Visual sections like “image of the week” are often used after more text-heavy sections, such as interviews or reflections.

Consider how you clearly signal the end of one section and the beginning of the next, too, by using textual and graphical elements including subheadings, line breaks, and images.

When filling each section remember the mantra *less is more*: focusing on the three or four key stories (or recipes, fashion disasters, etc) has been found to be more successful than overloading the email with too much information.

The end of the email is a good opportunity to encourage readers to share the email if they think someone would find it interesting—and provide a subscription link for people who have received the email from a friend rather than directly. BuzzFeed’s As/Is newsletter, for example, ends with: “Do you know someone who would love the As/Is newsletter? Tell them to sign up here!” You might also include other “calls to action” elsewhere, such as an invitation at the end of the round-up section to suggest links that you can include in the next issue.

And finally, remember that once sent, you cannot edit or correct an email newsletter—so make sure the email is proofread closely (ideally by someone who hasn’t written it) and have a strong attention to detail.

Writing a good subject line

When you write an email newsletter you’ll also have to write a separate “subject line”: this is the text that appears as the “subject” of the email when it arrives in people’s inboxes.

The subject line needs to be short: longer subject lines will be cut off by the recipient’s email client. The New York Times found that email subject lines “should be no more than

30 characters to drive the most engagement on mobile" (Teicher 2015), while email marketing platform Campaign Monitor advises no more than nine words and 60 characters (Campaign Monitor 2021).

Consider what emotion you want to generate with your subject line: curiosity is a common one—but make sure the newsletter will answer any question you raise in the subject line. If you have a surprising story to tell, or the ability to solve a problem for them, you might convey that. Don't be vague or generic: a subject line of "Issue 1", "The latest news", or "More top tips" will fail to give readers a clear reason to open. Verbs can work well—"meet…", "hear from…", "find out how…", and so on act as a "call to action".

Emojis can work well in the subject line—but don't overdo it: one emoji will normally be enough to convey the subject or emotion of your main story and draw the reader into the accompanying text (see the chapter on writing for social media for more on best practice when using emojis). Numbers can be effective in a similar way.

Many newsletter tools allow you to add *preview text*, too: this text is displayed in the inbox after the subject line and is a good opportunity to further pitch the value of your content. One technique you can use is a "twist" after the subject line's opening line: for example, if your subject line was "Where to eat in Everytown" you could use the preview text to add "…and the greasy spoons to avoid".

Consider spam filters: avoid subject lines written either in capitals, or entirely in lower case, and exclamation marks: these may be considered "spammy". You should also avoid words that have an association with spam, such as references to earning or borrowing money (credit, cash, income, debt, billion) or phrases like "Apply now"—search for "most common spam filter triggers" to identify others.

Accessibility for emails

Consider how you are ensuring that users with disabilities can access your newsletter. Some elements to focus on in particular include:

- Headings: make sure that the title is formatted as Heading 1 text, and each section begins with a subheading formatted as Heading 2. These are used by screen readers to provide navigation options to blind or partially sighted readers.
- Links are also often used for navigation, too—so make sure that linked text makes sense on its own. Never link phrases like "click here" or "read more"—and don't use URLs to link either. Instead, link a phrase that describes the content being linked to. See the chapter on web writing for more on how to link well.
- Images: these should have alternative descriptions—if it's not clear how to add an alternative description on your newsletter platform, search around for tutorials.
- Colour: if you are using anything other than black text on a white background use a tool like contrastchecker.com to check if the contrast between colours meets accessibility guidelines.
- Emojis: check the "unicode name" in the emoji's entry on Emojipedia.org to find out what the description is for any particular emoji—this will be used by screen readers if the user is blind or partially sighted. Make sure that it is visible in both dark and light modes.
- Text: keep it short and clear and avoid jargon.

You can use Accessible-email.org to check the accessibility of HTML in your email newsletter. Accessibility practices and tools are developing all the time, so make sure to search for the latest accessibility guidelines for email newsletters.

Email newsletter tools

You can use a range of tools to create and publish emails. MailChimp (mailchimp.com) is the market leader in "email marketing"—which includes newsletters—and has powerful design features and tools to schedule and monitor each email's performance. Other email marketing platforms include SendGrid (sendgrid.com) and Sender (sender.net).

Substack is the big newsletter brand in the news industry and having your newsletter on that platform will make it eligible to be recommended to their network of subscribers and writers. It provides comprehensive analytics to help you grow the newsletter and has dedicated features for podcasters who want to publish a newsletter (or newsletter publishers who want to launch a podcast). Other dedicated newsletter tools include Curated (curated.co) and Goodbits (goodbits.io), which offer Chrome extensions to save articles you want to include in your newsletter. Tinyletter (tinyletter.com) is a simple newsletter creation tool owned by Mailchimp.

LinkedIn has newsletters too, although you'll need to turn on "creator mode" and follow the steps on its newsletter Help pages (linkedin.com/help/linkedin/answer/a522525).

If you want to create a web-based publication with an associated newsletter, it is worth taking a look at Medium (medium.com). The platform allows you to curate stories by yourself on the platform into a single publication (see the Help Center guides at help.medium.com/hc/en-us/categories/201797548-Publications)—you can invite specific contributors to add their own stories too. Once created, you can access the Newsletter option by going to the publication homepage and clicking on the publication icon in the upper right corner and selecting "Newsletter" from the dropdown list. Explore Medium's guides on creating newsletters at help.medium.com/hc/en-us/sections/360008673973-Newsletters. The website creation tool Squarespace (squarespace.com) also offers newsletters.

You may find services, such as Canva (canva.com), which allow you to create more print-like newsletters with multi-column layouts. These formats are not often used in the news industry—and complex layouts can create loading issues—but they can be used to create magazine-style email publications if you're prepared to test the results on multiple devices.

Measuring performance with analytics

Most platforms provide some analytics on how well your newsletter is performing. Measurement of email "open rates" (what percentage of users open your email) and other metrics such as CTR (click-through rates: the proportion of recipients clicking on a link in your email) are crucial elements in testing your writing techniques.

Campaign Monitor suggests that anything between 17% and 28% should be considered a good open rate, depending on the industry, with the average rate for newsletters in the media, entertainment, and publishing sector being just under 24%. Click-through rates are much lower: 2–5% is considered a good range, with the average for media around 3% (Campaign Monitor 2022).

You can use these metrics to see if different approaches to subject lines, style, and structure make it more likely that subscribers open newsletters or click through to links. Some email platforms allow you to do A/B testing—sending two different versions of a newsletter (“A” and “B”) and seeing which one performs best. But you can also test different approaches in different issues.

Finding newsletters

Many publications have a webpage dedicated to their newsletters, and platforms like Substack also allow you to search their writers. It’s important to subscribe to quite a few to get ideas for your own and see how they’re written and structured. Here are just a few to give you ideas for your own:

- ABC (Australian Broadcasting Company): abc.net.au/news/subscribe
- BuzzFeed: buzzfeed.com/newsletters
- The Globe and Mail: theglobeandmail.com/newsletters
- The Guardian: theguardian.com/email-newsletters
- HuffPost: huffpost.com/newsletters
- The New Yorker: newyorker.com/newsletter
- NPR (National Public Radio): npr.org/newsletters
- Quartz: qz.com/emails
- Substack Discover: substack.com/discover
- The Sun: link.thesun.co.uk/join/5pl/signup
- Vox: vox.com/pages/newsletters
- Washington Post: washingtonpost.com/newsletters

Jacob Granger, Journalism.co.uk

Jacob Granger is a senior reporter for Journalism.co.uk, and edits both their email newsletter and a weekly newsletter on the chat platform Telegram.

The newsletter was inspired by The Telegraph's use of WhatsApp, which I covered back in 2019. It has been an effective and clever way for them to reach time-poor audiences with need-to-know articles of the day—and our audience of journalists are very much in that category of busy professionals. So I thought it would be a good way to increase engagement and traffic to our site.

Initially we started it out similarly to The Telegraph, with an audio briefing, but additionally teasing in a segment of our weekly podcast. But we discontinued that approach because in a limited team it proved too much work for too little engagement. Ever since then we have opted for a text round-up of our own stories, refining the number down to three text stories and the latest podcast.

We chose Telegram ahead of WhatsApp because although the platform is not as popular in the UK—our main target demographic—we felt the platform is much more straight-forward to use and it would catch on in the UK. We also have a good international presence where Telegram is more popular.

A Telegram channel is also not confined to a broadcast list of 256 recipients, as it was on WhatsApp. It is simple to insert links and format the message on the desktop app, and it provides really granular analytics on subscription growth, notifications muted vs unmuted, views per hour, views by source, languages of followers, and interactions.

My advice for launching on a chat platform, like any platform, is to follow the best publishers for inspiration: South China Morning Post, NYT (which began using it during the Ukraine war), Bloomberg (one of the very early adopters), Kyiv Independent, Journalism Festival, The Fix Media.

For me, I'm very emoji-inspired by Bloomberg, but I think I might try to test out its more concise approach in our forthcoming briefings next. Like anything, you don't improve by going on your assumptions blindly. Ask colleagues and your followers what they think about your service regularly.

One lesson I've learned—and this applies to anything—is that if you find a process a drag, it's likely your audience will too. An old university friend who now works at the BBC on audio said you should imagine your audience reading or listening to you on their morning commute. I practise this now in other media too: if you are running a newsletter and you are finding it tiresome to put together, will they care? Trust your instincts and always be prepared to shake up your offering by either asking your followers for suggestions or drawing on what is working for others—it is always a work in progress.

Writing alerts and push notifications

Initially used for breaking news, the use of chat platforms, news apps, and browsers to deliver alerts—sometimes called "push" alerts—has expanded to cover a wide range of news and features. Now analysis, first-hand accounts, and non-breaking news stories make up over a quarter of all alerts (Brown 2018) and brands such as The Wall Street Journal offer readers a choice of nine different alert "channels". Time-limited events such as elections (where users are willing to receive a number of updates if it is only over a short period of time) also suit the format.

Publishers have expanded the average length of push alerts and started to write more informally as they learned what worked in the medium. "We found that people like it to sound more like a sentence than the headline", as one person involved with alerts explained to the Tow Center (Brown 2017).

Choosing when to push out an alert for a story is a particular skill. CNN's senior director of mobile programming Marcus Mabry lists a number of factors that they consider: "How big is the news? Is it breaking? Is it surprising? Is it big enough to lead our home pages? Our competitors? Our television shows? Our competitors? Print font pages? Is it a story of national or international importance?" (Brown 2018). Having a strong first-person story, or a reporter on the ground, can also be particularly effective. And geo-targeting of alerts means stories can only be pushed out to people in particular countries or cities.

The Associated Press guide on push notifications suggests the following:

- Make it clear why the story is important—even if it makes the alert longer
- The tone should match the content. "But even with serious topics, a conversational tone can be more enticing" (Associated Press 2022)

- Have a publication-wide style, and be consistent in sticking to that
- Have a system for checking alerts before they are sent—and a system for corrections when they are needed

It also provides a number of suggestions for constructing alerts, including:

- Posing a question (making it clear that the article answers it, e.g. "…Here's what the experts say")
- Highlighting a detail (such as why divers shower after each dive)
- Making it useful ("Here's how…")
- Promoting the journalist ("National World reporter Jane Smith reports on…")
- Making it compelling

Writing a push alert is a skill in editing and succinctness: mobile notifications have a limit on the number of characters you can use, which means you will need to convey your message not only in as few *words* as possible—but as few *characters* as possible, with the first few words being especially important. Associated Press alerts averaged 132 characters (Associated Press 2022). As with other formats covered in this chapter, emojis can be very useful in communicating your story's subject or tone without using up too many characters, and numbers are effective in catching the eye too.

Chatbots

Another way to use chat platforms to reach audiences is a chatbot. A "bot" is a script that is pre-programmed to perform a particular task—and a chatbot is a particular *type* of bot that is mainly created on chat platforms to respond to what users type by providing information in response to questions or requests.

In June 2015, Telegram became one of the first chat platforms to add chatbots, and readers of TechCrunch and Forbes could soon use them to subscribe to updates on particular topics, or ask questions like "Who is Jack Dorsey?" (Bernard 2016). Chatbots, it was said, were the new apps, and Slack (Wang 2016), Kik, Line, Skype, Facebook Messenger, Viber, and Twitter (Power 2016) all began offering their own versions.

A number of services also popped up to make it easier for people and companies to create bots, including Chatfuel (chatfuel.com), Botsify (botsify.com), and Gupshup (gupshup.io). These tended to offer basic automation, as well as "branching" storytelling (the ability for users to choose from a limited number of options).

Summary

The growth in both email and chat means there is a real demand for journalists who understand the specific considerations to take into account when writing for these platforms—and have the skills to create and maintain a successful news product.

Newsletters are one of the easiest ways to get started with publishing: like blogs before them, these platforms provide a great way to build your profile and audience as a journalist. All you have to do is monitor and curate developments in a particular field—a basic part of the daily routine for every journalist and an important habit to build.

But newsletters help develop so much more than that. They give you a regular publishing routine and help with practising your writing, but with the support of a simple regular structure that gives you predictability and helps you work fast. Editing a newsletter builds knowledge of grammar and spelling, as well as the discipline of brevity—and you will have an opportunity to develop your writing style and find your voice over time.

A newsletter can be as simple as three interesting links you've found every week—but once that becomes easy, you can add extra elements that take you in new directions, including original interviews. Using the analytics available on newsletter platforms, you can see how different approaches have different impacts on subscriber engagement, and you can get to grips with editorial product development as you refine and change the newsletter over time—or close one and launch a new one based on what you learned.

Chat platforms also offer a range of opportunities to experiment as a journalist. If you work for a publication, suggest experimenting with a chat channel to send alerts or roundups, improving your editorial decision making (you'll have to decide which stories deserve to be included) and your writing skills (you'll need to describe the story in less than 40 characters). Or consider offering to set up a chat group to engage with readers and build your community management skills (see the chapter on community management)—or experiment with chatbots.

Whatever you do as a journalist, it's likely that at some point you'll need curation skills—from editing a curation-based newsletter or chat channel to rounding up news for a liveblog, or writing listicles, profiles, and explainers. Whenever you curate, consider what value you're adding, have clear criteria, and make sure that you're sourcing diversely and attributing clearly.

Curation can also provide the inspiration and foundations to begin reporting your own *original* stories: reading lots of journalism will improve your own—and knowing what information is out there can help you identify what gaps still need to be filled, or what the next stage in a story might be. You will identify potential interviewees as you read, and interviewing will be easier—because you'll already have done some background research through your curation. Conversely, you'll also be able to make more out of your original reporting, as you turn background research into explainers and listicles. If you're struggling to get started with journalism, curation is perhaps the best way to get started—then you can build from there.

Activities

1. Subscribe to ten email newsletters and rank them

Use the links in the section on finding newsletters to find ten different newsletters that look interesting. Try to pick newsletters in a variety of formats—some that are opinion-based and some that are curation-based, plus any others—and subscribe to them.

As they come into your inbox in the coming days, look at them as a budding publisher: what do you think they do well? And what do they not do so well? Write down the ideas that you can adapt for your own newsletters—and the mistakes you'll promise to avoid.

2. *Review news organisations on Telegram*

Telegram is the easiest chat platform to search for media organisations. Use Telegram's search engine at tlgrm.eu/channels to browse through different categories, including news, blogs, and politics, and find channels by brands that you recognise. Be careful: there is a lot of misinformation on chat channels so avoid brands that don't have an established reputation in the industry.

You can look at the updates from each channel in the browser or subscribe to them in the Telegram app itself (you'll need to download it if you don't already have it installed). Write a review of the top five: what do they offer? How do they use succinct writing and techniques like emojis? How are they choosing the material they link to? What could they do better?

3. *Plan your own email newsletter*

Map out a clear "user value proposition" (UVP) for a new email newsletter that identifies:

- What problem you will solve for your readers
- What value you will add
- Why your product will be better than the competition

Do some market research to see what else is out there in the market you're planning to aim this newsletter at and revisit your idea: you may need to pick a more specific niche or a different problem to solve. Get feedback from people in the community you want to target (see the chapter on community management for more).

4. *Plan the structure and style of an email newsletter*

Brainstorm ideas for the different sections that your newsletter might have. How will the newsletter be introduced? What about the main body in the middle? Can you choose different themes? Problems that you're solving? A mix of the textual and visual—even audiovisual? Will you have any original content? Can you sustain that original content for every issue?

Once you have a list of items, experiment with different orders: what should come first to grab the reader, and what section works well for a sign-off? Which sections can contrast with other sections to break it up and move the reader through?

Remember that you don't have to get it right the first time—once you start publishing, don't be afraid to change things as you go in response to feedback, new ideas, and developments.

5. *Create an email newsletter*

Use an email newsletter tool (see the section on tools) to design and write an email newsletter. You might want to try more than one to see which one you're most comfortable with.

Begin by filling the sections with junk text to get a feel for the overall layout and structure of the newsletter. Before you write, consider how you want the title and subheadings to look, and whether you will have lines or other elements between each section. Design a masthead for the top—and any other graphical elements you might need elsewhere.

Make sure that images aren't too big: if you use a photo, it shouldn't be any larger than 600 pixels wide.

Now you can start writing. Remember not to write *too* much: each section should be short and sweet, with lots of links if they want to read more about the things you're highlighting. Even interview and behind-the-scenes sections should be brief and punchy. Consider using emojis in some places—they can act as "bullet points", for example, but don't overdo it.

Finally: edit! In an email newsletter, editing is just as important as writing—and you'll need to edit it at least twice: first, for brevity—chop out anything that is redundant or unnecessary; cut back paragraphs to one or two sentences at most. And second, for accuracy: once you send the newsletter you won't be able to fix any mistakes so check the spelling of every name and place and look carefully for grammatical errors. Send yourself a test copy of the email for a final check to make sure it looks OK within an email inbox and on a phone.

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7 Live and mobile journalism—and verification

Chapter objectives

This chapter will cover:

- What is liveblogging
- Why liveblogging is widely used in the media
- Different types of liveblog
- The ingredients of a liveblog
- Ideas for liveblogging
- How to prepare for a successful liveblog
- Mobile journalism skills
- Mobile journalism kit
- How to verify content at speed

Introduction

In the modern news environment when news breaks, readers don't want to wait for journalists to write a 300-word story: they want to follow developments as they happen. Users also increasingly want communal experiences—to interact with journalists and others affected in real time.

While some elements of online journalism borrow from broadcast and print journalism, the liveblog is a format that is very much online-native. As its name suggests, it started life as a form of blogging: the first liveblogs were created by regularly updating a single blog post to add new information on a developing story or event. But liveblogging really took off with the rise of microblogging services such as Twitter, which allowed reporters, witnesses, and experts to provide real-time updates on news developments without having to write formal news stories or blog posts.

The rise of the liveblog, then, represents not only a way to bring that content into the news site ("curation") but also the community that is helping to create it.

What is liveblogging

A liveblog is a continuous series of real-time updates on a newsworthy event. As a format, the liveblog is very flexible: there are liveblogs which last an hour and liveblogs which last

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weeks. There are regular liveblogs and unscheduled ones. There are liveblogs about serious news events like protests and riots, and about lighter topics such as music festivals and popular TV shows. There are liveblogs rounding up a range of news updates from across a sector or region, and those that track a reporter taking on a challenge. Here are just some examples of the breadth of uses to which the form has been put:

- Many of the earliest liveblogs by newspapers were of sports events: football and cricket matches
- I, Scientist liveblogged the panel discussion "Are robots really after our jobs?"
- Many local newspapers run liveblogs summarising everything that is going on in the region that day and linking to relevant stories as they are published on the site
- Popular shows such as *The Apprentice*, *X Factor*, and *Bake Off* are regularly liveblogged by news websites
- BuzzFeed's Daniel Dalton liveblogged "This Is What It's Like To Watch 'Harry Potter And The Prisoner Of Azkaban' For The First Time"
- SchoolsWeek liveblogged the Public Accounts Committee (PAC) as the head of an academy school answered questions
- On the anniversary of the Battle of Britain, The Telegraph liveblogged the story of the event in "real time"
- The Guardian liveblogged every day of the Leveson inquiry into the conduct of the British press

Some liveblogs are done by a single individual; others are done in teams with people on the ground reporting, and "producers" back at base coordinating. Others are done with the collaboration of hundreds of eyewitnesses, stakeholders, experts, campaigners, reporters from other news outlets, and other participants. It all depends on what the story is and what information is most useful.

It is essential that you differentiate your coverage in some way from any other liveblogs based on your audience. For example, a local liveblog will focus on how the event affects local people, but a liveblog for a national publisher will take a broader view, and a liveblog for a magazine might focus on the industry or sector that it caters for. Differentiation is done partly through style and emphasis, but largely in where you focus your preparation: what is your expertise and how do you develop and deploy that live?

When done well, a good liveblog can draw clarity out of confusion, chase rumours down to facts, and draw multiple threads into something resembling a canvas.

Most importantly, it takes place within a network. The audience are not sat on their couches watching a single piece of coverage; they may be clicking between a dozen different sources; they may be present at the event too; or they may have friends or family sending them updates from their phone. If they are hearing about something important that you're not addressing, you have a problem.

More permanent than broadcasting, liveblogging does not require the same cycle of repetition that you will see on 24-hour news channels; more dynamic than print, it does, however, demand regular summarising.

Why liveblog?

Liveblogs do incredibly well when it comes to the number of visitors that they get, and how long they spend on there. At one point, The Guardian liveblogs received 300% more views than traditional news reports, and 233% more visitors (some visitors view more than once) (Thurman and Walters 2013), while the Manchester Evening News's Paul Gallagher said that liveblogs increased the amount of time spent on a page 20-fold (Bateman 2011).

Research by Neil Thurman throws up a raft of similar statistics: readers spend on average between six and 24 minutes on liveblogs: a very long time in news consumption (Thurman and Walters 2013). They are perceived as being more balanced or factual than traditional articles "because of the range of opinions they present, the links they provide to sources and supporting documents, and their 'neutral' tone" (Thurman 2014) and audiences are "more than twice as likely to participate in live blogs compared with other article types" (Thurman and Walters 2013).

At times, The Guardian website has been publishing almost 150 liveblogs every month (Thurman and Walters 2013), from politics and business to sport—at the weekend there can be ten sports liveblogs running at the same time.

It allows print outlets to compete in the 24-hour environment of rolling news and to cover major sporting events even when they may not have the budgets to obtain live coverage rights (although restrictions may still apply).

And it allows journalists to do more with their time: after all, if your entertainment correspondent has to watch the latest episode of a TV show, why not get them to liveblog it at the same time? And if a local reporter has to sit through council meetings, why not liveblog those?

Closer look: Ingredients of the liveblog

Although a liveblog does not have the formal "inverted pyramid" structure of most news articles, it does still need certain ingredients and to follow particular conventions.

The headline, for example, will often lead on the fact that it is a liveblog, or at least "live", followed by the story that is being reported. For example: *Live: Sparkbrook shooting latest: Man dies after gun attack*. Other elements include: a round-up of the key points, a gallery, an introduction setting the scene, mixed media, and a round-up at the end.

Gallery (optional)

Some liveblogs will lead the story with a visual summary of events so far, in the form of a gallery. The captions might perform a similar role to the key points section, detailed below.

The "key points"

The top of the liveblog will often include a bullet-point list of key events or points that have emerged during the process of the liveblog. This stays at the top of the liveblog throughout and allows users to "find their feet" in being able to understand the latest updates.

Early on in the life cycle of the liveblog this bullet list might only have one or two background points, but as things develop, those bullets can be added to and changed. Often, they will link to stories elsewhere on your site that provide more details.

The intro: Set the scene

The intro typically sets out the background to the liveblog—for example, what is happening, where. A Health Service Journal liveblog of a vote in Parliament, for example, has the following introduction:

> MPs are to vote today on Clause 119 of the Care Bill, which could give the health secretary powers to close down hospitals within 40 days, plus the rest of today's news and comment.
>
> (HSJ Live 2014)

While Digital Spy's liveblog for a TV programme final sets a lighter and less objective tone:

> It's here! We can't believe it's come around so quickly, but it's time for the Britain's Got Talent final.
>
> (Wightman 2015)

These are often written in advance: preparation is vital to liveblogging (see below). Typically you start anywhere from ten to 30 minutes before the event itself.

Part of the reason for this is search engine optimisation: making liveblogs live an hour or two before the event gives search engines time to find your story and make it available when people search.

The middle: Regular updates

Once you've set the scene, you can get straight into those live updates. These should be very regular—if you are leaving large amounts of time without an update you've either chosen the wrong thing to liveblog, or you haven't prepared well enough. The Guardian's liveblogs, for example, update about every ten minutes on average (Thurman and Walters 2013). But for big and fast-developing news events, you may be updating more than once per minute.

Some updates will have been pre-prepared: for example, background details, maps, graphics, and links. Others will come from outside: for example, user contributions, user-generated content (UGC), and contributions from colleagues.

You should aim for a mix of types of update in order to keep people interested. After a couple of background details, bring us back to the here and now. Inject images and video to break up constant text updates and so on.

Some ideas for different types of content you can switch between:

- Summarising and clarifying: what did all those words actually boil down to?
- Contextualising (politically): why are they making that statement?

- Contextualising (facts): what's the background to that statement?
- Factchecking: are they representing the facts accurately?
- Linking: is there a report that the statement is based on? Or an article that explains more about a particular anecdote?
- Colour: is there something about a setting, expression, or individual which you might remark on to bring it to life? Wit and personality are important here.
- Social: what are other people saying on social media and via email and comments? How can you bring that into the debate?

Remember that in sporting events the liveblog will still need to be updated during breaks in play, and these can go on for some time: in one Guardian cricket liveblog, a rain break lasted for five hours, and audience interaction was key to keeping the liveblog going while the sport wasn't (McEnnis 2015).

The round-up: Ending it

Ending a liveblog is just as important as starting it—and can be one of the most difficult parts. Typically you will want to summarise the key points of the event and point the user to links where they can read more. If there is more liveblogging to come you should indicate that too.

Remember that you don't have to end the liveblog when the event itself ends: in some cases, the aftermath will be just as interesting or you can find ways to reflect on what has just happened. After an election leaders debate in the UK, for example, The Scotsman liveblog used Google Hangouts to discuss the debate with three guests on live video.

After the liveblog is finished

Once the event and liveblog have finished, the headline is often altered to read "As it happened". After all, the event is no longer live but now acts as a recording of the live coverage. Some liveblogging tools (see below) will also automatically reverse the chronology so that, instead of showing the most recent update first, the liveblog now shows all the updates in chronological order, or users can choose to view it in either order.

You may want to write up a more traditional article on the event if someone else hasn't already. Thankfully you have lots of material to use from the liveblog itself, and of course, make sure you link to the liveblog in any related articles. As former Birmingham Mail reporter Jonny Greatrex explains: "You link out to the content, then back to the liveblog from that content, and get people to loop round your site driving up engagement time and pages per user".

Ideas for liveblogging

Some people assume that you need to wait for a big news event to start a liveblog, but the format has proved particularly flexible in serving a whole range of editorial demands.

Protests and demonstrations are perhaps the most obvious candidate for liveblogging. They are normally planned and announced in advance, so use a tool like Google Alerts (see the chapter on search) to receive emails when the terms are mentioned, as well as following local campaigning groups and local branches of national campaigns.

Industry conferences provide another useful opportunity to liveblog: whether you're reporting on a particular geographical area or subject there will be industries that play a key role in that. Search Google for "events near me" to get their built-in listings service or search for industry calendars or some of the specialist events listings and organisation services to see their upcoming events.

Council or board meetings, hearings, committees, and other public and semi-public meetings often have significant implications for local communities, sections of society, or particular industries. They are also often poorly covered. This provides a real opportunity for enterprising individuals to add value to their readership. In addition, there are more informal meetings of small groups that you can find on sites such as Meetup, Upcoming, and Eventbrite.

If you are planning to liveblog or tweet from court, make sure you are confident on your law—particularly contempt of court in the UK, Canada, and other countries. Check you are able to publish live updates from the type of court case you are covering and the country you are doing it in.

Press conferences are an obvious candidate for liveblog treatment. You can also add to political events such as a budget announcement, political debates, or sessions where leaders are questioned. The main consideration is that you will be covering the conference alongside other journalists, so your coverage needs to be distinctive. The situation is also likely to be tightly controlled, and as a result dull, so have the facts and evidence ready to challenge what is being said, and bring users into the coverage too.

Product launches and store openings can be very dull affairs, but occasionally generate significant enough interest—particularly among technology and fashion fans—to justify liveblogging. Your liveblog is likely to use that interest as the basis for some broader editorial angles. For example, launches and openings are social gatherings, so try focusing on the people there: interview them and paint a picture of how diverse or similar they are. Tap into their expertise or enthusiasm; work with them. And think about what people might want to know after the launch/opening: tips and tricks on using new technology? The items that are flying off the shelves? You may need to be ready to contact experts and insider sources too.

Of course, remember that you don't need to wait for something newsworthy to happen to start a liveblog: you can do something yourself and liveblog your progress. Ideally, it should be something with a beginning, a middle, and an end over a limited period of time, such as a "day in the life" of a particular job.

With preparation and some creativity, anniversaries can be liveblogged. The Telegraph liveblogged the Battle of Waterloo, as it happened two centuries earlier. Laurence Dodds, who has managed Telegraph liveblogs on anniversaries from the fall of the Berlin Wall and the funeral of Winston Churchill to Waterloo and the Battle of Britain, says that he prepared for the liveblogs with a large range of sources: books, interviews with historians, old Telegraph newspapers, and interviews with living witnesses. He says:

> The mistake I made was to underestimate the time my preparation would take. For Berlin especially I did a lot of original research and interviews, including phoning up the historian of a German football club. Lots of work also went into the multimedia stuff, like graphics and pictures, which I commissioned from the relevant Telegraph teams. I also had a lot of conversations with museums who own the rights to images and old documents.
>
> (Bradshaw 2015)

As for breaking news, while you cannot plan for the exact timing of breaking news, you can *prepare* for some news events that may happen at some point. At the most basic level, you should know how to quickly launch a liveblog. But you might also have files prepared for when certain stories break. For instance, most news organisations have obituaries ready to go when certain public figures die. And if there is a major earthquake or other natural disasters, major transport problems, or a terrorist incident, you should have contacts ready to call.

Your role as a liveblogger

One of the key qualities of liveblogging is its networked nature: at the same time as you are covering an event, dozens or hundreds of others may be liveblogging and live-tweeting about it too (or even watching it on television). So you need to quickly evaluate that coverage and decide where your efforts will be best invested and appreciated.

The bottom of the "value chain" in liveblogging (Figure 7.1) is simply *documenting* what is happening. But if there are lots of other people doing this too, you may want to spend at least some of your time *filtering and aggregating* (curating) the most informative and insightful updates.

Moving up the value chain, you should also consider adding some *analysis* of what is happening: why is one particular piece of information or statement important, or why is this one not important? What does this mean for the industry or area that you are covering?

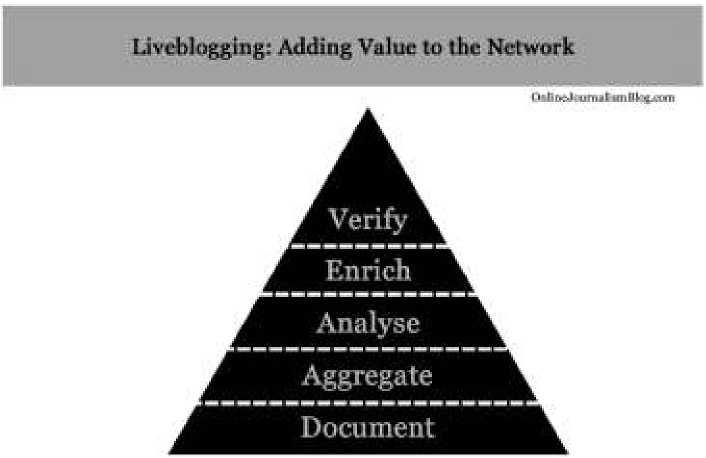

Figure 7.1 Liveblogging pyramid. When liveblogging, ask yourself how you can add value to what people are already doing in covering the event

Research on live tweeting suggests this move from documenting to analysis is key with sports events in particular: tweets describing what was happening on the field saw much less engagement (retweets and likes), whereas "analysis, opinion, entertainment, and visual content" was retweeted more (Shermak 2018).

You might decide to *enrich* coverage by adding audio, video, or other multimedia that adds a new dimension. When The Telegraph planned their liveblog of the wedding between Prince William and Kate Middleton, for example, they placed different reporters at key positions on the route and tasked them with producing different media.

Finally, if the event involves disputed facts or versions of events, you might seek to *verify* that information. This is what often happens during election debates, for example, where everyone can watch the coverage and have an opinion, so the main need is for a reporter who can actually check whether the claims being made are true or not. Likewise, during riots and demonstrations, there are often lots of claims from those on the ground about what is really happening and why; a journalist's role in that situation is to verify what the truth is, as far as they can see.

Preparing for liveblogging

A good liveblog is well prepared—just as a good TV or radio programme is the result of days spent lining up guests, researching key talking points, and preparing key visuals or sounds.

The worst liveblogging is done when the reporter has not prepared anything and knows nothing about the subject. You can spot these liveblogs a mile away: updates are dull and there are large gaps between them.

How you prepare for the liveblog clearly depends a great deal on the subject of the liveblog itself. You should certainly aim to pre-write some material that can be easily fed into your coverage when things go quiet: for example, the introduction and background details on people, places, and facts. You might also write separate articles that are published on the same day, such as profiles and explainers, that you can link to in your introduction and coverage.

Visuals are particularly vital to live coverage and can often be pre-prepared. Typical examples include a map of any route, charts illustrating key facts, and infographics combining those.

Information you should be seeking out for different types of events include:

- Agendas, schedules, and routes: when are the key moments likely to be? The key locations?
- Documents: presentations, transcripts, and reports are often published online by organisations in advance of meetings and conferences, or you can ask for these in advance.
- Jargon: many events may feature the use of jargon that you will need to be able to understand immediately.
- Systems. How do they work? (e.g. voting systems, technologies, inventions).
- People and places: make sure you research the key people involved in an event, whether those are speakers, campaigners, or attendees. If the event is in a particular building or along a particular route, have some detail on key places so you can add a bit of colour.

The Guardian's Martin Belam says preparation is "one of the keys to successful live blogging" (Belam 2021). While updating the website's US politics liveblog during the US election he had a map of the country on his wall, crib sheets on key figures in the important senate races, a spreadsheet of the previous results, and two Twitter lists of key political figures.

Prepare the ground

In addition to background information, you should also be preparing other elements to make sure your reporting is the best it can be on the day.

Contacts, for example, are key: knowing *about* people is one thing; *knowing people* is another. Make sure you have some good contacts in the organisations involved: ideally speak to them before the event so you have some quotes ready to go and they know who you are if you phone them during the event itself.

In a similar vein, you should make sure you have good *feeds* set up on social media: for example, lists of key people in Tweetdeck or other social media dashboards (see the chapter on search for more on this).

Locations might also be important. If you're going to be on the ground then it helps to know where the local wi-fi spots are, and which areas are likely to be good for interviews (quiet; good visuals) or where trouble might flare up. Try to recce places before you arrive there—or speak to others who can give you a heads-up.

Finally, make sure that you let people know that you are going to be liveblogging in advance: write a preview article highlighting why this event is going to be important or exciting, and at the end mention that you or your organisation will be reporting it, live.

Liveblogging skills

When done well, liveblogging can take in curation, writing for social media, recording video and audio for the web, and image editing and verification. Initially, you may feel overwhelmed by the various demands, but remember that doing all of these at the same time takes practice, so the more practice you get, the easier it will become.

One of the things that most people struggle with when first liveblogging is simply updating regularly: it can be hard to find things to report when nothing is happening, which is why that preparation is so important: it gives you material to publish or points to mention when things are quiet.

Personality and style are important too. Dan Ripley of the Daily Mail recommends: "Be as human as possible, project your character, inject humour, make it as lively as possible—but you've got to get the details" (McEnnis 2015).

Try to make sure that you have identified any appropriate *hashtags* or create one if you don't find any being used (you can always change). Remember that even if you don't have time to capture an image or record a sound you can still describe it: try to tell us how things sound, look, smell, and even taste.

Direct quotes are particularly useful in liveblogging: try to use those where you can. And focus on updating when something *changes.*

A further skill to focus on is the ability to move quickly in response to developments. If the action switches to another location, you need to go there. Don't be afraid to talk to people: if you see someone important or unknown, you need to be able to approach them and ask specific questions. Knowing *what* questions comes down to research: what would your users want to, or need to, know?

You also need to be able to switch focus and check what other people are saying online: it may be other people in the same place posting updates on social media; it may be experts tweeting from afar; or individuals with key questions based on the coverage. You should also look for examples of individuals or organisations affected by the things being discussed: for example, are there charities or businesses that would be affected? People who have suffered, or succeeded, because of policies or proposed ideas?

A final skillset relates to multimedia. Remember that multimedia in liveblogs is very different to broadcast video or audio, or even photojournalism:

- Video can be (and typically is) raw footage, more like a photograph that moves than a story.
- You don't have to tell us the story as a broadcast journalist would do—sometimes you have to narrate, but really strong online video and audio often lets the subject or pictures tell the story.
- Even if you are not allowed to take images of people because of privacy concerns, you can take images of other things that tell the story: a broken chair; a discarded leaflet.
- Keep it short. It's better to record five one-minute audio clips, each answering a single question, than to publish five-minute audio. The same goes for video.
- But also remember that you can stream video or audio. Of course, there should be a good reason to do so.
- Make visuals out of text: tools like Canva allow you to create social media-friendly images that bring quotes to life. Word cloud generators allow you to make word clouds out of speeches or documents.
- Make visuals out of background: think timelines and maps.
- Make visuals out of facts: it may be a chart, but equally, you can pick a single number and make a visual out of that.

You don't need to record *everything* visually and aurally, but having that in your toolkit will give you some extra options. In particular, look for situations where hearing someone's tone of voice (their pain, confidence, or evasiveness) tells us much more than their words alone.

Finally, there is *verification*. Don't assume anything you read during live coverage is true. Try to go to the source of any facts or claims where possible, or speak to experts and other sources. Often liveblogs allow you to publish without going through an editor—so it's up to you to get things right the first time. Use the tips later in this chapter to ensure that you don't make an embarrassing mistake.

At the end of the liveblog you should have performed that vital watchdog role that journalists often claim: holding power to account and giving a voice to the voiceless.

Closer look: Liveblogging tools versus Twitter

There are many liveblogging tools that seek to make the process easier: Scribble Live and 24liveblog are two of the best known. These will give you a dashboard where you can automatically pull in updates from social media (e.g. specific users' accounts, searches, or hashtags), insert media, conduct votes, and moderate comments. But most importantly, they all enable you to embed the liveblog on your website. They also make it much easier for users to replay afterwards. This is why news organisations use these tools rather than Twitter alone.

Many of these tools will also "push out" any updates to social media too, so that when you update a liveblog, your Twitter account will also publish that update, so you don't lose out on engaging through social media.

"Mojo": Mobile journalism

When AJ+, Al Jazeera's social media unit, reported from Baltimore on protests against police brutality, they broke their record for engagement and increased their audience by tens of thousands of people. One of the co-producers, Shadi Rahimi, put the success down to the relevance of their reporting, the speed of delivery on social platforms, conforming to social norms, and raw emotive video:

> We know that positive emotions often carry content farther than negative (awe vs. sadness), and anger-inducing content is more likely to be shared than sadness-inducing; it produces greater emotional activation.
>
> (Rahimi 2015)

Mobile journalism—often abbreviated to "mojo"—is regularly used to report live—or very quickly—from the scene of an event. It can play a major role in liveblogging, allowing you to provide colour and quotes that other people cannot get, while it also puts you in a perfect position to respond to developments and verify claims.

Often reporters sent live to the scene of a news event will be expected to do specific things in their work to make sure that the right content is online quickly. A typical example is provided by former liveblogger Jonny Greatrex:

1. We need a scene picture immediately
2. We need six to eight paragraphs of colour or scene-setting, which can be self-referencing: "I am at the shooting in Sparkbrook, crowds have gathered at the police cordon, I am off to speak with people" for example
3. A 10–15 second video clip of the scene; this can then go in every story about the incident
4. Five more pictures so we have enough for a gallery
5. Then a constant stream of copy
6. Then find out more information about the victim, speak to people who knew him, and ask for permission to use images they have of him

Because you can only be in one place at one time, it is important to monitor social media as well so you can follow what is happening where, and where you might need to be. You can also use social media to arrange to speak to participants or invite users to tell you where they think you should go.

- When reporting on a mobile phone or tablet, put it in airplane mode to stop the recording from being interrupted by a phone call or alert.
- Remember that your main strength is the images, audio, and video that you can capture—but also that you don't need to do that all the time. Try to vary the content you are producing, and be prepared to listen just as often as you publish.
- If you are recording audio or video make sure you are close to the subject. This means you can get clearer audio and a steadier shot.
- Likewise, try to record in a quiet place with little background noise.
- Hold the camera with both hands with your arms at your side to keep things steady, and using your body as a tripod, moving at the hip rather than moving your arms.
- Be careful about which way you are holding your camera: film in landscape unless it is only going to be used on vertical video platforms. Know before you begin.

- If you are filming a video that is to be used on television, then check whether you are using the right frame rate. Some apps (such as Filmic Pro) allow you to select a frame rate that is suitable. And if you can listen to the audio while you record, all the better.
- Avoid using the front-facing camera: it is always poorer quality than the rear-facing one. And avoid using zoom as well (it results in poorer quality images—although this is changing): move closer if you possibly can instead.

Closer look: Useful mojo kit and software

The most basic kit for any mobile journalist is, of course, the mobile phone (see Figure 7.2 for a list of how much broadcast output was filmed on mobile phones in just one week). You will find various articles arguing about the merits of iPhones versus Android phones but both have their advantages, and it will depend on the sort of assignment you are on. You can also use a tablet. Apple devices' main advantage is the iMovie app, while Android devices have the advantage of removable batteries and memory cards.

It is always worth making sure that you have a generous data plan that is going to allow you to stream video or send large files, and you may even consider buying multiple SIM cards with different operators in case you are in an area that doesn't have a good signal.

Sound is important when it comes to recording multimedia, so find out how to connect a microphone to your phone (you can get adaptors for most iPhones and Android devices). Remember that you can also use your hands-free headphones as a microphone too (if they have one).

Depending on how much space you have, and how important it is, you may want some way to fix your device to a tripod (or a monopod/"selfie stick") if you need a steady shot. You might also take small but powerful LED lighting too. Tools like the Padcaster provide a frame for an iPad or iPhone that has fittings for a zoom lens, lighting, microphone, and tripod.

Multimedia uses up a lot of power and memory, so consider buying a portable battery that you can use to recharge your device if necessary and have extra memory cards if your phone uses them (iPhones don't, so try to buy a device with lots of memory). You might also want to buy separate devices instead of relying on your phone to do all the work: portable digital camcorders, DSLRs, and audio recorders can be used to record and then connect to a laptop to upload media.

If you're doing a lot of typing, consider getting a small (ideally foldable) portable Bluetooth keyboard that you can connect to your phone.

In terms of software, you will need the basic social media apps, but see if you can get an app for the liveblogging service too. You can also often get an app for your content management system on your phone (WordPress, for example, has its own app, and the BBC have their own internal app for journalists called PNG). You will need an audio recording app that allows you to upload to relevant platforms, and video editing. Note that while services like Instagram allow you to record inside the app, it is generally better to record video normally and then upload it to those services.

Make sure you also have streaming apps such as Spreaker for audio and at least one video streaming app. Note that you can also stream from a laptop and record using YouTube Live and other services.

Don't forget about apps that can help with other issues as well: a torch, for example, and a battery meter app that will help you reduce power consumption.

741	01/04/2022	NOTTINGHAM	EAST MIDLANDS TODAY	REBECCA BRICE	DEMENTIA OPERA	WEBSITE, SOCIALS AND RADIO TOO
742	01/04/2022	HULL	LOOK NORTH	PAUL MURPHY	SHIPPING	LIVE U AS SECOND CAM
743	01/04/2022	TUN WELLS	SOUTH EAST TODAY	JOSIE HANNETT	DR RANJ	80% OF PAACKAGE; INT ON BIG CAMERA
744	01/04/2022	NORWICH	LOOK EAST	JAMES BURRIDGE	BOAT RACE	AL MOJO EXCEPT ARCHIVE
745	01/04/2022	HULL	LOOK NORTH	PAUL MURPHY		LIVE U AS SECOND CAM
746	02/04/2022	NORWICH	LOOK EAST	THEO CHIKOMBA	LIDO	OOV ACT
747	03/04/2022	LEEDS	LOOK NORTH	MARK ANSELL	LEADMILL	AS LIVE LATE BULLETIN
748	03/04/2022	LEEDS	LOOK NORTH	SABBIYAH PERVEZ	ROMA	ALL MOJO
749	04/04/2022	BRISTOL	POINTS WEST	SCOTT ELLIS	VISA/UKRAINE	ALL MOJO
750	04/04/2022	MANCHESTER	NORTH WEST TONIGHT	ALEX WOTTON	BAKERY CLOSURE	ALL MOJO
751	04/04/2022	LONDON	LONDON	TARAH WELSH	COCKNEY	ALL MOJO BAR ARCHIVE
752	04/04/2022	HULL	LOOK NORTH	JO MAKEL	FALKLAND SHIPS	PART MOJO (NORLAND CREW)
753	04/04/2022	HULL	LOOK NORTH	ANDY WHITE	UKRAINE AMBULANCES	SEVERAL SHOTS FROM IPHONE
754	04/04/2022	TUN WELLS	SOUTH EAST TODAY	PIERS HOPKIRK	DOVER TRANSPORT CHAOAS	TRACKING SHOTS FILMED ON MOJO
755	05/04/2022	CAMBRIDGE	LOOK EAST	THEO CHIKOMBA	MEALS	ALL MOJO, SELF AUTHORED
756	05/04/2022	TUN WELLS	SOUTH EAST TODAY	MARK NORMAN	SEX ASSAULT	ONN 1330 TOO
757	05/04/2022	TUN WELLS	SOUTH EAST TODAY	JOSIE HANNETT	SWIM	ONN 1330 TOO
758	05/04/2022	OXFORD	SOUTH TODAY	DAVID LUMB	THAME FOR UKRAINE	PACKAGE BENEFITTED FROM BEING MOJO: WE COULD DELIVER FLY-ON-THE-WALL STYLE WHICH UNFOLDED REALLY ORGANICALLY; LIVE DOWN WITH LIVEU APP
759	05/04/2022	TUN WELLS	SOUTH EAST TODAY	JOSIE HANNETT	M20	SHOTS OF LORRY QUEUES
760	06/04/2022	TUN WELLS	SOUTH EAST TODAY	MARK NORMAN	HIV	ALL MOJO
761	06/04/2022	LONDON	LONDON	TARAH WELSH	COST OF LIVING	TOP STORY, DOG STUFF
762	06/04/2022	LEEDS	LOOK NORTH	SABBIYAH PERVEZ	COST OF LIVING	SELF AUTHORED PIECE
763	06/04/2022	TUN WELLS	SOUTH EAST TODAY	PIERS HOPKIRK	THE JAM EXHIBITION	FIRST EVER SOLO SHOOT; OFF IPLAYER TX
764	06/04/2022	HULL	LOOK NORTH	PAUL MURPHY	FOSSIL FUEL	OPENING SEQUENCE AND PTC WERE MOJO
765	06/04/2022	HULL	LOOK NORTH	JO MAKEL	FALKLAND VETERAN	ALL MOJO; NEWS CHANNEL TOO
766	06/04/2022	TUN WELLS	SOUTH EAST TODAY	BEN LEETE	VISA	MOJO AND CANON RSC
767	06/04/2022	LONDON	LONDON	CHRIS SLEGG	BUS ART	ALL MOJO, OFF IPLAYER ROT
768	07/04/2022	NEWCASTLE	LOOK NORTH	PHIL CHAPMAN	WILDEYE ART PROJECT	
769	07/04/2022	LEEDS	LOOK NORTH	SABBIYAH PERVEZ	RAMADAN	ALL MOJO
770	07/04/2022	NORWICH	LOOK EAST	DAWN GERBER	PERIOD PAINS	ONLINE TOO
771	08/04/2022	NEWCASTLE	LOOK NORTH	PHIL CONNELL	ROMAN TREASURES	OFF IPLAYER TX
772	08/04/2022	NEWCASTLE	LOOK NORTH	PHIL CONNELL	MIDDLESBORO MURDER TRIAL	CLIPS
773	08/04/2022	NEWCASTLE	LOOK NORTH	PHIL CHAPMAN	ITALY GLAMPING	OFF IPLAYER TX
774	08/04/2022	NORWICH	LOOK EAST	SHAUN WHITMORE	DINNERS	LEAD STORY
775	08/04/2022	TUN WELLS	SOUTH EAST TODAY	SARA SMITH	DOVER	VOXES, TRAFFIC AND PORT SHOTDS
776	08/04/2022	LONDON	LONDON	ROBERT TAYLOR	POINTE BALLET SHOES	ALL MOJO PLUS GIMBAL, 1330 TOO
777	10/04/2022	HULL	LONDON	ANDY WHITE	DISABLED DOGS	

Figure 7.2 Mojo output in broadcast journalism. Just some of the material produced for broadcast output on the BBC in one week using mobile phones and a mojo kit (source: Marc Blank-Settle)

Ethics of accuracy in liveblogging

In his book *Tell Everyone*, Alfred Hermida notes that when Lisbon was almost destroyed by an earthquake in 1755, it took weeks for news to reach London—but the way that news spread three centuries ago would still be recognisable in our hyper-connected society:

> The initial reports were often embellished and contradictory, much as happens now on social media. In the absence of timely and reliable information, Europeans exchanged stories, opinions, rumours and theories for months following the disaster.
>
> (Hermida 2014)

Today, he notes, the same process takes place but "days become minutes and weeks are hours".

There will always be concerns about technology and accuracy: when US senator Gabrielle Giffords was shot in 2011, many news organisations reported—incorrectly—on Twitter that she had been killed. Some blamed Twitter for the error, but the same mistake was made 30 years previously when President Ronald Reagan was shot as he left a Washington hotel. "People shouldn't see this as a Twitter mistake", said NPR's Andy Carvin, "rather it was a reporting mistake that could have occurred on any platform" (Taylor 2011).

This, of course, is the point: your standards of accuracy should be the same whatever medium you report on. Liveblogs and mobile journalism place increased pressure on you as a journalist to "hit the deadline", but you also have increased opportunities and resources to verify the information that you come across.

In some cases, the liveblog itself is one of those resources: if you come across information that has not been verified, you might sometimes judge that your audience may be able to help with this. Acknowledging that a piece of information is circulating and putting that into context is important—especially when everyone else can see the same information too. You might simply ask if anyone has any more information, or say that it does not match up with other reports, but most importantly, you should continue to update on the status of that piece of information, and seek to check it yourself—through phone calls, getting yourself or a colleague to the scene, or checking technical details (see below).

Remember that official statements should be treated with scepticism, too. This was particularly highlighted in the live reporting of briefings during the coronavirus pandemic, where politicians had an opportunity to make false statements live on news channels. Those statements were often live-tweeted and pushed out via mobile alerts without question or context. Sometimes journalists should have known the statements were false—such as when the UK health secretary claimed the government had hit its target of doing 100,000 tests per day (a specialist health publication had revealed how it had fudged the figures two hours earlier). Sometimes the claims were potentially dangerous—as when US President Donald Trump made misleading comparisons between the new virus and flu. Sometimes the wording may give a false impression, even while being strictly true: a politician will often say, for example, that they are spending "more than ever" on something, but they may still be spending less per person (because there are more people than before) or less in real terms (because of inflation).

In response to concerns raised by the briefings, journalism professor Jay Rosen suggested shifting the focus of coverage "from what [the politician] is saying to what his government is doing" (Rosen 2020). And the experience of misleading official statements has led many news organisations to begin adopting the "truth sandwich" approach to reporting what officials are saying. Suggested by linguist George Lakoff, it involves beginning your report (or tweet) with the truth *before* describing the false statement—then repeating the truth again after it. For example, you might report "Smith falsely claims that her department brought the Olympic games to the city. The bid was actually won by her predecessor, Toni Jones".

Verifying information live

When the telephone first entered the newsroom journalists were sceptical. "How can we be sure that the person at the other end is who they say they are?" The question seems odd now because we have become so used to phone technology that we barely think of it as technology at all—and there is a range of techniques we use, almost unconsciously, to verify what the person on the other end of the phone is saying, from their tone of voice to the number they are ringing from and the information they are providing.

Dealing with online sources is no different. How do you know the source is telling the truth? Well, you're a journalist: it's your job to find out.

The internet gives us extra tools to verify information—certainly more than the phone ever did. The apparent "facelessness" of the medium is misleading: every piece of information, and every person, leaves a trail of data that you can use to build a picture of its reliability.

Broadly speaking, there are three levels to verifying any information online (Table 7.1):

- The *content*
- The *context*
- And the *code* underpinning that

Table 7.1 Things to consider in verification

Element	*Things to consider*
Content	• Is it "linkbait" or "clickbait" (designed to get people to link to it)? • Recency: is it up to date? • Frequency: does the source update regularly? • Style and personality: does it match what you would expect from this source (e.g. spelling and grammar mistakes)? • For images, is there potential cloning or airbrushing?
Context	• What is the provenance of the content? (Where did it come from? When was it first published?) • Who is following the account? • Who is the account following? • How long has the page or account existed? • Can archives and caches provide information on how the page has changed - and is that suspicious? • What pages are linking to the content? • Does the site domain match what it purports to be (e.g. .gov for a government site, .edu, or .ac for an academic site)? • Can you correlate the information from other, independent, sources?
Code	• Does the source code provide any clues to the history of the page and its authors? Are there hidden messages? • Use WHOIS services to find out when the domain was registered and by who. • For emails, see if the IP address can provide extra information • For wikis, check the history and discussion pages • For documents, check the metadata to see if that can offer further clues to the date of creation, author, and changes

Verify online information by asking questions about the content itself, its context, and the code underpinning it.

Table 7.2 Fergus Bell's system for verifying information at the Associated Press

UNVERIFIED Establish earliest instance (provenance) and:	
VERIFY THE SOURCE ☑ Review social history ☑ Make contact ☑ Ask questions ☑ Secure permission to use	VERIFY THE CONTENT ☑ Translate text and audio ☑ Consult independent experts ☑ Seek separate confirmation ☑ Establish context
☑ Ensure source and content consistent VERIFIED	

This model from the Associated Press's Fergus Bell provides a series of steps to follow with unverified information: start with the earliest known instance of the content and then verify both the source and the content to check that they are consistent before treating the information as verified (Bell 2015).

Questions to ask of content: Too good to be true?

At its most basic level, alarm bells should ring if the information you're looking at seems too good a story. Journalists have found themselves hoaxed in the past by transfer rumours posted on message boards by a football "agent" (really a bored teenager), by photos showing the Harrods Christmas lights spelling out an offensive message (a simple piece of cloning in Photoshop), and by a social media account pretending to be a newspaper columnist apologising for her latest article blaming a pop star's homosexual lifestyle for his death. Embarrassing emails that go viral can turn out to be PR tricks. Video diaries can be revealed as new forms of fiction.

The more hoaxes you are familiar with, the more likely alarm bells are going to ring at the right time: the website Snopes.com keeps track of the most widely shared ones, and they often share similar qualities.

The frequency and recency of information will give you a clue as to its veracity: the more recent the information, the more up to date it is likely to be (although it may be based on out-of-date information—trace it back to its source). And the more frequently a source is updated (over a long period of time), the less likely it is to come from an opportunistic hoaxer.

Finally, does the style and personality of the information match the supposed source? Do they write in the same tone? Do they make spelling mistakes?

Questions to ask of context: Verifying social media accounts

The Associated Press's Fergus Bell recommends separating the source and the content when verifying information (Bell 2015) (see Table 7.2). Thankfully, social and other digital media lends itself particularly well to verification because, in our activity on social networks, we effectively verify each other. If your information comes from a social network account, ask yourself some of these questions:

- How long has the account existed? If it's only existed since a relevant story broke then it's likely to be opportunistic.
- Who did the person first "follow" or "friend"? These should be personal contacts, or fit the type of person you're dealing with.
- Who first followed them? Likewise, it should be their friends and colleagues.

- Who has spoken to them online? Ditto.
- Who has spoken about them? Here you may find friends and colleagues, but also people who have rumbled them. But don't take anyone else's word for their existence unless you can verify them too.
- Can you correlate this account with others? The Firefox extension Identify is a useful tool here: it suggests related social network accounts that you can then try to cross-reference. For companies, the Chrome extension Polaris Insights does something similar

Finally, of course, you should try to speak to the person. Phone their office or their employer and confirm whether they do indeed have the account in question.

For websites, the checks are broadly similar. On Google, you can use the advanced search facility to look for other pages that link to the one you're checking. These might include other websites that have rumbled the hoax before you—or are bragging about it. Similarly, look at the links the webpage contains to other sites: does this fit what you would expect?

Use the Internet Archive's Wayback Machine (web.archive.org) to search for the URL of the page, see how long the page has existed, and look at older versions of the page in question, which might include giveaway information that has since been deleted.

If your source is a webpage, look at the website address. If it is purporting to be a governmental website, it should end in .gov, .gov.uk, and so on. Some countries will have specific domains for other authorities (in the UK health bodies have a .nhs domain, for example, and there's .police too). Academic websites should end in .edu or .ac but this is no guarantee: less reputable "establishments" have managed to obtain web addresses with these extensions. The same applies to .org domains, which are normally used by non-profit bodies. And, of course, .com addresses offer no guarantees.

Questions to ask of code

The code behind a webpage can offer important clues. To see this, right-click on the page and select the option to view the source code. Occasionally, hoaxers intentionally leave messages here, but you can also find other clues such as the author, date, location, and technologies used. If these don't match what you expect then you know to be extra sceptical.

You can also use a WHOIS service to find out about the registration of the website: this might have been done through a third party but if it's a company for individual consumers rather than large companies that should make you suspicious.

If you are asking for emails verifying a story, make sure you are forwarded the original email, and not a screengrab, and check the IP address of the email against who it's supposed to be from (you can search online for instructions on how to do this).

On Wikipedia and other wiki-based sources, look for "history" and "discussion" links where you can see what changes have been made and the discussions about those.

Sometimes looking at the metadata of documents can lead to a great story itself: when the UK's Conservative Party sent a letter from "more than 5,000 small business owners" to The Telegraph praising the party's economic plans, one observer noted that the letter's metadata showed that it had originated from Conservative Central HQ: this was no grassroots movement. Once people realised this, they dug into the names on the letter and found dozens of problems including businesses that did not exist, duplicate names, people who were not business owners at all, and people who had never signed the letter and asked to be taken off. It was a major embarrassment for the party.

Verifying media: Images and video

Probably the most common hoax that people fall for online is when a real image is shared—but for a *different* news event. As Russia invaded Ukraine in 2022, for example, one TikTok video was shared showing Ukrainian troops and Russian soldiers "facing off"—it was actually footage shot eight years earlier. And whenever there's an instance of flooding, you can pretty much guarantee that someone will share an image of a shark swimming on a highway. This image has been shared by users for over a decade now, during hurricanes in Puerto Rico in 2011, then New York and Kuwait in 2012, and Florida and Houston in 2017. The image of the shark was actually taken in 2005 and the flooded street was added later. Some of those sharing these images are trolling to see how gullible people are—while some have simply fallen for the hoax themselves.

The first thing you should ever do when you see an image is use a reverse search engine like Google Images or TinEye to find out if other versions of this image have appeared online.

If you can't find any copies, look for cloning and airbrushing. Cloning is the replication and repetition of small areas of a photograph to, for instance, make a crowd look bigger by duplicating faces; or to make an air attack look more dramatic by adding extra plumes of smoke. Airbrushing is the removal of details.

Look for details that don't match up with the place or date that the video or photo was supposed to be of: you can search for weather reports in that place and time, or other images of that spot (using Google Street View, for example).

You can find out more about an image or video by checking the EXIF data: this is information about when the image was taken, on which camera, and with what settings. Jeffrey's Exif Viewer (regex.info/exif.cgi), for example, allows you to quickly see the EXIF data on any web-based image. That information can also be used when speaking to the person who claims to have taken the image, to check if they can tell you what time it was taken, for example (although remember that EXIF data can be faked too).

Some news organisations—such as the BBC, in its UGC (user-generated content) hub—have systems that look for Photoshop modification (not necessarily a sign of hoax—a user could simply have cropped or lightened an image). JpegSnoop will provide more details on images, and other tools to help you check images include Forensically (29a.ch/photo-forensics) and Ghiro (getghiro.org). Error Level Analysis is another useful tool to detect possible alteration, although it's not perfect. New tools are being created all the time, so search for image verification tools to find others.

Closer look: What to do when you get it wrong: Correcting errors

If you do post a liveblog update that later proves to be wrong, what do you do? Should you delete it and risk looking like you're trying to pretend it never happened? Or should you try somehow to correct it while risking the original update still being shared?

Some platforms—such as Facebook—allow you to edit posts, but with Twitter, there's no clear consensus on best practice. There are, however, some broad guidelines identified by Nathan Gibbs (2011):

- Capture the error: take a screenshot
- Publicly acknowledge the error
- Reference the error in the correction
- Notify those who shared the error
- Repeat the correction

When it comes to liveblogs and articles, a report from the New America Foundation recommends corrections are made as early as possible:

> In particular, media outlets should correct online versions of their stories directly (with appropriate disclosures of how they were changed) rather than posting corrections at the end (which are likely to be ineffective).
>
> (Gahran 2012)

Summary

Liveblogging and mobile reporting have become central to the online output of the majority of news organisations: reporters are expected to be able to report from the scene of major news events using social media and multimedia. Even broadcast reporters used to travelling with camera operators and other technical support are expected to file images and updates from the scene while they wait for their colleagues to arrive (and often after the film crew leaves, too).

These updates from reporters—and from others at the scene, whether witnesses, participants, or the authorities—are regularly incorporated into liveblogs: a format that has proved to be one of the most engaging in modern journalism. But liveblogs can also be flexible enough to be used to cover "softer" stories such as a shared TV experience.

The liveblog demands a wide range of skills from the journalist: in hard news, you need to be able to report quickly and accurately; to chase the truth behind claims and verify rumours, images, and video. You will need to be able to adapt to the best medium for the story, whether that is a simple text report or multimedia, and prepare thoroughly so you know what to expect and how to fill the quiet periods.

In softer liveblogs, you'll need to be just as well prepared. You'll need to be able to entertain with a quick wit and a sharp eye for detail, but you'll also need to be an impeccable host, bringing users into the experience and highlighting their most interesting or amusing contributions.

As sports reporter Dan Lucas says: "To write about it in a format that allows the journalist such unprecedented scope to apply their own personality to the reportage is hard work but fun too" (McEnnis 2015).

At their best, liveblogs represent a rare fulfilment of one of the central promises of online journalism: the ability to connect individuals, to provide a shared experience that helps debunk myths and enlighten individuals, while also offering a platform for a variety of voices to reach the truth about news events.

Activities

1. Find a forthcoming event such as a protest, meetup, or conference (use the resources outlined in this chapter). Make a plan for how you would cover that event: this should cover what research you can do ahead of the event; what kit you might need; what your role should focus on; and what might be the beginning, middle, and end of your live coverage.
2. Come up with ten ideas for a liveblog. Try to apply them to different subjects—not just live events but other feature ideas outlined in this chapter like "a day in the life" or an anniversary.
3. Pick a major public event and look for three different examples of live coverage in different publications using the liveblog format. How do they differ and why? How are the liveblogs structured in terms of beginning, middle, and end? How do they incorporate user-generated content (UGC)?
4. Produce a liveblog yourself using one of the tools outlined in this chapter—or one that you have found yourself. Try to create a mix of text, images, and multimedia. Look for opportunities to highlight (curate) relevant content by others if possible. Review the results and identify areas where you can improve. For example, did you update frequently enough? Did you describe what was happening in detail or quote people?
5. Monitor social media during a TV debate such as Question Time (hashtags like #BBCQT are useful), or during a breaking news event or protest, and look for opportunities to factcheck claims that are being made by viewers. Use the techniques outlined in this chapter.

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Online resources

First Draft News focuses specifically on live reporting and has a number of resources around verification: https://firstdraftnews.com/resources/

Forensically (image verification tool): https://29a.ch/photo-forensics/

Richard Lackey's YouTube channel: youtube.com/channel/UCtBBof9h6CoSgF7EHXDKPnw

Glen Mulcahy's Mobile and Video Technology Blog: https://tvvj.wordpress.com/

Google Image Search—click on the camera icon to upload an image and search for it elsewhere on the web: https://images.google.com/

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8 Online audio

Chapter objectives

This chapter will cover:

- How online audio is different to radio journalism formats
- Different audio formats used online
- The basics of audio production
- Useful kit to record audio for the web
- Generating ideas for audio stories and podcasts
- Considerations in live audio streaming
- Podcast ideas and considerations
- Getting audio on social media with audiograms
- Social audio platforms and planning
- Creating audio for Alexa and smart speakers
- Publishing and optimising audio for the web

Introduction

If you want to stand out in a competitive online environment for news, audio is one of the best ways to do it. While countless text updates are published every day, and there are multiple apps where you can scroll through unlimited video clips, audio is a medium that forces you to stop and listen.

It is a medium responsible for some of the first truly web-native formats: in 2005, *podcast* was declared word of the year by the New Oxford American Dictionary, as publishers raced to create content in this new genre, and in the same year, Soundslides was launched, a tool dedicated to the creation of another new format: the *audio slideshow*. Then in the following decade, as media consumption moved from desktop to mobile, audio producers looked for new formats to make it easier to share and listen to their content on social media—and invented the *audiogram*: an audio clip converted into video by adding a waveform and image. The invention of connected speakers was accompanied by the creation of the *voice skill*—essentially an app or bot that plays audio when it is activated by a voice. And as tech companies looked for gaps in the app market, we saw the birth of *social audio* platforms such as Clubhouse and Twitter Spaces.

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As well as new genres, old audio formats have found a place online too: broadcasting live audio is easier than ever thanks to mobile connectivity and audio livestreaming apps like Spreaker; dedicated audio platforms such as SoundCloud have made it possible to publish news broadcasts and interviews online. There are now dozens of apps for recording and editing interviews and other journalistic material—and artificial intelligence is playing a key role in speeding up the transcription and editing process.

Perhaps the most significant event in the development of online audio has been the podcast *Serial*. Launched in 2014 by the creators of the well-known radio program *This American Life*, *Serial* was a podcast series about the murder of an 18-year-old student 15 years earlier. When it became the fastest podcast to reach five million downloads and streams on iTunes, topping the charts in four different countries, it changed everything. Suddenly, a decade after its first flush of fame, podcasting was fashionable again.

By 2016, attention turned to other forms of audio content as publishers looked to new technologies and apps. “Podcasts as we know them are just one style of audio”, the New York Times said when it announced the creation of a new audio team that year. “We plan to experiment with other forms of on-demand audio, including short-form, newsier offerings, and with new platforms like [Amazon’s] Alexa and Google Home” (Henig and Tobin 2016).

It would take four years, and a worldwide pandemic, for audio’s “killer app” to emerge: in 2020, Clubhouse was launched, allowing users to create and join “rooms” and host live conversations, interviews, and discussions. Despite being initially invite-only, the app was downloaded 12 million times in six months, as users looked for a new way to connect during lockdowns.

This incredible growth led to an explosion in copycat social audio platforms: Twitter launched its rival to Clubhouse—Twitter Spaces—in 2021. In the same year, Reddit launched Reddit Talk, Spotify launched Greenroom (later renamed Spotify Live), Discord added “Stage Channels”, Slack created “Huddles”, and Facebook launched Live Audio Rooms (later moved into Facebook Live). It was clear that social audio was here to stay—even if Clubhouse might not be.

How is online audio different to radio?

There are two key differences to bear in mind when comparing radio with audio online. The first lies in the devices we use to *consume* audio online: while radio is often a “background” experience, playing as we cook a meal, or work, online audio is a much more “lean-forwards” experience: audio clips in news articles and audio slideshows must be clicked on and listened to: research by RAJAR noted that most podcast listeners preferred to listen while commuting or travelling, or while relaxing or doing nothing, whereas radio listeners tended to listen while studying or doing chores (RAJAR 2015). Podcasts in particular are also typically listened to through headphones on a mobile phone (Vogt 2016).

This may change—particularly with the rise of connected cars and speakers—but the culture of online audio has been shaped by those early experiences: good audio must take into account the contexts in which it is consumed.

A second difference lies in the way that we *produce* audio. Unlike radio, there is no need for your audio to fill a particular amount of time: content is as long as it merits. If you are producing regular audio, you might consider a podcast, but even then, the length does not have to be the same each week. And outside of podcasting, audio is very likely to be *irregular*, following the demands of the stories that you cover, and also benefitting from an aural element or treatment.

Different audio formats online

There are a number of types of audio you might consider using as an online journalist:

- Raw audio, to illustrate a story, such as the noise of a protest
- Audio clips, such as the answer to one question or a classic guitar lick
- Full audio, such as an interview
- Audiograms: audio-driven video clips for social media, typically clips taken from longer packages and edited to give a taster
- Audio programming, i.e. podcasts, which might have a particular format and multiple elements
- Audio slideshows, combining a gallery of images with audio such as an interview
- Livestreaming audio
- "Social" audio, where users can talk and ask questions live on platforms such as Twitter Spaces and Clubhouse

Of course, these distinctions are not entirely strict: podcasts can be illustrated visually like an audio slideshow; a story might embed an audio clip that is so long that it is difficult to distinguish from a podcast. But broadly speaking, these categories are useful in thinking about the type of audio you want to produce.

Audio basics

Whatever type of audio you are recording, some key principles apply: you need to make sure that the speaker can be heard above any background noise; that sound levels are good and consistent; and if possible, use a microphone.

Recording tools

Audio can be recorded directly onto a computer or laptop, in a studio, or on a mobile phone or tablet using a digital Dictaphone, or audio recorders such as a Marantz, Edirol, or Zoom. All of these have strengths and weaknesses: mobile devices allow for quick publishing when your audio is time-sensitive; studios make for a controlled and "clean sounding" environment, but often require booking in advance and require more technical tuition. Dictaphones are convenient but audio recorders provide more control over things like levels and audio inputs.

Mobile apps for audio recording that allow you to record and edit audio (sometimes with multiple tracks or effects) include Ferrite, TwistedWave Recorder, bossjock jr, and AudioCopy. Some apps, such as Anchor, include a publishing option.

Checking sound levels

Good audio needs to be "just right": loud and clear enough to understand what is being said or what is happening. The two extremes to avoid are:

- Audio that is too *quiet*, meaning the listener struggles to hear
- Audio that is too *loud*, so that it becomes distorted and uncomfortable to listen to

Normally these extremes are avoided by checking the *levels* of the sound coming into your audio recording device or software. On an audio recording device like a Tascam, Marantz, or Edirol, there is normally a screen that displays those levels, as a series of bars that move as the sound comes in. You will see similar level indicators on audio apps like Spreaker and Ferrite.

It is a good idea to *test your levels* before recording—getting your interviewee to speak into the recording device and checking where those bars go. If the bars "peak", hitting the line at the top of the levels or triggering a red light on the levels indicator, then it is too loud and you need to move the device further away. But if they remain very low throughout, then you need to move closer.

You can take levels before you start recording, with recording paused, or during an initial few seconds of recording that you edit out later. Sometimes you can amplify audio a little during editing, if it is a little quieter than you would like, but distorted loud audio is harder to fix (Figures 8.1–8.3).

What microphone do I need?

There are three main types of external microphone that you might use in recording audio: handheld mics, lavalier (or lapel) mics, and shotgun (or boom) microphones. Lavalier mics are often used for video because they don't get in the way of the shot, but this isn't an issue when you are just recording audio. A handheld mic gives you more flexibility, allowing you to record more quickly, and to record your own questions alongside the responses.

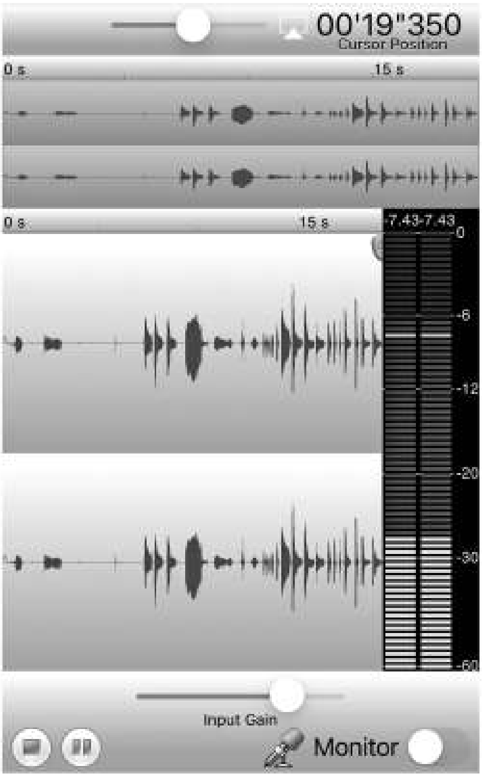

Figure 8.1 The TwistedWave Recorder app shows you the levels on the right—anything going into the red levels is too loud

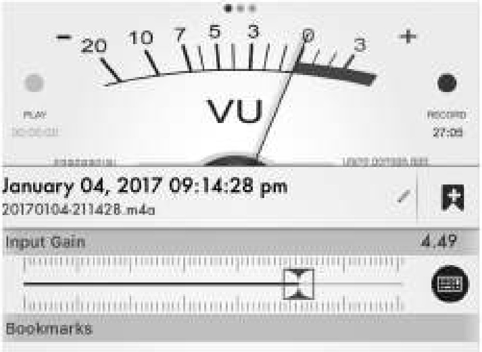

Figure 8.2 Voice Recorder Pro uses a traditional levels meter to show you when sound is too loud (in the red) or too quiet

Figure 8.3 The levels on Spreaker's audio recording app are harder to spot—you can find the meter in the bottom right corner

A shotgun microphone is normally used for recording "wild track" (the sound of the surrounding environment).

Different microphones also record in different directions—what is called *directionality*:

- A *unidirectional* or *cardioid* microphone records in one direction (and a little to the sides). This is useful for recording a speaker without capturing other sounds in the room.
- An *omnidirectional* microphone records in all directions, which makes it useful for capturing atmosphere.
- A *bidirectional* microphone records in two directions: forwards and backwards. That might allow you to record a conversation, for example.

Recording devices like Tascam, Zoom, or Edirol have built-in microphones and often provide the ability to change the directionality of those microphones based on the situation. You can also usually plug in multiple external microphones.

It is likely that at some point you will need to use your phone to capture audio. There are at least three microphones to consider in this respect:

- The "receiver" or front-facing microphone that you speak into during phone calls.
- The rear microphone, normally next to the rear-facing camera.
- The hands-free microphone attached to the headphones that normally come with the phone. This is not as good as the built-in mic, but it does have the flexibility of being able to put it in someone's lapel or move it between speakers. In very noisy environments, you can also place it right next to the mouth.

It is important to know where the microphones are placed so you don't make the mistake of covering the microphone with your finger when recording. Phone microphones are directional, but also designed to adjust to the sound that they pick up, so make sure that they are pointing in the right direction and, importantly, nice and close to your subject. If you are further than a few inches away, background noise will interfere with the recording.

In addition to built-in microphones, it is worth investing in an external microphone for your phone. You can get adapters, such as the iRig Pre or PRO, which allow you to use microphones with a three-pin XLR connector, or you can buy microphones with a 3.5 mm lead that can plug directly into a phone or the 3.5 mm adapter that comes with it.

Watch this: BBC's Nicholas Garnett on using mobile audio to report riots safely: https://www.youtube.com/watch?v=YzTqBo7PyWc

Recording in mono or stereo

Some devices provide an option for recording in mono or stereo. Remember that stereo recordings will take up more space and take longer to upload or download. Audio dramas often do make good use of stereo, and podcasts like Radiolab have also used it inventively. However, most situations in journalism don't require stereo recording: voice-based reporting, for example, will be just as good in mono.

Coming up with ideas for online audio

If you are on the scene of a newsworthy event, you should certainly be on the lookout for striking sounds, just as you should be looking to grab images and video for your report. You might also look to grab a few "soundbite" single-question clips from people involved.

Beyond reacting to events, you can also plan ahead for stories that will work well on audio. These include:

- Speech-based events, such as debates, speeches, presentations, lectures, and conferences
- Interviews where the subject is a good speaker, or whose voice is particularly expressive (the voices of younger or older people, for example, tell us much more about the speaker than their words alone)
- Interviews where the non-verbal reaction is likely to be key (for example, a person's hesitation in answering or the way that they stumble over their words or avoid the question)
- Situations involving a range of participants who can contribute a variety of voices to a report
- Stories *about* audio, such as reporting on music and musicians
- Heated discussions that might involve contributors with a range of valuable perspectives and experiences
- Stories where users can participate in the creation of audio, such as community-driven conversations through social audio platforms

On a more regular basis, you might also think about audio programming *formats*, that is, podcasting. See the section on podcasting for more.

Practicalities will always come into play when deciding which ideas to pursue. If audio is not core to the story, then prioritise the elements that are (such as establishing the facts or getting some quotes). You might, for example, interview someone for your story, and then at the end ask if you can record a brief (30–90 second) clip of them explaining some element of the story.

Some ideas will require more time and preparation than others, and it may be that the story does not justify this (or will be old news by the time it is finished). For that reason, you might focus your efforts on audio treatments for stories that are less time-sensitive or require a deeper exploration.

Audio clips

Audio clips are a good way to get started with audio online. Easy to record with a mobile phone, and ideal for embedding in news articles or sharing instantly on social media, the emphasis is on brevity, rawness, and instantaneity rather than studio-quality sound or snappy editing. However, it still needs to be clear, audible, and make sense, and you still need to consider the basics of audio outlined above. Examples of audio clips include:

- The "sound" of a noisy newsworthy event, such as the shouts of a protest, the commotion of a riot, or the cheers as an election result is announced
- An interviewee's answer to a question (any more than one and it will be too long)
- A key part of a speech or panel discussion
- Your own analysis—but keep it brief

An audio clip can be the only thing you record—or it might be something you extract from a longer piece of audio you have recorded. Once recorded and "clipped" (edited), it will need to be uploaded to an audio hosting platform, such as SoundCloud, so that you can embed it in an article.

Depending on where your article is published, you can even make a passage of text into a clickable audio clip using *SoundCite* (soundcite.knightlab.com). The effect is similar to a hyperlink: when you use a phrase like "The noisy crowd", "her unique drumming style", or "his phone call to the police" that can be clicked to play audio of that crowd, drumming, or phone call.

For publishing on social media, Twitter has an audio recording option too (click on the soundwaves button). However, it can't be edited so it may take a few discarded attempts before you create something you can publish. The resulting clip will actually be a playable video with your profile image and a waveform for the audio track. You can create similar video clips for Twitter and other platforms by using one of the various "audiogram" apps and online tools—see the section on Audiograms for more.

Audiograms—making video out of audio

If you have audio from an interview or some other aspect of your story, but no video, don't worry—you can make video content from that, too (this also applies if you've recorded a video clip but only the audio track is actually very good).

"Audiograms" combine a short section of audio with a visual element—it might be a soundwave, an image of the speaker, captions transcribing what they said, or a combination of all three—to create a video clip that can help you reach audiences on social media.

Delaney Simmons, director of social media at WNYC, is a big advocate of the format, saying that engagement for their audiograms on Twitter was eight times higher than those without audiograms. “On Facebook”, he wrote in a blog post, “some of our shows are seeing audiogram reach outperform photos and links by 58% and 83% respectively” (Owen 2016). The organisation was one of the first to create a tool for others to create audiograms, but now there are a number of apps to make them, too, such as Headliner, Canva, and Wavve. Some podcast platforms, such as Anchor and Buzzsprout, include audiogram-creation functionality, and Twitter Spaces includes a “clipping” feature too.

Audiograms work best for “soundbite” clips from interviews where the person is saying the most important thing you recorded. “We think shorter, more snackable content is the way to go”, Delaney Simmons, WNYC’s social media director, told NiemanLab (Owen 2016).

But they can also be used for audio clips of key moments in a story—the moment when a winner was announced, for example, or when police clashed with demonstrators. In those cases, you will need the accompanying captions to help listeners understand what they are hearing and why it is important.

Try to establish a visual style for your audiograms so that they are consistent with each other—they should have a consistent colour scheme, use the same font(s), and there should be some branding indicating the publication or programme, too. Check out the galleries on the app’s website (headliner.app/gallery and getaudiogram.com/gallery are just two) for ideas and inspiration.

Consider the text and other elements that surround your audiogram wherever it is embedded: if it sits within a social media update, you can use the text in that update to add further context and links.

There’s a lot of flexibility in the form: within stories they can be used to add an extra dimension the reader can play if they want—but the story should still make sense if they choose not to. Within social media updates, the audiogram might be used more as a “taster” for a linked story or podcast or show. Or if you are reporting live from the scene of a story using your mobile phone, they can be used to turn an audio interview into something more audiovisual. Experiment to get a feel for the different ways you can use the format.

Tips for perfect audio

Sian Grzeszczyk is a correspondent for BBC Radio Coventry and Warwickshire. Here are her tips for creating strong audio:

- Set out with a clear set of objectives—a shopping list—this will make it easier to edit: if you head out without a clear idea of what you want, you'll come back with far too much audio and risk missing the point of the piece
- Strong audio clips featuring good quotes stand out a mile but make a note while conducting interviews to save time before the edit
- Always ask for feedback, whether it's a package or a report
- Take time to listen to how other journalists produce podcasts
- Aim to be original, stay out of your comfort zone
- Don't be afraid of mistakes—just make sure you learn from them

Watch this: Smartphone journalism: Audio: https://www.youtube.com/watch?v=QmTHmjYNLf4

Live audio streaming

Livestreaming audio works well for events where you are expecting a lot of speech, but very few interesting visuals (otherwise you might choose live video). You will need to make sure that you have the bandwidth to support a livestream: ideally, you should have access to wi-fi and be confident that the wi-fi signal is not going to get swamped by other users.

There is a range of livestreaming audio apps including Spreaker, Mixlr, and Boxcast. Most have a time limit on free accounts, but users can pay more to get extra or unlimited time and other features. You should also consider what happens to the audio after the livestream has finished: can you download it and edit parts to use elsewhere?

When planning a livestream, contact the organisers and speakers in advance if possible to let them know that you will be livestreaming it. If you cannot do that, arrive early and ask them before it begins. If it's a public meeting, such as a council meeting or scrutiny committee, you shouldn't have to ask permission, but it is polite to inform people what you are doing, and a good excuse to make contacts. For more private events, you may have to check that participants are happy to be recorded. Court cases often cannot be recorded.

If you are livestreaming something that involves speech, you need to make sure that you are as close as possible to the person or people speaking. Arrive early and get in the best position for this. You might need more than one microphone and some way to position them properly if the people you are recording are in different positions.

The two key parts of any live audio stream are the introduction and the ending. Make sure that you introduce the livestream right at the start, establishing where you are and what's going to happen. You also need to think in advance about how you might end the stream—particularly if your livestreaming account has a time limit.

While the event is taking place you may need to monitor comments on the live feed or on social media in case listeners experience problems or ask questions. You should also make notes about the times when key moments occur so that you can grab those clips later and either insert them into a text article or edit them together into an audio package.

When the livestream has finished, make sure you point listeners towards other coverage and any later reports that you intend to publish.

Social audio

A great way to get started with online audio is to create a social audio event or conversation on Twitter Spaces, Discord, or the audio options on other social platforms. Twitter's article on "How newsrooms are using Spaces" (Twitter Media 2021) identifies a range of formats that are useful to consider—and which can be used on other platforms too:

- Interviews
- Ask me anything (AMAs)
- Pre- or post-podcast or story discussion
- Dispatches from the field
- Q&A
- Weekly shows
- Games or trivia

Some of these can be done when reporting an existing story: for example, if you are on location for a story, you might consider a "dispatches from the field", posting audio updates in addition to or instead of the usual text updates. Or an "Ask Me Anything" or Q&A inviting users to ask you about a story you have been covering for some time or in some depth (and therefore have some expertise in).

Others can be incorporated into editorial planning: if you already publish a podcast or YouTube show, for example, you might consider scheduling a conversation on social audio to "tease" it with a discussion between the editorial team or contributors—or continue a conversation straight after the show goes out to pick up some of the discussion points that it threw up. You can use social audio to host a launch event for a new show, scoop, or series.

Major stories that involve multiple reporters can also work well as the basis for a social conversation: Twitter Media gives the example of HuffPost hosting a conversation with Mississippi Today reporters to discuss water relief efforts in Jackson, Mississippi, after a major storm. Elections and major sporting or musical events are other examples of stories involving multiple reporters from different outlets that might suit this format.

If you have a remote interview planned with someone, why not ask if you can do it on a social audio platform instead? The results will still be recorded—allowing you to write up the story you were planning—but you will also have built an audience for that story, who can contribute their own questions. You can choose to either open the conversations to questions at the end or make the whole thing a Q&A format—but remember that you'll need your own questions prepared if the audience isn't forthcoming with their own (or they're not very good).

And instead of previewing a major event, why not schedule a live social audio discussion—and live tweet that instead? The Los Angeles Times' entertainment team used the upcoming Oscars as a reason to host a conversation on Clubhouse with reporters and guests from the entertainment industry. After the awards, the team repeated the strategy with a social media discussion analysing the results.

Social audio might inspire you to do something you wouldn't otherwise do: the format is a good excuse to bring expert interviewees together into the same virtual space for a panel interview or discussion. You might make this into a regular show or design some other regular format in the same way as you would a podcast (see the section on podcasts for more suggestions). Indeed, social audio platforms can be a good place to try out podcast ideas first.

The format doesn't have to be serious or complicated: USA Today and Insider host trivia games on Twitter Spaces about the week's news, while Mike Butcher, host of TechCrunch's Tech Media Show on Clubhouse, described it a "bit of a knock-about chat … I felt like if I dialled up some mates in the tech-media sector we could have a bit of a giggle with it" (Turvill 2021).

Decide who gets to speak — and rehearse if you can

You can change the settings in a social audio conversation so that only specific people can talk or everyone can. Decide which people you'll be allowing to talk and when (for example, you might invite specific audience members to speak at certain points). Then rehearse the conversation using the tool so you're confident in using the tools to switch each contributor on or off.

Some platforms have moderator roles as well as speakers and listeners—decide if you want to use these roles too.

You don't have to rehearse with guests—just ask some colleagues or friends to spare some time to rehearse with you (they'll benefit too). Then later on you can direct the guests with confidence. Don't worry too much about things going wrong in the real thing—if you tell everyone this is an experiment and things might go wrong, you'll be surprised how forgiving your audience will be!

You should also make sure that captions are turned on if the platform supports these (Twitter Spaces does). This ensures that your conversation is accessible and inclusive for deaf users and people with hearing loss.

Don't forget that once the conversation has ended—that's not the end of the story! Chances are you'll have some great content recorded that you can now make into another story for a different audience. It might be simply "5 things we learned during [the name of your event]", or it could be an interview feature based on the interview that took place or a news story based on the most newsworthy thing that was said by someone. Twitter Spaces allows "clipping" audio to create audiograms, too, which can work well on social video platforms such as Instagram.

Catalunya Radio on Twitter Spaces

Twitter's Spaces feature allows journalists to build a close connection with their audiences while expanding stories coverage. Catalunya Ràdio's Carla Pedret shares her tips for using the platform.

Our first Space was a conversation about the invasion of Ukraine. Manel Alías, our Moscow correspondent, and Albert Mercadé, our special correspondent to Ukraine, were coming back home—so it was a great opportunity to share some insights and personal experiences beyond the daily headlines.

The first questions that anyone should ask before trying the platform are the same as with any new tool:

- What kind of users has the platform? Are they an audience we want to connect with?
- How is the feature going to help us get closer to our goals?
- Have other media outlets used the tool? How? What were the results?
- Does the tool need to be updated frequently? How does it fit into the newsroom's workflow?

Twitter Spaces is useful if you're looking to promote exclusive content or special coverage, build a new relationship with your audience, listen to their questions, or find new sources and ideas for stories.

The experience of using Spaces exceeded our expectations—not just for the number of users connected and the questions raised, but also because our journalists were so engaged in the conversation that they didn't want to stop.

The strength of the feature is that it allows a close connection with the audience, which enhances engagement. "The power of Spaces is really in the audience", says Matt Adams, Engagement Editor at NPR. "Seeing what they have to say, what questions they have, their thoughts and opinions, they become part of the story in a way" (Twitter Create 2021).

I also wonder if part of its success is also the fear of missing out (FOMO) effect: users enter a room to listen to an "exclusive conversation" that might not be recorded or—if it is recorded—might not be accessible for a long time on the platform.

Twitter Spaces functionality is organised around several roles: hosts, co-hosts, speakers, and listeners. The Twitter profile that opens the Space is automatically one of the hosts. I recommend having a second one in case the main host has any technical problems.

All users that connect with a Space start as listeners, guests included. Hosts can also make specific users in the Space into a speaker. It's convenient if the guests enter the Space first because it will be easier and faster for the hosts to change their status to speakers.

The mechanism is the same when a listener requests to ask a question: the host should change the status from listener to speaker. Think about it just as opening and closing the microphones. Once the listener-speaker has raised their questions, the host can change their status back to listener, freeing up one of the speaker's positions.

Twitter Spaces lets ten speakers interact at the same time, so it's important not to have ten guests because you want listeners to join the conversation.

One of the advantages of Twitter Spaces is that there is no time limit. In our case, we gave our journalists the freedom to talk for as long as they wished. We had planned the conversation to take around 45 minutes, but our journalists and the audience were so engaged that it lasted 90 minutes.

Although there are no time constraints, bear in mind that you need to allow time for users to discover the Space and join it, which means it can't be too short. According to our research, the minimum time recommended would be around 30 minutes.

One of the advantages of Twitter Spaces is that you can reuse the conversation to produce additional content. NPR has used audio from Twitter Spaces to produce podcast episodes and as a source for new stories, according to the broadcaster's Engagement Editor Matt Adams. He also says the tool can be used to get feedback, similar to how surveys have been used to understand online communities:

"To me, social audio is an in-real-time survey where we can gain feedback and hopefully reach new audience members" (Scire 2022).

Twitter Spaces is easy to use but, as with any new feature, you have to understand how it works. At Catalunya Radio, before any Space, we do a test and invite the speakers to try the tool and get familiar with it.

This proved to be key. In our first Space, some of the guests didn't allow the Twitter App to connect with their phone's microphone, which is essential to use the feature. Imagine if that happens when you are live and your guests can't talk!

You can either open a Space and go live or schedule it. Scheduling has the advantage that you can promote the event beforehand by sharing the link. And users can set a reminder if they are interested.

Once the conversation is going, you can increase attendance by tweeting out quotes or letting users know about the topic discussed or who is involved.

My newsroom was very pleased with the experience, and we have included Twitter Spaces as part of our digital strategy. There aren't many opportunities in a newsroom's workflow to receive feedback and have "real" contact with our audiences, so it was energising to find out what they think and wonder about.

As the proportion of news consumers avoiding news grows, listening to our audience's questions and needs might be a clue to reversing the trend.

Podcasting

In its early days, podcasting was, like blogging, a way for anyone to connect with an audience online. As a result, many early podcasts consisted either of one person speaking directly to the listener or two people discussing an issue of the day.

As it has grown and developed, however, podcasting has become a much more polished medium, with more variety in the formats that are used, and increasing sophistication in editing. Many newspaper podcasts combine analysis with interviews, discussions, and short "packages", while well-known podcasts like Radiolab and 99% Invisible weave together multiple audio elements into compelling stories. And it's become a pathway into the wider news industry: National Public Radio's chief operating officer has described podcasts as "a way for us to bring new talents and new voices into public radio" (Doctor 2016). Although there is no one way to make a podcast, there are plenty of examples of good practice and sources of inspiration for the aspiring podcaster.

Podcast ideas and planning

A podcast can be about anything at all. It can be an interview, discussion, guide, expert advice, or just a way to blog out loud. It can be pegged to a news piece or something timeless.

The best way to get ideas is to think about what your target audience would like and the stories and issues that interest them. Try out ideas on friends and family—and ask users to send you comments and feedback. And make sure you listen to lots of podcasts from a range of sources with a critical ear before setting out to create one (see the list below).

Play to your strengths and to the interests of your potential listeners and yourself. For example:

- Do you have access to events that might provide lots of useful audio?
- Do you have practical expertise you could share?
- Can you research a subject in depth and access interesting interviews?
- Do you and another presenter have the sort of chemistry that could engage listeners and bring subjects to life? (This takes work and persistence)
- Do you have an idea for a distinctive format that could work across multiple episodes?
- Are you looking at a deep and rich story that could be spread across many episodes?

One of the most common mistakes made by new podcasters is to assume two friends chatting is enough to make a good podcast. But what might be an interesting conversation for you isn't necessarily the most interesting—or useful—content for someone else. To make your podcast stand apart, it needs to have unique content, that is, hard work on research. One of the easiest ways to make your podcast stand out is to have guests who have already done that research: experts and academics, people with interesting experiences or skills, and those in senior positions at organisations who make decisions that affect others. Having these guests also increases the reach of your podcast to people who want to hear from that particular person.

Closer look: Five podcasts to listen to for inspiration

- Serial (serialpodcast.org): the seminal series that gave podcasting a new lease of life: make sure you explore the material on the website, too: it's not just about the audio.
- This American Life (thisamericanlife.org): a long-running radio series that has become one of the best-loved and most influential podcasts around.
- Radiolab (radiolab.org): This American Life host Ira Glass once said Radiolab had created "the rarest thing you can create in any medium: a new aesthetic" (Glass 2011).
- 99% Invisible (99percentinvisible.org): award-winning show on design and architecture created by Roman Mars, it often works with radio stations.
- IRE Radio Podcast (ire.org/podcast): Investigative Reporters and Editors is an organisation dedicated to improving investigative reporting. This simple podcast tells the story behind individual investigations and is a useful listen for anyone interested in the field. It also shows how you can make podcasts out of "behind-the-scenes" insights.

How long does a podcast have to be?

There is no set length for a podcast: they can vary in length from a few minutes to over an hour, and typical lengths have changed over time: studies of podcasts listed on iTunes show that the average length increased from 25 minutes in 2007 to around 40 minutes in 2015 (Morgan 2015), before shortening again in recent years to around 36 minutes (Misener 2019). But that average may be skewed by the number of amateur producers who fail to edit their content down: games, film, and music podcasts—those most likely to be produced by fans—averaged closer to an hour while the shortest categories, averaging around 15–20 minutes, were in the business category, which are more likely to be produced by professional podcasters.

Longer is not necessarily better: research based on data from the podcast app Stitcher suggested the average podcast listener only stayed connected for 22 minutes (Beard 2014). And there are many advantages to shorter podcasts, not least the fact that you can produce more of them and therefore publish more regularly.

The key question is not how long a podcast should be, but how long *your* podcast *needs* to be, for *your audience*: Dan Misener, head of audience development at audio company Pacific Content, says most of the podcast episodes they produce are between 25 and 30 minutes, partly because of average commute times. Equally, if you have a variety of elements, it may need more time; and a compelling and complex story might justify a longer treatment (or, better, multiple episodes). Simple subjects may not need long at all—and when starting out, it's best to keep it simple to begin with and build from there.

Once you have come up with an idea, ask yourself:

- What does the listener get out of this?
- Who would subscribe to this?
- What is "aural" about the subject?
- How much variety of "voices" is there to keep people interested?
- Could you produce content regularly?

- How much editing time might be needed?
- What preparation and research are needed?

Once you are satisfied with the answers to these questions, you need to think about practicalities such as equipment and the environment you will be recording in. Clearly, having a reliable environment like a studio is useful, but not everyone has that access and it's not always practical to record in that way. Recording "in the field" often results in more interesting and livelier sound, so don't be afraid to get out there—but you will have to allow time for editing after.

Always test your equipment before going out in the field and just before you start to record. Make sure you have pressed the "on" button to record—it might sound obvious but when under pressure this is the most common mistake.

Those without the luxury of a studio need to make sure recording is done in a designated, quiet area. Out and about, environmental noise such as the sound of traffic or wind can hamper the quality of audio so be selective about the type of microphones you use and the location. Remember to always carry a notepad and pen—note names, places, spellings, and "killer quotes" that you might want to use as a taster audio clip.

Interviews

Podcasts can have a relaxed, accessible style, but when it comes to interviews, the journalistic rules of good research and accurate, fair questioning apply. It is not necessary or advisable to give an interviewee a list of questions (the result will be stilted and sound rehearsed) but you can give them a general idea of topics to be covered. If they are particularly nervous about being recorded, you might give them a quick trial run for the first question. Be clear about the narrative of your story and the order of your questions while following up on answers that beg further investigation.

When recording an interview:

- Keep control of the microphone
- Don't rustle papers
- Keep eye contact with your interview subject
- Keep questions short—try not to ask "closed" questions that will elicit "yes" or "no" answers
- If they get tongue-tied or make a mistake, record that segment again
- If you want to keep out of the interview don't interrupt, mumble, sigh, laugh out loud, or say "ok" or "mmmmm, I see". These can be edited out, but it makes the process more time consuming.

Discussions

Discussions are regularly used in podcasts: they provide an opportunity to hear from a range of voices, gain some useful insights and information, and with the right mix of contributors can be insightful, heated, or entertaining.

Be clear about the rules of engagement when you organise a discussion. You don't want people to agree so much that there is nothing to discuss, but equally, you want to avoid a "zoo radio" effect where participants talk over each other and raise their voices.

Be clear about who is hosting the talk and introducing guests, what subjects will be covered and the general length of answer you expect from guests to prevent them from monopolising the discussion. It is advisable for the host to agree on a signal such as a raised hand to indicate to someone that they need to come to the end of their sentence.

While it is not necessary or advisable to follow a script, it is a good idea to make notes, as well as crafting an introduction, cues to different subjects, and lines that would help to round-up the podcast. Guests might also have their own notes if they think there are key facts or points they need to remember. Always remember the listener and talk to them directly. Ask them to share their reactions and ideas across relevant online platforms: your site, forums, blog, Facebook page, Twitter account, or anywhere else. This should be a two-way process: online feedback could give you ideas for the next podcast. Name those who have contributed responses and seek out and engage with listeners—this will guard against podcasts that sound indulgent and smug.

Quests and journeys

Many of the best podcasts follow a "quest" or "journey" format: in this genre, the presenter is the vehicle for the story, as they set out to get answers to a particular question (there may be interviews and discussions along the way, too). This is the format used by the seminal Serial podcast, for example. In some cases, a single quest forms the basis for an entire series and there are a limited number of episodes; in others, every episode follows a different quest, and the podcast is ongoing, although it might take breaks. You can also use a quest for one part of a podcast—for example, using it to tell one story, while other parts of the podcast are made up of discussion and interview sections.

It's a format that works well for explanatory reporting (finding out how something works or how it is made) as well as investigations—indeed, the format can be a useful fall-back plan if you set out to uncover the truth behind something, but don't actually get to that truth in the end, because the journey itself can be illuminating (for example, if there is a lack of transparency that itself is important to discover) and the story is as much about the places that you record in, the interactions that you have, and the way that people behave when you ask questions, as it is about the actual answers.

The production time for a quest-based podcast can be much longer than other formats, and it can require more resources—so planning is especially important. Many podcasts that use this structure have a number of programmes in production at the same time, each at different stages, so that one is ready to go live while others are still being made. They might also have different teams or reporters working on them (listen to *This American Life* for an example of this type of podcast). Other podcasts will produce all the episodes in advance before releasing the entire series week by week.

More explanatory podcasts in this genre rely on having a consistent format and approach that makes production more efficient. It might be that the quest is re-told between two presenters, or that there are always two expert interviews and one location. You need to keep it simple and predictable enough that you are confident you'll be able to pull together the material in time every week.

Editing your podcast

Before editing your podcast, it is worth reviewing all your audio and checking any notes you made along the way. It is essential you do this first, particularly if you have several audio projects on the go or if you have left a gap between the recording and editing process.

Several software programs are available to journalists. The most popular include Audacity, GarageBand, and Adobe Audition. Audacity is a free software program that is easy to install and good for beginners. It allows you to record directly from your computer—which is a good place to start for those with little experience who want to rehearse basic skills such as recording, deleting, cutting, and moving around audio clips. Audacity is a drag-and-drop program that can import WAV, AIFF, AU, IRCAM, and MP3 files and works with Windows and Mac computers. It also comes with a series of step-by-step tutorials for the novice. GarageBand (for Macs) is for the more experienced podcaster and offers more features such as the ability to add music and special effects. Adobe Audition is aimed at professional audio producers and has additional functionality.

You can also get audio editing apps for mobile phones and tablets such as TwistedWave Recorder, Anchor, and Ferrite—these are limited compared to the computer-based options but useful if you are on the move and need to publish quickly. And look out for tools that incorporate artificial intelligence (AI) to make it easier to edit audio by transcribing speech and then allowing you to edit the audio by deleting words and sentences from the transcript (examples include Descript and Murf), and even automatically balance levels and reduce noise (Podcastle and Auphonic are just two of the tools that do this).

Once you have imported any audio to your computer, keep copies of your audio files in one folder. When you import your files into a program such as Audacity you will get what is called a "timeline", which indicates the sequence of your audio and tracks that contain audio clips. There are many tools to allow you to add, overlap, and fade between clips. When you are starting out it is a good idea to follow a linear narrative: editing, cutting, and pasting your clips in order. You can always leave gaps at the beginning and at the end if you want to add anything such as an introduction, music, or another type of clip: many podcasts, for example, have a "sting" at the start (a brief theme unique to the programme) to establish that the podcast has begun. If you make a complete hash of it start over again—that's why you need to keep a copy in your folder.

If your audio is too quiet, you should be able to amplify it using the audio editing software's effects options. You can also reduce background noise by selecting a sample of the type of noise you want to remove and using the "noise removal" option in the effects menu. But if you have to do this at all, you should, of course, remember to prevent these problems at the recording stage the next time you go out and record.

If you are on the move a lot, or your subject requires you to be, it might be worth trying out some of the mobile-specific podcasting apps. Some of these, such as Anchor, focus on recording and hosting your own podcasts or make it easier for others to join in a discussion to create a collaborative podcast.

When editing, remember to:

- Cut with care—be fair and balanced
- Don't cut the context of a quote
- Select the introductory audio to give meaning to the piece, don't puzzle the listener
- Cut out blips such as coughs, hisses, and interjections from the interviewer, but don't feel you have to cut out everyone
- Don't cut the character of the piece—a pause or a stumble may be telling
- If music is used, make sure it does not intrude on audio or likely to annoy the listener
- Most music is copyrighted in some way—make sure you know what sort of copyright covers the music
- "Sell" your audio online with good headlines and explanatory text

James Cridland's tips on podcasting

James Cridland is the editor of Podnews, a daily podcast newsletter, and a radio futurologist.

What advice would you give to someone thinking of starting a podcast?

Start it. Literally, just that. The biggest mistake I see is from people who spend an incredible amount of time preparing something that they never get around to launching—or, worse, people who plough lots of marketing effort into launching something that frankly isn't good enough.

Instead, start a podcast. Get good at it. Podcast in secret if you like, or just share with a few trusted friends. Know what works and what doesn't. Then shout about it once you know what you're doing.

Audio is a very intimate medium —over 90% of podcast listeners do so alone, which gives a really close relationship. That's rather different to the radio (only 50% listen alone), and, of course, much different to a newspaper or a magazine. Audio is a whole new medium: and should be treated as such.

How has your own podcasting practice developed over the years?

I don't necessarily consider myself a "podcaster" first and foremost (although I've just finished recording episode 1309 of the Podnews podcast). But, as someone who used to be a radio presenter, I'd suggest that the first thing that develops is an understanding of your "on-air" personality and learning microphone technique. It's not quite as easy as chucking it in front of you and hoping it works.

What do journalists need to know (and do) about the distribution side of podcasting?

The first thing is to make sure you're available on all the major podcast platforms (and even some of the minor ones): Podnews carries a list of all the podcast directories you should be on. Then, make sure you promote yourself by linking to your website, not just linking to, say, Apple—there are many people out there who can't use Apple Podcasts!

What advice would you give on using social media as an audio producer?

Throwing bits of audio onto social media and hoping that people are interested is a hiding to nothing; but if you're a podcast about knitting with electrical wire, use social media to find communities who also knit with electrical wire and be a good member of that community.

Be the person people think of when it comes to knitting with electrical wire, and you'll do a great organic job of promoting your podcast and also find some great fellow electric-wire knitting enthusiasts.

As an industry, podcasting offers a new route into journalism. How can people stand out in that job market?

The journalist that can write AND podcast will always have an advantage over the journalist that can just write. Bringing more skills to a job will always lead to more opportunities and more benefits for your employer: and enable you to do more of the things you love doing.

Publishing

Choosing a place to put your podcast is a challenge in itself: there are dozens of places to choose from, from general audio platforms like SoundCloud to dedicated podcast hosts like Libsyn, PodOmatic, and PodBean. Don't be afraid to upload to more than one and focus on the one you feel most comfortable with. Community can be important: if you feel that the audience you are aiming at is more likely to use one platform than another, use that to guide your decision. And as you gain in experience, you may look for additional features that are only available by switching platform.

To publish audio on the web, you need to save it in an audio file format that is supported by the host, most commonly MP3 or WAV. The site's help pages should explain what formats it supports.

The next question is how potential listeners can find and subscribe to your audio online. Podcast subscriptions are based on RSS technology: most podcasts are made available via an RSS feed so listeners can subscribe to it and are alerted to fresh content. Audio hosting services like SoundCloud will provide RSS feeds and services such as PodBean which will give you a feed for your podcast too: check the service's help pages for tips on submitting the feeds to podcast indexes.

Think creatively about the title and description of your podcast—make it short and snappy if it is a regular podcast and remember to use descriptive keywords to help people find your podcast via search engines. You'll need an image to represent it too. You are then ready to submit your feed to podcast directories.

Spotify and Apple Podcasts (formerly iTunes) may be the best-known places to find podcasts, but they are not the only games in town: Google Podcasts is important for Android users, and many podcast fans use dedicated apps to listen to podcasts (called "podcatchers") like Overcast, TuneIn, and Stitcher. Try to submit to more than one. In fact, there are so many podcast directories that there's even a directory of those directories: the website Podcast Places (podcastplaces.com).

Note that many of these directories have certain criteria before they will list your podcast, such as a certain loudness and use of meta tags. Check these when submitting and make sure your podcast satisfies these. Choose any categories carefully—if you feel your podcast might fit into more than one, pick the one that has less competition, as this means you'll be more likely to rank in any charts and pick up extra listeners that way.

Closer look: Voice—Creating audio for Alexa and smart speakers

Amazon's Alexa is the best known and most widely used of a number of voice-driven platforms powering a growing range of smart speakers and virtual personal assistants. Others include Google Assistant, Apple's Siri, and Sonos. Devices with these technologies respond to voice commands by playing audio content—either pre-recorded (such as a news bulletin or song) or automatically generated (such as a Wikipedia entry being read out by an artificial voice).

Adoption of smart speakers has grown quickly: in 2019, one in five owned one in the US and UK—within two years that had increased to 35% of Americans and 39% of British consumers (Edison Research 2022; Department for Culture Media and Sport 2022). At the same time, the *share* of time being spent listening to content through these devices has also increased (from just 1% of time to 5% in the US) while the proportion of people using it at least once a day, and the number of tasks being requested, and the variety of tasks, has also increased. Put simply: more people are using voice commands, more often, for more purposes.

Not all of those use them for consuming journalistic content: 66% of US users used them for news in 2022, and 42% for podcasts (Edison Research 2022). But the growth of the platform has seen many news organisations set up dedicated teams, or part of their broader audio teams, to voice.

The platforms work in the same way as app stores on a mobile phone: publishers can create an app—called a "skill" on Alexa, an "action" on Google Assistant, and "shortcuts" on Siri—which will play a particular audio clip or narrate a certain text script when the user gives specific verbal commands.

A number of publishers have taken the opportunity to create new products for the "voice" market: the BBC has been providing bulletins for all the major platforms since 2016, and CNN launched on Alexa in the same year, but it's not just broadcasters using voice—The Atlantic and the Washington Post are on there too.

The most basic news "skill" on Alexa is the Flash Briefing: when the user asks "Alexa, play my news" it will play news bulletins from whichever news brands they have added. Some will be recordings of the latest broadcast bulletin, but others will be text updates read out by the platform's automated voice—research suggests that these voices are less engaging (Bullard 2019), but it does make production much easier for those who don't have dedicated audio resources. Publishers can set their feed to update at different frequencies, depending on their own rhythm: it might be every hour, day, or week.

Alternatively, you can create a more in-depth app that provides longer updates and more options for listeners: the broadcaster CNBC provides a livestream through its Alexa skill, for example. And NPR Radio offers notifications (the smart speaker's light will blink to indicate an alert) or local news updates. ESPN allows users to ask to "play the news" but also "play the radio" and NBC News's options include "what's trending" and breaking news. Users can also access radio shows through general apps such as Alexa's myTuner skill.

NPR's managing director of personalisation and curation, Tamar Charne, believes that updates created for voice should be different to those made for radio: "It's subtle sometimes but there's a difference between going on the air and giving a report on something and responding to a question", she told Nieman Reports. "Newscasts are a little more presentation, and what we were aiming for is a more genuine answer to a question" (Bullard 2019).

Podcasts can be played relatively easily by users of smart speakers by connecting the account with Spotify, Google Podcasts, or other podcasting platforms—or activating built-in apps such as Alexa's TuneIn skill, but some podcasts have dedicated apps on voice platforms: the BBC Sounds app, for example, allows users to access a range of its programming.

An alternative—or addition—to making broadcast-like content, is to create standalone apps. These are more than just repurposed bulletins and headlines: a cooking magazine might create an app that responds to the command "What shall I cook for dinner tonight?" (as BBC Good Food did) or a history magazine might want an app that responds to "Tell me about Cleopatra" (BBC History Magazine).

If you're trying to come up with an idea for an app on a voice platform, it's useful to think of the following genres illustrated by the examples above:

- *Regular content*: simply taking content you are already producing (audio or text) and making it accessible via an app.
- *Quizzes*: a series of questions on a theme you are known for (it could be news or it could be a specialist area such as fashion or sport).
- *Regular tips* on a theme you are known for (health and fitness works well in this area, as does fashion and beauty).
- "*Branching*" *content* provided in response to a series of questions or options—this is essentially a form of bot (see the chapter on interactivity for more). An example might be asking the user to choose a favourite sports team, then what they want to know (results, fixtures, history, and so on), or answering questions about the type of person they are, and being provided with content that matches their personality.
- *Searchable content* on a topic your publication has expertise in, whether that's historical figures or celebrities or cars.
- *Event-specific content*, such as making it possible to request updates on an election or major sporting event.

Voice platforms have created detailed resources to help publishers create their own apps: Amazon Lex (aws.amazon.com/lex) is a tool for creating bots on Alexa, and Google Developers has a guide for making apps on Google Assistant at developers.google.com/assistant. In addition, there is a range of third-party tools that make it easy to create bots for Alexa, Google, and other platforms, such as Voiceflow (voiceflow.com) and Flow.ai.

Hugh Levinson, head of longform audio

Hugh Levinson is the BBC's head of longform audio. Previously he was head of Radio Current Affairs, and has produced some of the UK's most popular podcasts and also worked for local radio and newspapers.

In our terms, longform audio is audio output which adds value to coverage in daily news sequence programmes (e.g. the Today programme), through techniques like greater depth, background, reportage, exclusive interviews, investigations, and so on.

When approaching a longform audio project, you need to be able to discern whether it will sustain a longer piece of audio than in normal daily news coverage—so asking questions like whether there is sufficient complexity in the story, a human angle, or a way of shaping/formatting the story to make it original.

On top of that there should be a clear idea of what the piece will say, or at least what will make it distinctive: a budget, which will control the amount of time allotted to the project: and an early consideration of how to achieve extra impact, for example, through social media.

You need patience, good organisational, and in particular, self-organisational skills; persuasiveness; analytic skills; and perhaps most importantly, the ability not to follow the herd in covering a story but to find an original approach. Top-level technical skills are pretty important too.

The most common mistakes I see people make include trying to gather the material too quickly—which usually means going to the obvious sources—following what has already been written or covered on a story; and tending to overvalue material gathered early in the production process. In terms of planning, it's easy to undercalculate the amount of time needed post-gathering in terms of writing/mixing/reworking and impact production. And to not spend enough time on the writing element, which can make or break a project.

It's also important not to become fixated on one interpretation of a story—you need to be sufficiently self-questioning.

The industry's approach to audio online has changed dramatically since the advent of podcasts and non-linear listening: listeners have a much greater personal choice. This has led to a welcome change with much greater attention given to tone of voice—so making output that is warm, humane, witty, and inviting—alongside much greater attention to attracting listeners at the start of any output, then retaining them through storytelling devices such as hooks and so on. There has been a much greater emphasis on diversity of all forms in storytelling, plus a move towards having the person involved in the story telling the story themselves, rather than by a conventional journalist.

My advice to anyone who wants to get into online audio production is this: do it. Make stuff. Don't wait to be paid for it. The cost of entry is really low, and if you make good stuff, it will be noticed—and you can point to it when you have interviews. Plus, you will learn a lot more by actually making output than by studying how to make output. I'd also pull every string you can and be fairly relentless in following up on contacts—checking in with them regularly. If you can find a mentor in the industry that can help a lot. I'd also say that it's really competitive, so you have to really want to make a career to succeed. If you are half-hearted about whether it's what you want to do, I'd suggest looking elsewhere.

Six examples of longform audio:

- BBC Radio 4—Intrigue, Tunnel 29 bbc.co.uk/programmes/m0009jkb
- BBC World Service—The Lazarus Heist: bbc.co.uk/programmes/w13xtvg9
- BBC Radio 4—The People Vs J Edgar Hoover: bbc.co.uk/programmes/m00187g6

- Slate—Slow Burn: slate.com/podcasts/slow-burn/s1/watergate
- Serial, Series 3: serialpodcast.org/season-three/about
- APM Reports—In the Dark, Season 2: features.apmreports.org/in-the-dark/season-two/

Optimising your audio

Getting your audio online is not the end of your editorial process. One of the key differences between radio and online audio is that online audio almost always has a *visual* element and a *textual* dimension. Visually your clip, stream, or podcast will be associated with a still—or sometimes moving—image to illustrate it. And textually, you will need to think about the *words* surrounding it: titles and descriptions on audio hosts; accompanying text in social media updates; and transcripts and other content on the page or website that the audio is embedded on.

Most audio hosting services allow you to upload a thumbnail image to accompany your audio, and a well-chosen image can make a big difference to whether users click on your audio or not. Having the face of your interviewee or yourself, for example, can draw listeners in more than a more abstract image, while a well-designed logo can be important in conveying the professionalism and dedication behind your work.

Titles and descriptions are equally important in helping users decide on whether or not to listen to your audio (Athas 2015)—and in helping search engines to understand it (see the chapter on writing for the web for more on search engine optimisation). Paige Ransbury, a copywriter for Spotify's Parcast Studios, says keywords are especially important: "When I'm writing descriptions, I look for strong keywords first", he told the Anchor blog. "That includes specifics like names, places, timely topics, and guests" (Anchor 2022).

Descriptions should be short—so every word needs to count. If you're describing a podcast you should go through a few drafts before you get one that does the job of selling the episode without *telling* the episode. Use links to point to any articles that the audio was created for, any websites or social media accounts with further material, or anything that guests mentioned. Platforms like Spotify publish their own guidelines for podcast descriptions, so spend some time familiarising yourself with those.

Broadly speaking, there are at least three places you need to think about when it comes to publishing and optimising your audio:

- The audio hosting platform (e.g. SoundCloud, Facebook, PodBean)
- Social media and YouTube (where you might share short audio in full or a clip from a longer piece)
- The webpage on which your audio might be embedded (e.g. your news article or feature, or your podcast's dedicated website)

It is worth selecting a "must-listen" clip from your audio (in other words, something that has to be heard rather than watched or read) and publishing that separately in order to promote it on social media and YouTube (see the section on audiograms above). Sometimes the clips don't need to be from the podcast itself: audio that wasn't included for whatever reason can still be used on social media or in related articles.

More broadly, consider how your audio might work on a range of platforms: many podcasters use YouTube as a key platform for extending the reach of their show, for example. Pacific Content's Dan Misener identifies four types of podcast videos on YouTube: those that create audiograms and similar clips using just an audio track (animation is another option here); those that create clips with video footage; those that put the whole episode on the platform without any additional video; and those that film the episode and put it on YouTube (Misener 2022) (Figure 8.4).

Many podcasts will publish a transcript of the show on their website and there's a good reason for this: it makes it much easier for search engines to understand your content and therefore makes your content easier for people to find. It also makes your content more accessible, and easier for people to share quotes if they want to (you might also consider this approach for interviews, publishing a separate linked post devoted to the full transcript). There are many automated transcript tools, such as Trint and Happy Scribe, which can help you do this. If you publish your podcast to YouTube, you can also use the transcript to make sure the automatic captioning is correct.

Summary

Audio has been one of the toughest nuts for publishers to truly "crack". Difficulties in finding and sharing audio and measuring audiences and monetising them plagued the sector for years. But the success of podcasts like *Serial*, improvements in optimisation techniques, and an explosion of new social audio platforms have opened up the potential of the form.

Social audio in particular has been described by industry analyst Jeremiah Owyang as the "Goldilocks" medium:

> Text is not enough, and video is too much; social audio is just right. It represents the opportunity for social connection and empathy without the downsides of video.
>
> (Owyang 2021)

Figure 8.4 Four types of podcast video (Dan Misener/Pacific Content)

The challenge for you as a journalist is spotting the opportunities for telling stories through sound and telling those stories well.

It is important to have a range of options available so that you are ready to respond to those opportunities when they arise. Your mobile devices should have a range of apps for recording, editing, and sharing audio. You should know where the microphones are and have external ones when needed, or audio recorders. Free audio editing software will inevitably come in useful even if you don't intend to use it often.

Sometimes the sound that travels furthest is audio that was made for another purpose. In an article about the difficulty of making audio "go viral", Stan Alcorn notes that calls to the police and hotlines, voicemails, and speeches are often widely shared, describing them as "bits of audio that serve as evidence in a news story" (Alcorn 2014).

Audio does not have to be complicated: making a note to record and share interesting sounds as you go about your reporting can get you started on developing your audio instincts. Recording just one question on audio after every interview can build your confidence—then when you want to challenge yourself further, you can record a full interview on audio and then multiple interviews to edit together.

For most journalists, those are the key audio skills that you need to develop: the ability to illustrate or add to a story where audio does it best. If you aspire to a role as a podcaster or multimedia producer, experiment as you develop a style of your own.

Ultimately, whatever your audio aspirations are, try to listen to a range of audio just as you read widely: it won't just teach you about audio production, but great storytelling too.

Activities

1. Generate ideas for a social audio conversation

- Use the list of formats in the section on social audio to generate ideas for ways you might use an app like Twitter Spaces
- Consider things you can plan for, like events, as well as stories you are already working on and standalone ideas such as someone you could interview or a discussion you could organise
- Identify the ideas that you could do most quickly—and make a plan to do it
- Identify potential guests that you might involve in your conversation—and ask if they'd be willing to take part
- Identify a time that works for anyone involved and should be good for listeners
- Rehearse beforehand so you're confident with the app and assigning roles
- Prepare any background material you may need to refer to—and plan your beginning, middle, and ending
- Review the results afterwards and identify what you want to improve for the next conversation!

2. Record a short audio clip to embed in a story

- Plan an interview-based story
- Tell the interviewee that you'd like to record a brief audio clip at the end of the interview for one of the questions that you can embed in the article, and ask if they're OK to do that

- Look at the list of questions that you've planned and pick one that will stand out on social media. This will depend on the subject of the interview, but their "tip" on something is a good one to fall back on.
- Choose an app to record the clip with, and practise with that app so you're confident in how to record a clip that has good levels and you can edit for social media

3. Optimise audio for the web

- Listen to a long audio piece such as an interview or a podcast—this should be by someone you know so you can get permission to work with it
- Identify a clip from the piece that is a "must-listen": use editing software to pull it out as a standalone piece
- Use an audiogram creation tool to turn that audio clip into something that can be shared as social video (see the section on audiograms for more)
- Upload the audiogram to social media and choose a strong image to illustrate it if the tool allows this
- Consider the text that will go alongside that clip on social media—use the tips in the chapter on writing for social media to write different text for Twitter, Instagram, and other platforms

4. Create a series of short podcast guides to your area

- Research your local area
- Record weekly reports on local attractions, restaurants, bars, and nightlife
- Think about who you might record—do you even need to be in the podcast?
- Think about capturing the atmosphere of featured places and events through different clips of sound
- Keep going—it often takes a few episodes to find your voice, refine your format, and build an audience

5. Create your own podcast format

- Brainstorm ideas for what might make for good, regular audio programming: don't settle for generic or formulaic ideas—what makes it unique, and aural?
- Research your subject and know it well enough to talk confidently and naturally with others—as well as to pick good guests
- Make sure you've got a decent setup: a quiet place to record and a good microphone. Check your levels and get recording!
- Edit the results for a sharp final product
- Keep practising—it takes time to develop real sharpness and good chemistry

Further reading

Abel, Jessica (2015) *Out on the Wire: The Storytelling Secrets of the New Masters of Radio*, Crown.
Herrington, J.D. (2005) *Podcasting Hacks*, O'Reilly.
Hudson, G. and Rowlands, S. (2007) *The Broadcast Journalism Handbook*, Pearson.
Lubetkin, Steve and Papacosta, Donna (2015) *The Business of Podcasting*, CreateSpace.
Mills, J. (2004) *The Broadcast Voice*, Focal Press.
Weldon, Glen (2021) *NPR's Podcast Start Up Guide*.

Online resources

Anchor blog: blog.anchor.fm
Apple Podcasts for Creators: podcasters.apple.com
BBC Editorial Guidelines www.bbc.co.uk/editorialguidelines
Clubhouse Blog: blog.clubhouse.com
Guardian Voice Lab (this experiment ran from 2018–2019 and their experiments are useful reading for anyone making voice apps): theguardian.com/info/series/guardian-voice-lab
Hot Pod: https://www.hotpodnews.com/
On SoundCloud Creator Guide: https://on.soundcloud.com/creator-guide/
Jeremiah Owyang's "Social Audio Landscape" list: web-strategist.com/blog/2021/01/30/the-future-of-social-audio-startups-roadmap-business-models-and-a-forecast
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9 Video for the web and social media

Chapter objectives

This chapter will cover:

- How video online is different to broadcast journalism
- Useful equipment and software for online video
- Different online video formats
- Vertical and square video
- "Tap to advance" social video: creating "Stories" formats
- Short vertical social video formats: TikTok, Reels, and YouTube Shorts
- Drone journalism, virtual reality and 360-degree video
- Ideas for video online
- How to shoot video
- How to edit video
- Captions, audio descriptions, and accessibility
- Live video tips
- Publishing and optimising video for the web

Introduction

Video has become an important medium for publishers in three respects: to compete with influencers and video bloggers; to perform well on social media; and to enable them to charge more for advertising. As a result, journalists are being asked to capture video on a story wherever possible, while a raft of new specialist positions are being created dedicated to producing more video content, and TV news organisations have discovered an appetite for video online that is very different to broadcast television.

Even radio news has become an *audiovisual* medium, with studio interviews regularly livestreamed online, reporters capturing video for social media, and using dedicated apps to create "audiograms" that overlay audio clips on top of a soundwave or image of the speaker. We are all video journalists now.

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In many ways, the last people to catch up with this rush to video are the audience. The proportion of people who "mostly" watch the news is as low as 6% in the UK, and ranges between 12% and 18% in Australia, the US, and Canada (Newman et al. 2022).

In many ways, having video alongside, or instead of, text is becoming as natural as using photographs to illustrate stories. And just as printing technology made it possible to include photographs in newspapers from the mid-19th century, increases in connectivity and bandwidth have made video increasingly part of the news package online.

But just because we *can* use video, doesn't mean we *should*. Knowing when to use video, why you're using it, and how to do it well is what this chapter is all about.

Online video is not TV

December 2010 was an important moment for news video online. At the end of that year, the video platform Brightcove reported that for the first time, *newspapers* were now streaming more minutes of content online on the service than broadcasters (Brightcove 2010). Video, it seemed, did not just mean "TV online".

It would take some years for journalists to start to challenge techniques absorbed over decades of watching broadcast news reporting. But it quickly became clear that online audiences were turned off by broadcast techniques. On the BBC's iPlayer, short news *clips* were getting more traffic than news *programmes*.

Understanding why some broadcast techniques don't work online requires thinking about why those techniques were invented in the first place. Television has no choice in using video, so it has had to invent a number of ways to "make the news visual", from the "presenter behind the desk" to having reporters standing "on the scene" to tell you what they know. These tricks are not needed online: if your story isn't visual, don't use video.

It is also important to understand how people consume news on television and how they consume online news differently. "Online, there is often no need for the reporter as an intermediary", noted Alfred Hermida, "as a user will have already read the story" (Hermida 2010).

John Domokos of The Guardian agrees that online video should not merely repeat TV techniques:

> For a start, you have to imagine how a person in front of a computer is searching for it and looking at it—it might be in a small frame. It's a much more intimate environment. You have to grab their attention very quickly, in a few seconds.

Mobile phone and tablet consumption make it an even more intimate environment, on an even smaller frame—and add different orientation (vertical rather than landscape), too.

For David Dunkley Gyimah, one of the first video journalists in the UK, video journalism signals a revolution, an advance on television news production. His post "Secret history of a media revolution" (Dunkley Gyimah 2015) describes how video journalists of the 1980s and 1990s were the first to use lightweight cameras. Unencumbered by heavy equipment, their template for storytelling was to get as close to the stories as possible, and the people in them.

Then, in 2007, the first iPhone was launched. With the launch of the Nokia N95 in the same year (which was issued to journalists by newspaper groups such as Trinity Mirror), this would extend video production opportunities to journalists and citizens around the world. And when DSLR cameras began to include video recording capabilities in 2008, it made it easier for photographers to start producing video too. As a result, the influence of photography and photojournalism is perhaps as significant as that of TV (Hedley 2012).

A third thread is what Dunkley Gyimah calls "cinema journalism": video that borrows techniques from cinema, and cinema verite in particular, rather than broadcast (Dunkley 2016): in a video explaining the concept online, video pioneer Travis Fox is quoted as being influenced by the French director Tony Gatlif (see below).

> **Watch this:** David Dunkley Gyimah talks about "cinema journalism": https://www.youtube.com/watch?v=DqVpdyR_7Z4

Different publications make different decisions on which approach to adopt. Some prefer newsier angles focused on events, people, and sport, using solo video journalism techniques: coverage of local charity runs, farm shows, interviews with footballers, store openings, and CCTV camera footage. Others lean more towards a mix of video journalism, photojournalism, and cinema journalism. And still others will eschew natural audio altogether in favour of running a music soundtrack underneath footage and a story told through captions.

The journalist can sometimes be the focal point in video blogs—as long as they have something interesting to say and a visual kicker. For example, reporters on the scene of news events might do a "piece to camera" (PTC) taking the viewer through the scene; and journalists at technology magazines might regularly publish video reviews of gadgets they are testing. The magazine industry in particular has taken strongly to video, with many publishers having their own TV studios and numerous magazines posting video to branded video "channels" on their own sites, YouTube, and social media platforms.

But perhaps the biggest shift in the move from broadcast to online video has been the rise of vertical and square video.

Vertical and square video

One of the biggest factors in the shift to vertical video has been Snapchat. Snapchat was vertical-only from the start, and in 2015, it announced the numbers to back that up when it told advertisers that vertical ads on the platform were viewed to the end nine times more frequently than horizontal ones. That same year live (and mostly vertical) video apps Meerkat and Periscope also launched (see the section on live video) while YouTube updated its mobile apps to play vertical video too. Facebook followed the next year when it found that people watched for longer and with the sound turned on when presented vertically in feeds (Peterson 2016).

By 2016, vertical video was accounting for 29% of video viewing time (Newman 2016). The BBC was piloting vertical video on Snapchat and in the BBC News mobile app, in a round-up of the latest stories.

Choosing to film in vertical or square format will ultimately come down to the platform you intend to publish on, and the subject you are covering. The market for vertical video has expanded considerably now that Facebook, Instagram, and Pinterest all have their own "Stories" formats—and if your story is intended to be solely for one of those, or TikTok, then it makes sense to work in vertical. Outside of those platforms, however, most video journalism is still filmed in horizontal ratio (with video clips often being re-edited into different formats for social media distribution) so think ahead in terms of what platforms you might need to publish on.

If you do have to re-edit into a different format, or edit vertical video, there are a growing range of apps that cater to this need (some of which have different social media platforms' ratios built-in) including Vochi, InShot, Quik, and Adobe Spark Post. Look around for "story apps", too, which make it easier to create tap-to-advance stories for Instagram, Snapchat, and other platforms (Unfold and Lift are just two examples).

The best way to make an informed decision is to consume as wide a variety of video as possible. Make sure you are following journalists and media organisations on new platforms to see what conventions are being followed—and invented.

Tap to advance: Creating a vertical video "Story"

Snapchat's influence on online video goes beyond its adoption of vertical filming: its launch of the Stories format in 2013 was one of the most significant developments in mobile video. Before this point, most content on the web was navigated vertically by scrolling down a story (with some notable exceptions, such as the app Flipboard); the innovation of Stories was to create a format that was navigated *horizontally*, and not through scrolling—but by tapping or swiping.

In the years since then, a raft of platforms have announced new features adopting the same "tap to advance" approach, from Twitter's Moments feature in 2015 to Instagram Stories in 2016, then Facebook Stories, Instagram's Carousel, WhatsApp's Status, and Medium's Series (all in 2017), before Pinterest joined the club with "Idea Pins" in 2021.

All of these have forced creators to think about a *sequence* in a way that they didn't perhaps before: a journalist seeking to tell a story well using those tools has to think about the order in which they take and combine video and/or images.

Considering sequence has knock-on effects too: ordering elements means we also have to think about variety. In traditional television terms that would mean aiming to include a variety of shots (close-up, wide shot, and so on), but on platforms like Snapchat or Instagram, it is not just about varying the type of shot—it might also mean varying the type of *media*, as a Story might combine video with still images, text "slides", GIFs, stickers, polls, and other media.

This variety helps keep a user engaged: repeat the same type of content too often, and the story becomes predictable; there is less narrative tension.

A survey of 350 users by social media marketing company HubSpot appears to back this up, too: when asked what type of Instagram story they were most likely to click through to the end, the top response was "Short narrative stories with photos, video and text", chosen by 35% of respondents (Bump 2022). Only 15% of people chose stories centred "only" around quizzes or polls, and even fewer chose traditional formats such as demos, tutorials, behind-the-scenes stories, and documentary formats.

What all this highlights is the importance of *planning* your story: whatever sequences of clips and images you choose to create your story, there must be a beginning, a middle, and an end.

Deciding on a genre for your story—and beginning it

The first clip of your story is especially important: it establishes expectations in the audience about the type of story they're going to experience; and it is the key point to persuade them that this story is worth tapping through to.

You need to have decided before beginning the story what *genre* of story you are creating. At the most basic level, for example, you should know if this is a news story (telling us about something new) or a feature (a longer and more exploratory story, which might use an existing news story as a jumping-off point).

Here are some examples of news stories you might report using a Stories format:

- A new report has been published or a statement released, etc
- You are at an event and something newsworthy has happened (or been said)
- A newsworthy incident has happened and you are reporting from the scene
- Someone has said something newsworthy in your interview with them

If it is a feature, what type of feature is it? Here are some examples:

- A review
- An interview
- An explainer or backgrounder on a topical issue or a profile of a person or organisation in the news
- A "day in the life" of a newsworthy person or role
- A "behind-the-scenes" feature
- A photo feature
- A listicle

The genre will determine how you begin the story: try to find other examples of that genre of story, both online and in video, and see how they begin. For example, news stories will typically use an *inverted pyramid* format, where the newest information comes at the start (what has happened or been said), and any context (where, when, who) comes next before further background is added.

Feature stories, however, don't have anything "new" to report—instead, they will normally lead on what's useful about the information or why it's important (newsworthy) now. For example, a review might lead with something like "Sony's new games console is out—here's what you need to know about it". In that two-part sentence, the first part establishes why this is relevant now and the second part is why it's going to be useful.

Similarly, an explainer might start with something like: "With the World Cup one week away, we look at the teams who are favourites to win this year", and a day in the life feature might go with "As concerns grow over teachers leaving the profession, I'm spending the day in Turton High School to find out what it's like to work in an understaffed education sector" (again, in both examples the first part establishes importance; the second part what you will learn about). Interviews similarly often lead on the fact that the subject has a new product (album, tour, exhibition) out, or is the focus of news stories, before explaining that you spoke to them (and we will hear the results).

That set up (why this is relevant; what we will get) helps orientate the user and engage them quickly.

Using text effectively in a story

Think of each part of your story as existing to "move the story forward". Video may be the core material in your story, but text parts can help to "bridge" different parts of your story by supplying extra information that isn't present in the video or wouldn't work on video.

Text should be short enough—and large enough—to be read during the brief time it will be on screen (the user can always tap ahead once they have read it). If you find yourself writing long passages of text you should consider if this is the right medium for your story—after all, if the person wants to read an article, they can do that on your website! Long passages of text also mean a smaller font size, which makes it harder to read and more dull looking. The golden rule is: show, don't tell.

On that front, try to pick an image that works well with the text on top, too—the background will need to help the text stand out, so avoid cluttered images with lots of different colours. Simpler shots with an area of consistent colour will work well to help the text "pop".

Use font and colour carefully: most organisations have a style guide that specifies which fonts they use, and which colours—or you can create your own. The important thing is to be consistent: unless there's a good reason, stick to two or three fonts, colours, and sizes maximum.

Tips on using still images

You can tell a story entirely through still images—there is already a long history of photo story formats in specialist publishing such as "This season's trends", "What New Yorkers are wearing", or "10 of the best phones to buy on a budget", and you can extend those ideas into a vertical video story.

Remember that you may need multiple photos of the same item if you want to run multiple pieces of text about it. Combine different shots—close-ups, medium shots, detail shots—to ensure it doesn't get visually repetitive. You will also need to consider some form of graphic (or video introduction) to open the story as a whole.

When used alongside video clips, still images can also act as a "freeze-frame" of sorts, signalling a change in tempo and drawing attention to the item being shown. They can also act as a cutaway, illustrating an object being talked about. Or provide context or illustration to the information delivered.

Consider the points on composition in this chapter: the rule of thirds applies whether you are taking images in portrait or landscape. Note that, while it may be easier to use the Instagram app to take photos, you will get higher-quality results by using your phone's own camera app first.

Using stickers and pencils effectively

Stickers and pencils can be used particularly effectively alongside images. They can be used to draw attention to part of an image, to add ratings (e.g. three star emojis), or commentary (e.g. a "laughing" emoji to indicate you think something is funny, or an "applause" emoji to show approval).

Location or temperature stickers can be useful where that is an important element in your story, while timestamps can be used for stories that spread out over a day to inject pace into the story—and countdowns can be used in a similar way to inject urgency where your story relates to a forthcoming event (such as an election or announcement).

Stickers can also be used to add hashtags and mentions (see the chapter on writing for social media for more), and interactivity—such as polls, questions, or sliders, which can be especially useful as a way of ending a story.

Don't forget about sound and lighting

Finally, don't forget that sound and lighting are just as important in a vertical video story as any other video—make sure that your subjects are well lit and use a microphone if you can (see the section on audio in this chapter). Remember that they will need to be very close to the phone to be picked up clearly by the phone's microphone if not.

Closer look: TikTok, Reels, and YouTube Shorts

Just as multiple platforms copied Snapchat in the years after it launched Stories, the viral vertical video platform TikTok has also been widely imitated—most notably with Instagram's Reels and YouTube's Shorts formats, both launched in 2020.

Unlike the "Stories" format, TikTok-style video is linear (you play from start to end rather than tapping to move through different clips) and more video-driven (you are much less likely to see still images or text-only sections).

The most distinctive quality of the format is its use of "memes": songs, phrases, quotes, images, dances, or other elements that take on a life of their own (see the chapter on writing for social media for more on memes)—and this is facilitated by the way the apps make it easy to reuse content from elsewhere and build on work by other users.

CNN's Max Foster, for example, used an audio track on the app from the TV gameshow *Pointless* as a vehicle for his video countdown of coronavirus deaths in countries with female heads of state (tiktok.com/@maxfostercnn/video/6816259281407544581). The juxtaposition is effective in drawing the viewer in to find out about a topic they might not have otherwise done and also injects a tension that the gameshow countdown track is precisely designed for.

The apps also make "green screen"-based video easy to produce. "Green screen" refers to a technique where a particular part of the screen—normally the background—is replaced by a particular image or footage. Weather reporters, for example, use this technique to place a map behind them which they can then pretend to be pointing to (in reality they are standing in front of—you guessed it—a green screen).

The green screen filter on apps like Reels and TikTok, however, doesn't actually require you to have a green sheet to go behind you. Instead, it uses artificial intelligence to detect the person on screen and replaces the background with the image that you choose. This makes it easy for a journalist on TikTok, Reels, or Shorts to illustrate a report with images, charts, or diagrams.

The brevity of TikTok and its clones means it is best suited for simple explanatory video content, practical content such as quick how-tos, fact checks, and behind-the-scenes insights. Sophia Smith Galer, who built a massive following on TikTok while working for the BBC, suggests that explainer videos should be within one minute, while behind-the-scenes videos should be under 30 seconds.

When it comes to telling your story, Toronto Star TikTok producer Libaan Osman recommends getting "straight to the point within the first three to five seconds rather than introducing [yourself] first … keeping the content relatively light and relatable to young people … and making sure the language is accessible and easy to understand" (Weisfeld 2021). Smith

Galer recommends focusing the start with an aspect of your story that is interesting, before explaining why it is important. "Importantly you have to work out how to be funny and smart and engaging without bringing the brand into disrepute or taking the brand away from its main aims" (Shahid 2020).

Consuming lots of content on the app will help you to understand the conventions of the genre and different ways that people use it (you can find a list of news accounts on TikTok at tiktokjournalism.glideapp.io). Despite its dance- and music-focused beginnings, over time TikTok has become less distinctive and more conventional in style, with simple pieces to camera becoming especially widely used by journalists. ABC News—which reached one million followers in 2022—"quickly realized that hard news worked better than some of their attempts to follow goofy trends" (Fischer 2022) with some of its best-performing content clips from official news briefings.

Like Snapchat before it, the main advantage comes with the informality (there's no expectation of slick production values) and the punchiness of the content—not to mention getting your stories in a space where your audience is.

Picking a niche—and the hashtags that go with it—can be especially important. NPR's Planet Money team joined TikTok when they realised nobody was covering their specialist area on the platform. Hashtags like #FitTok replicate the sort of material you might find in personal fitness magazines, while #MomsofTikTok is all about parenting advice and #BookTok has created a new audience for book reviews. If you can identify a need that's out there and serve it, then you'll be doing well.

What equipment do I need to make video?

What kit you need depends on what sort of video journalism you're planning to do. You can get started with a laptop and a built-in webcam or a tablet. But most video journalism is now done using a good mobile phone: it's light, portable, and image quality is good enough for most situations—indeed, mobile video is now regularly used in broadcast output. For this reason, it is also the best way to get started with video journalism and learn the basic techniques. Make sure you have a phone with enough memory and battery power (see the chapter on liveblogging and mobile journalism for more).

For projects that are intended to be broadcast as well as placed online, you might find yourself using dedicated—and expensive—video cameras. For active first-person video, you might want to look at devices like the *GoPro*, which are designed for capturing activities like skydiving, skiing, cycling, scuba diving, and watersports. You might even want to get a *drone*, or a special *360-degree* video camera (see sections below). And, of course, for an animated video, you don't need a camera at all.

A *microphone* makes a big difference. Audio is very important when recording video: mobile phones aren't great at recording sound more than a few inches away, so having a microphone helps you deal with situations where background sound is a problem and makes your video sound more professional generally. A *lavalier*—or lapel—mic can be fixed on a person's collar and is ideal for pre-arranged interview situations, but make sure it is not rustling against the material. A *handheld* microphone is what you see reporters using on television and allows you to record either yourself or anyone you interview. If you are filming with a mobile phone in a noisy environment, you can also use the hands-free microphone in the headphones that come with the phone: however, this should be a last resort. See the audio chapter for more on sound and microphones.

Find out if the microphone will work with your mobile phone or if you need an adapter. The iRig adapter, for example, allows you to use broadcast microphones with iPhones or Android devices.

If you want a steady shot consider buying some sort of *tripod*: these range from small flexible portable tripods like the "GorillaPod" series, which can be wrapped around a post, to extendible "selfie sticks", or traditional camera tripods (Figure 9.1). You may need a grip, adaptor, or case to connect your phone to the tripod through a "mounting hole".

Lighting will be important if you are filming in a poorly lit environment or are filming inside: you might notice that one of the qualities of many successful YouTube vloggers is good lighting (you can even get light meters for mobile phones). *Headphones* can make a difference: use them to listen to the audio feed while you film. And then there are *lenses*: remember that zooming on a mobile phone generally reduces the quality of the image. Instead, for mobile phones, you can buy lens kits that can be placed over the mobile phone camera, such as the Olloclip.

Some video journalists use a separate audio recorder to capture audio, which can then be edited into the footage later on. This is a useful backup plan in case your camera microphone does not record as well as you expect.

Don't forget the little extras like lens covers, extra batteries, and memory cards—and your charging leads!

Figure 9.1 Broadcast journalist Joe Tidy used a flexible "GorillaPod"-type tripod to attach his phone to a wire fence in order to provide steady streamed video from his mobile phone

Closer look: Drone journalism

Drones—remote control unmanned aircraft—have been eagerly taken up as a way of getting striking aerial footage without the cost of hiring a helicopter. As well as breaking news, the devices have been used to "provide glimpses of natural disasters that would otherwise be too hazardous for journalists to obtain, and to offer unique perspectives that enrich news storytelling" (Holton et al. 2014). The Manchester Evening News, for example, used drones in coverage of a fire at the city's dogs home, while the BBC has flown them along the tunnels of transport project Crossrail, and inside and around both Canterbury and Lincoln cathedrals.

BBC drone operator Neil Paton says the best stories for using drones include industrial and transport pieces; housing stories; agricultural, environmental, and rural affairs; and stories that involve big subjects (Pedret 2016). But there are costs involved: aside from the drone itself, you will need to explore insurance: the BBC insures its drones against causing damage up to a cost of £20 million and recommends insuring against at least £5 million. Risks include invasion of privacy, reckless piloting, being hacked, and issues around airspace controls and regulation (Collins 2015).

After an initial period of experimentation, a range of guidelines and rules have been established that limit how you can use a drone. In the UK, you need the permission of the Civil Aviation Authority (CAA) to fly a drone, renewed annually. They cannot be flown over congested areas without authorisation, and cannot fly within 50 meters of any person, vessel, or structure not controlled by the pilot. In 2015, for example, a man was fined £1800 for illegally flying drones over professional football matches and London landmarks (Gayle 2015). Check the latest guidance on the CAA's drones section for more information on the rules. You can also find BBC guidance on the use of Unmanned Aerial Systems on their Safety Guidelines pages, and the Professional Society of Drone Journalists has a range of resources on their website (dronejournalism.org) including a code of ethics.

Privacy is a particular factor to take into account. Paul Egglestone from the University of Central Lancashire says they often discuss ethical differences between using a drone to obtain footage compared to standing on a step ladder and using a long lens. "We've all seen those shots looking down at festivals for example—they are mostly illegal as things stand" (Hartley 2015).

Other factors to take into consideration when using drones include wind speed (avoid speeds over 20 mph), heavy rain, extreme temperatures, and battery life. It is recommended that two operators should control the drone: one to direct the flight and the other to control the camera.

Closer look: 360-degree video and virtual reality

While drones provide opportunities for videographers to *film* in places they've never been before, 360-degree cameras create opportunities for *viewers* to *explore* video and images in ways they've never been able to before. And virtual reality is allowing them to experience places even drones can't go.

Most use of 360-degree video and photography involves spectacular or exclusive scenes that a user is going to *want* to explore: nature and historical documentary reporting and environmental and travel journalism all suit the medium well, as well as large public events: Vice News used it to cover a rally by 60,000 protestors, while the New York Times used it to cover vigils in Paris in the wake of the terrorist attacks in November 2015. It can also be used to immerse viewers in more personal stories: Gabo Arora and Chris Milk, for example, used 360-degree video in "Waves of Grace", which follows an Ebola survivor in Liberia as she narrates her story. And "Clouds Over Sidra" shows a refugee camp through the eyes of a 12-year-old girl. This intimacy—without the presence of a reporter—can be part of its appeal: research in 2022 found that 360-degree video "led to a linear increase in enjoyment, ultimately resulting in greater intentions to seek further information" (Pjesivac et al. 2022).

Behind-the-scenes 360-video can also tap into users' natural curiosity: talking about the potential for using the technology on the election campaign, for example, Washington Post video directory Micah Gelman says: "Viewers can experience what it's really like to be on the campaign trail by seeing not just the candidates but what the candidates themselves are seeing" (Wang 2015). This means thinking carefully about the environment you're shooting in, and what is visible—including any crew and yourself. If you need to remotely control the camera from a distance to keep yourself out of shot, you'll also need to make sure it's protected. There are ethical considerations around making sure that people have given consent to be filmed. Broadcasting guidelines on consent are useful here.

Virtual reality (VR) is often used synonymously with 360-degree video—partly because the VR apps and devices (such as Google Cardboard or Oculus Rift headsets) are also used for 360-degree video. But there is a difference: some will insist that virtual reality video is *simulated*: in other words, the footage is virtual, not real.

Virtual reality is useful for allowing users to explore environments that could not be filmed, whether that is reporting on space or other planets, science reporting on what goes on inside our bodies, places from the past that no longer exist, or predictions about the future that might never exist. Associated Press used VR to explore what happens in the brain of someone with Alzheimer's Disease, for example (Kreinberg 2016), while the Wall Street Journal created a VR roller coaster ride through 21 years of the NASDAQ stock exchange: "We could have done a flat chart of the NASDAQ. We have done that numerous times. But virtual reality lets you feel the change in your gut", said developer Roger Kenny (Bhatia 2015). VR is a more expensive and intensive process, involving research and planning as well as the creation and editing of the visuals themselves alongside any narration, and with a much smaller audience able to experience it, that makes it the less likely option for most projects.

YouTube started supporting 360-degree video and VR in 2015, and Facebook the year after, saying that 360 and immersive video would be a key focus for the news feed. WordPress and Twitter joined a few months after that. But you can also find content on specialist apps on your phone's app store. You do not have to buy expensive headsets to experience virtual reality: Google Cardboard headsets (and others based on the same idea) can cost as little as a takeaway pizza. Likewise, you don't need expensive tools to get started: the Google Street View app is a good way to begin creating 360 images on your phone (search for other 360-degree apps on your app store). For longer and higher quality 360-degree footage, however, you will need a 360-degree camera.

Software

Software plays as big a role in video journalism as hardware, particularly when it comes to mobile apps. The key factors to consider are what kind of computer or phone you use, budget, expertise—and the kind of video journalism you will be producing. Video uses up a lot of memory so it is likely that you will need sufficient storage for the files you are dealing with (a portable hard drive can be especially useful for backups) and a high processor speed.

There are, broadly speaking, four things that video journalists use software for:

- Recording (including social media apps you might use to record video directly)
- Editing
- Altering (adding filters and effects, slowing or speeding video, changing frame rate, adding interactivity)
- Publishing (including YouTube, Vimeo, etc)

Some software covers more than one step in the process: the Snapchat app, for example, allows users to record, alter, and publish; while TikTok and YouTube's video tools can record, edit, alter, and publish all in one.

Broadly speaking, it is better to record video outside of any app or website first: this generally results in higher quality but also more control to do other things. On a phone, the built-in camera app is fine in most cases. However, if you need extra control over things like frame rate, resolution, or audio, you can use an app like Filmic Pro.

Editing software at the entry level includes iMovie on the iPhone, iPad, or Mac, and Windows Movie Maker on PC. For more advanced editing options you might explore Adobe Premiere and the Final Cut and Avid suite of products. You can also do basic editing online using the YouTube Editor.

If you are using an iPhone, the iMovie app is extremely good for editing and publishing/emailing without having to move your footage onto a laptop (Final Cut Pro is also available as an app, but is vastly more expensive). On Android, editing apps include KineMaster, Quik, and PowerDirector, but as new apps are added and updated all the time it's worth trying a few to find the one that has the features that you require. If you are shooting vertical video, you might need a specific editor for that (InShot, for example), or an app that will allow you to run multiple vertical videos next to each other to create a horizontal one (PicPlayPost, for example).

Beyond basic video editing, some video apps allow you to animate text against a still image or video. This is particularly useful for creating titles. Other apps allow you to turn multiple images into video slideshows, turn video into animated GIFs, record your screen, create time lapses or slow motion, record stop motion animation, or even animate virtual characters. And, of course, there are lots of apps that will apply all sorts of filters and effects to your video.

Publishing software is important to ensure you can get your video online quickly on the move. If you're uploading to YouTube then you will need the YouTube app on your phone and, crucially, be logged in; likewise any social media accounts. Many news organisations now have their own apps for uploading video too, used only by employees.

All of these apps give you huge creative options when it comes to your video: the key thing is to be clear what the purpose of your video is and never to use a feature *just because you can*. Like the best writing, the best video is simple, clear, and doesn't get in the way of the story.

Step 1: Coming up with online video ideas—and planning them

One way to come up with ideas for online video is to write down lots of story ideas—then look at those ideas with the eye of a video journalist. That means looking for stories that have a strong visual element. It might be a striking setting, a compelling character, or lots of action. Here are some examples:

- *An interview*: if the person is good on camera, or visually interesting, or their expressions are key to the story, video can work well
- *Events*: protests, marches, sporting events, and openings can provide decent visuals—but remember that a few seconds might be enough
- *Demonstration*: if you or an interviewee need to explain how something is done, or how something works, why not film it?
- *Reaction*: if you think someone's reaction is going to be strong—whether that is their reaction to a question or their reaction to some good or bad news—then capturing it on video can tell us much more than any number of words
- *Colour*: anything that is colourful—literally or figuratively (such as a colourful character) can work well on video

Remember that video tends to play one of four roles online—and does not have to be complicated or long:

- Some video is used to *illustrate* a text-based story, much as a photo might do. An example might be using raw footage of a fire to illustrate a news article or social media update about the fire.
- Some video is used to *add to* a story, much as a link might do. The story can still be read without watching the video, but the video is there in case the reader wants to explore further. An example of this might be creating an explainer video about a technology referred to in the main story or embedding the full video interview that a text story is taken from.
- Another way that video might be used is to *distil and tease* a story, much as a headline does. In this situation, there may be a longer news article, video package, or podcast and a short section of that longer story (a key quote, clip, or fact) forms the heart of this smaller video.
- The final type of video is one that simply *tells* the story. This video stands alone, rather than forming part of a text story or teasing a longer story. Examples would include video packages and stories created solely for social media.

This sliding scale of video roles can provide a useful list to work through as you gain confidence in video production: an easy way to get started with online video is by filming "raw" video when you go to report a story and including that in your social media update or the story itself (Table 9.1). This will give you experience in basic filming and related technical skills such as composing the shot and getting clear audio.

Once you've built confidence you can move to creating video that adds to a story you or someone else is writing. Record an interview, for example, then write up the interview feature—but embed the full video for people to watch if they want to see everything that was said. Or report a story about a new development in an ongoing issue, then record a brief video explaining the background to that issue. Platforms like TikTok (see below) are good for this: audiences will have lower technical expectations and the focus will be on getting the information across succinctly and in an engaging way.

Table 9.1 The four roles of video online

Role	*Analogous to…*	*Examples*
Illustrate	Photos	Raw footage in a text story or social update
Add to	Links	Explainer of a technology or process mentioned in the main story Unedited interview in a story based on that interview
Distil/tease	Headlines	Short video clip of the most interesting part of an interview Audiogram of a clip from an audio interview Listicle/key facts from a story Headline round-up for social media
Tell	TV packages	Edited package Edited "Story" (Instagram/Snapchat) Planned livestream

Next, you'll need some editing experience, and a "teaser" video is a good way to build that experience without having to create longer video content or worry about lots of footage: in this type of video, the captions will typically do most of the work of moving the story along.

With all that experience under your belt, the final leap will be into self-contained video. Now you'll need more footage, and more editing (see below), for what will probably be the longest video you've done yet—but don't make it too long: part of the skill is being able to leave footage on the cutting room floor. If a clip can be cut and the story still makes sense, then you should probably cut it.

Video formats used online

Video can take a range of forms and formats online. Here are just a few to look at and think about:

- *Guides*: "how to" videos are popular on magazine websites and YouTube
- *Screencaptures*: PewDiePie built an enormous following by capturing what was happening on his screen while playing computer games—but that alone isn't enough: you have to be informative, useful, and entertaining all at the same time
- *Live streams*: live video from an event or studio
- *Video shows*: programmes that are broadcast online
- *Documentary features*: see Vimeo's Documentary Film subsite for examples (vimeo.com/documentaryfilm)
- *Motion graphics and animation*: often used to explain something in a way that might be clearer than using real-life settings and presenters
- *Explainers and backgrounders*: video can be a good way to explain how something works or how we got to this situation in the first place
- *Time lapse*: condensing minutes, hours, days, or months into a video that is sped-up
- *Round-ups and previews*: if you're looking ahead to an event, or rounding up the highlights of the week, this can be done on video—but still try to find a way to make it visual

Once you have an idea for a video ask yourself: who would want to watch this and why? The story might be good, but it might be better served through text, still images, audio, or a combination of all three. Think about practicalities such as resources and time. Think about images and footage that can be used and how they will propel the story. Some news organisations have their own studio to record interviews, reviews, or live video. But are you adding any visual value to a story or would it be more interesting to film somewhere else?

Interviews can be a compelling feature if the subject or person is interesting, if there is an element of exclusivity about the video, or you want to capture how they respond to a "right of reply" on a potentially critical story.

Edited features and news packages need research and planning. It is not necessary to storyboard your feature in the prescriptive way of a film director so that each and every shot is prefigured (unless you are planning to invest time in a documentary-style piece). Stories have a habit of changing and developing. However, think about the people, the places, the action, and the still shots you might want to use. Before setting out make a checklist and consider the following:

- What's the story?
- What pictures will you need? Think about locations.
- Can you shoot the story on your own (think about transport)?
- Have you packed the right kit and tested it?
- What kind of environment are you going into? Think about the terrain, weather, lighting, safety
- Have you researched interviews in advance and made appointments?
- Plan ahead: video stories take more setting up than print. For instance, you can't film a story about forestry in a series of lumberjacks' and activists' offices. You have to arrange to meet them in a forest.
- Have you permission to shoot video? Think about government buildings, public spaces such as schools or copyrighted material such as music that may be playing in the background.
- Permission slips—you will need contributors to sign a form giving permission to publish or broadcast their interview.
- Parental consent—needed for interviews with children.
- Identification—court reporting rules apply to video.
- Think about balance, right of reply, and visual libel. This is an easy trap to fall into when you juxtapose images with voice-over without thinking about how the two fit together.
- Think about third-party footage. The preponderance of cameras now means that you may find useful footage from other people—or even a CCTV camera. Google "Man stuck in lift 40 hours" for an example of how one story was brought to life by using CCTV footage.

Samara Mackereth, HuffPost UK head of video

We use video to cover the news, we do reactive material, explainers, and some original short documentary films, and we make ongoing personal series and studio shows. So it's everything from politics, breaking news, and covering the election to doing explainers on watercooler topics, to bringing you the field.

We will do a lot of what we call versioning: we might make a ten-minute film that is great on YouTube that we might promote on-site, but we might cut it down to three minutes for Facebook. If we're going to do it for Instagram TV, it can be in that platform format a little bit longer, but if anything's going to be in the grid on

Instagram, we have to version it for square in the edit. Every project has seven different exports for different places.

One of the things that I talk to my team about a lot is not just to think about the video itself but think about how the video lives on different platforms. People might watch our videos on-site, within an article; they might watch them on social media—and the way that those things are packaged should be unique to those different places. You should keep that in mind as a producer from the beginning: why should someone watch this—and what can you do to get them to watch it?

We don't have to think so literally that "I'm going to make a video and then put that video everywhere". For some longer films, you might want to use Instagram or Facebook to do a trailer to then bring people back to your platform. BlackVoicesHPUK was a panel show we did during lockdown, with 25-minute episodes—but that length is a hard sell on digital, so we really amplified this series with social clips, Insta stories, and different ways in which built upon the conversations that these people had around different topics in interesting ways.

We did a whole 25-minute episode on the musical contributions of black people in the UK and then our producer put together a historical timeline on Instagram: it wasn't specifically discussed in the conversation but the Insta story could give that added context; it's a different chapter, but it feeds back and people hopefully want to watch the conversation.

We use these techniques with our podcasts, too—podcasts don't have to be audio-only. Our podcast producers make the podcasts and then our video team promote them. We do that with clips: taking a little bit of the conversation and putting it on social. Insta stories are also a good way of doing quizzes—it's a good way to interact with your audience—or a poll. And then we also do social videos: we have a podcast on chronic illnesses and the guests will shoot videos themselves of something about their illness, for example, "This is what you don't say to someone with a chronic illness" or "Here are 5 things you should know about people with arthritis". It's a video component that promotes a podcast so you don't only have to use the video or the podcast that you're creating, you can create new content around it to promote it.

It's important that visually someone can tell that it's connected to your brand. When you see an AJ+ video you know it's an AJ+ video, their style, their graphics. With graphics-driven videos, you need to start with your strongest image, and the strongest sound if you have it, or text.

When it comes to captions, I remember being told at university to write for the comprehension level of a nine-year-old child because of the way that people mentally digest when they're seeing and hearing a story. It's really important to be simple, so I have a two-line rule with text-on-screen videos for us, and oftentimes if people are struggling to be succinct, I might have them telling me the story back—not thinking about the video, just tell me in a minute what happened. Then we can pull out what's the most interesting thing: what we have to make sure to include. You can write a first draft and it can go through three iterations down to two lines. You can really weed it out. Think of each word as valuable real estate, and remember the language needs to be simple.

Closer look: YouTubers and journalism

While the news industry was getting to grips with online video, a whole new generation was busy inventing a web-native approach to video production outside of traditional media: YouTubers.

Typically presenter-led and published regularly to a demanding schedule, YouTubing is in many ways more like traditional television than the more content-led and irregular approach to video taken by print and online journalists. As with traditional broadcasting, the platform and medium have already been chosen, so YouTubers must regularly fill a certain amount of screen time regardless of whether the content itself best suits the medium. They must also ensure that the production quality is high enough to meet audience expectations. While the tone may be informal, the approach to lighting and sound is often thoroughly professional, with tight editing and jump-cuts used to keep the pace fast.

Content that is *useful* tends to do well on YouTube. As a result, many successful channels closely resemble traditional magazine sectors and article formats, from makeup tutorials to cooking shows. Gaming YouTubers manage to combine useful tips with clear, entertaining delivery and, equally important, prolific and persistent publishing. Channels like Veritasium and Numberphile build on a rich history of popular science.

The regularity of publishing means you need to think creatively about the show's "format" (Jung & Naiv's "naive" interview format, for example, or the self-explanatory "Cooking with Dog"), make sure that content is compelling and original, find an engaging style that is your own, and regularly come up with strong ideas. But one of the key qualities of YouTubers is the way that they engage with their community.

Other platforms are important too. Most successful YouTubers maintain a cross-platform presence, so that people can follow—and discover—them on Twitter, Facebook, TikTok, or Instagram, and often re-edit clips from their content for those platforms. Wyatt Sharpe, a 13-year-old YouTuber from Ontario whose channel features interviews with the Canadian Prime Minister and cabinet ministers, and Finland's former Prime Minister, says:

> Platforms like Twitter have been beneficial in the sense that I can share and publish the link via Twitter as well, so it has the ability to reach larger and more significant audiences. I find a large portion of people who watch my show via YouTube, often find it through me also publishing the YouTube link to Twitter.
>
> (Sharpe 2022)

There are also many video producers inventing a new visual language on other platforms: Vimeo is well established as a platform for longer-form video production drawing on documentary styles. Twitch created a platform for video game playthroughs, talk shows, and live e-sports tournaments before expanding into radio, music, and creative walkthroughs. Snapchat teamed up with the Tribeca film festival to showcase the best video and supporting top creators directly.

Commercially, many successful channels make money from a combination of YouTube ads and collaborations with brands (sponsorship). But you need to be aware of advertising regulations: the Committee of Advertising Practice has a specific section on its website devoted to video blogs and streaming that is worth consulting ("Recognising ads: Blogs and vlogs"). Any coverage that is paid for must be disclosed clearly and labelling must be "timely", and "material should not mislead consumers or cause serious or widespread offence" (Committee of Advertising Practice 2020). In addition to advertising, some YouTube channels are used to build a customer base for events and merchandise.

Step 2: Shooting video

It is not enough to just switch the camera on and start shooting. You might capture hours of material but find in the edit that you have badly framed shots, no close-ups, jerky footage, and invasive ambient sound. Think about the different elements of the story you need.

In other words, shoot to edit. For example, you might be covering a protest by parents at the closure of a local school. A shot of people chanting with placards or of people marching only tells one part of the story. Think about the composition of visuals that will tell the story and give it context: footage of the school and its location, close-ups of individuals and their placard messages, interviews, a shot that shows how big the demonstration is, and the reaction of bystanders. Is the protest holding up traffic? Are there police?

Framing video: Composition

A variety of shots always helps in video and there are three shots in particular that you should practice and become familiar with. Keep the camera still and always get these three shots before doing moving shots:

- Wide shot: stand back and establish the scene
- Medium: move closer to the point where people can be easily identified
- Close-up: used for interviews, usually just head and shoulders

If you are using a mobile phone, make sure it is focusing on the right part of the image by pressing on that area of the screen. You should see a circle or square appear briefly to indicate that the phone is focusing there. If you press and *hold* on an area of the screen you should see *AE/AF LOCK* appear: AF means auto focus: the focus will be locked on that point of the screen. AE means auto exposure: you can move your finger up or down on the screen to lock the exposure (how much light you want).

Think about composition: when people first start filming video, they tend to put the subject in the centre of the screen but look at professional video journalism: you'll notice that often the subject is slightly off to one side.

This is the *rule of thirds*, also used in photography. The rule of thirds imagines the shot is divided vertically and horizontally into thirds by lines. Where the lines cross, you put the focus of your shot. For example, if someone is being interviewed, they should be off-centre and their head below the top line so they don't look like they are being squeezed into the shot (although you can get away with tighter framing in vertical video).

Most cameras will show you a grid on the viewfinder to help you use the rule of thirds, and you can turn it on a mobile phone too by going to your camera settings and looking for the *grid* option.

Traditionally, TV reporters have avoided letting subjects look straight into the camera, which gives the impression that they are staring at the viewer directly. Instead, they will ask them to speak to the off-camera interviewer and give room between the person being interviewed and the direction that they are looking. If there are shots of the interviewee, they will often be positioned on the opposite side of the shot (if the interviewee was on the right, the interviewer will be on the left), looking "back" at the interviewer.

However, because of the intimacy of online video, many videographers ask the interviewee to speak directly into the camera: after all, vlogging and YouTube have now made us much more used to seeing people speak this way, and many more people are comfortable with speaking to camera. You can use either approach but make sure you do it consistently and give clear instructions to the interviewee.

Shooting to edit: Thinking about sequences

Sequences are a key technique in telling stories through video. For example: to tell the story of a successful athlete, a sequence might start with a clip of the athlete walking out onto the track, followed by a clip of her taking up a starting position, followed by a clip of her feet flying off the blocks. By combining the three shots, you are able to condense time and make the story more visually varied and interesting. By contrast, imagine how much longer and less interesting a single shot of the athlete walking out, taking up a position, and running would be.

To create sequences, you first need the footage to edit together, so shoot a variety of different shots for your story, with an idea of how they might fit together into sequences (a storyboard is useful but bear in mind that news events might throw up surprises that you need to be prepared to go with). David Burns recommends shooting at least four times as many close-ups as wide or medium shots: these satisfy the viewer's desire for detail but are also easier to edit together (Miquel 2012).

For those starting out, the following is also advisable:

- Use the autofocus and auto lighting function
- If filming with a mobile phone, turn airplane mode on: you don't want filming to be interrupted by a phone or message alert
- Make sure you know where the microphone is on the phone—and then make sure you're not covering it
- Use a tripod, or at least steady a mobile phone shot by holding your elbows by your side. This is key to professional-looking video (but not necessary if, for example, you stumble upon a news story and setting up a tripod would mean missing key footage)
- Avoid sweeping shots left and right (or panning)—too much movement is distracting
- Avoid too much zooming in and out for the same reason
- Capture movement *in* the frame; don't be tempted to create movement by moving the frame around
- Along the same lines, try to ensure that subjects enter and leave the frame rather than you following them
- Don't follow a wide shot with another wide shot: use a variety of angles
- Remember close-ups work well online
- Leave yourself at least ten seconds of video at the beginning and end where the shot does not move. One of the first rules of editing is not to cut on a shot that is still moving
- Remember to choose a shot, press record, and film it then STOP recording and set up for the next shot. Inexperienced camera operators tend to leave the camera rolling and end up with hours of useless footage

Once the basics have been learned, consider experimenting with the following: a piece to camera (for example, a video piece for a blog) and shooting cutaways (often used in interviews, when there is a shot of the interviewee's hands or sitting room, for example). You should also get in the habit of shooting enough supplemental footage that illustrates the story or the point a person is making.

It is easy to make mistakes in a stressful situation particularly when you are on your own with no one else to rely on. Common pitfalls for even the most experienced video producers are:

- Forgetting to turn the camera on
- Choosing the wrong environment (e.g. a dimly lit office or in front of a bright light)
- Umming and aahing while interviewing—remember to keep quiet
- Allowing interviews to go on too long. Keep interviews short and to the point with open questions that prompt your interviewees to give decent responses
- Letting the interviewee make time-specific references that may not make sense later—don't be afraid to brief the interviewee to avoid that type of reference
- Videoing someone in front of distractions, for example, traffic or a poster with easily read text
- Letting the interviewee grab the microphone

"Shooting" video with your computer: Animations, screencaptures, and Zoom interviews

Some video can be created entirely on a computer without using a phone or video camera at all. A number of online tools, for example, allow you to create animations and presentations that can be used for backgrounders and explainers. These include PowToon (powtoon.com), Moovly, Vyond and Animaker. Or you can record what is taking place on your computer with screencapture and screencasting software like CamStudio and Screencast-O-Matic.

Then there are tools for streaming on platforms like Twitch, such as Open Broadcaster Software (OBM)—and tools for making "audiogram" videos out of audio recordings (see the chapter on online audio for more).

Another way to create video on your laptop is to record an interview via video call on a tool like Zoom, Skype, or Google Meet. In this case, you *are* using a camera—in fact, two: the webcam on your device and the interviewee's webcam or phone camera.

Tips for filming remote interviews on video calls

When filming interviews remotely it's important to remember that you can *direct* the two cameras at both ends of the call—and the people you are interviewing—to get the right shots for the story.

Start with your own device's built-in camera (or external webcam if you have one): you should position the device so that the resulting shot is well composed and framed, and you are well lit (with indirect natural light if possible). Raise your laptop so that it is filming you at eye level, and not from below. When conducting the interview try to maintain eye contact with the camera.

Once you've confirmed an interview with someone—and their consent to record it—make sure you help that person set up their laptop or phone appropriately, too: some journalists have a document that they send to interviews in advance with some tips for choosing the best place for a video call, and for setting up a good shot; or you might begin your interview by guiding them (politely) to position their camera appropriately. Factor this time into your planning and give your interviewee a realistic expectation of the time you expect the interview to take as a result.

If you have time, and have built a good relationship with your interviewee, consider asking them (or a friend or family member) to use their webcam or mobile phone to film "cutaway" shots, too. This will give you extra shots that you can cut away to in the final edit, for a wider variety of shots that can mask where sections have been cut out. Simple over-the-shoulder shots of the person talking to you on their laptop, or even shots of them performing some activity that they are talking about, will make a big difference to the final video.

You can also ask them for any video or photos that they have that you could use in the edit: for example, of a person or event that they're talking about.

Don't forget the importance of good quality audio with a remote interview. Make sure that you and your interviewee are both in a quiet space and that your voices are clear (use microphones if possible). Many journalists will ask the interviewee to record the audio of the interview separately, on their phone (which can be emailed to you later), so that there is a clear audio "track" that can be used if the audio on the call isn't good enough.

Test the internet connection to make sure it is reliable—you don't want the video or audio cracking up because either of you is in a wi-fi blind spot (sometimes a mobile phone hotspot may provide a more reliable connection). If it does break up at any point, make sure that you ask the interviewee if they would mind repeating that part of the interview. Likewise, if there are other problems such as background noise, or someone is typing or clicking while you speak (or vice versa), don't be afraid to ask the other person to mute themselves while you repeat it.

You can find a lot of guidance from journalists who developed remote interviewing techniques during coronavirus lockdowns when many interviewees could not leave their homes—as well as broader tips on looking good during video calls—so look for these online (some are listed at the end of this chapter). It's also a good idea to organise a test call with a friend so you can check you've got all the technology covered and have some experience in guiding someone through the steps.

Tips for online video journalism

From John Domokos, video producer The Guardian

- Always have a camera with you
- Be clear about what the story is and what your film is doing
- Show, don't tell, and don't try to ape TV formats
- The internet is an intimate medium, get close to your subject, and allow them to tell their story, instead of using soundbites
- Be fair to your characters and subjects
- Speak to real people, real voices, rather than talking heads
- Try to get actuality—real life happening in front of your camera, instead of set-up shots and GVs (general views)
- Be ruthless with your edit, keep it short and tight, and take advice from people who weren't on the shoot
- Watch quality documentaries and keep up with what others are doing
- If you're starting out, upload to YouTube, video blog, and share on social networks

Step 3: Editing video for the web

If you are capturing short video clips for use alongside a text article or on social media, then it is likely that the "editing" is done at the planning stage. A common technique, for example, is to ask an interviewee to introduce themselves at the start of the clip, and to include the question in their answer (for example "My advice to people wanting to get into the sport is…"). The resulting video should only need to be "topped and tailed" (removing unnecessary footage at the start and end of your clip) to be usable straight away. Doing this for each question separately can give you a series of brief videos that can be inserted into an article for extra colour.

For longer video packages you are likely to have to edit together more than one clip, in a different order in which they were filmed. This is called "non-linear" editing.

Non-linear editing software such as iMovie or Final Cut allows the journalist to cut, split, move, and delete video and audio to construct the story. First, however, it is a good idea to look at all the raw footage and decide what elements are needed to construct a story with a clear beginning, middle, and end. This can be a time-consuming process: don't be tempted to start editing straight away. You may have forgotten a particular sequence or the significance of a quote might not have been clear at the time of recording. Beginnings are particularly important: Mukul Devichand of BBC Trending says, "You only have 7 seconds to engage people: if you don't, they will go elsewhere" (Hayward 2015).

Logging and the rough edit

Start by looking at the footage. You may have more than an hour's worth that you need to edit down to three minutes or less. You may have several hours of footage from which you want to construct a long feature. In these situations, save yourself time by going through the footage and logging the clips you want to use. This process is called a rough edit.

Log the clips by giving them catchlines (labels) and create your log by hand or electronically (most software programs allow you to do this). Note the "in" and "out" points (the precise time) of each clip by looking at the digital time display on your video camera. Be selective about your clips and choose establishing shots, a range of close-ups and mid-shots and have a mix of short, killer quotes and longer, more descriptive elements from interviews. Try to be disciplined. You may need to drop footage of an interview if two people make the same point.

Import and edit

When you first create a project in your editing software you will need to import the clips you are using. If you are on a mobile phone, clips can be imported from your camera roll. Most editing tools have a drag-and-drop, cut-and-paste system that allows audio, music, and titles to be added. They also have a timeline where clips are added to create a narrative and where you can layer video and audio clips so that, for example, you can add ambient sound.

Decide what order you want your clips to go in and cut and paste them onto the timeline. You can look at your clips frame by frame, cut them, and split them in two. With most tools you can also separate the audio track from the video, allowing you to show "illustrative" video over relevant audio from a different clip: for example, you might have interviewed someone talking about a protest, and you want to show your footage of the same protest over that audio.

Think about pacing—you need to draw the viewer while getting to the point. Online audiences tend to have a shorter time threshold when they view a story online because they have the facility to click to something else. Keep the pace lively and keep in mind the length of your video.

For example, a shot lasting 30 seconds in a three-minute video is generally far too long as you may find that the story gets squeezed or becomes incoherent. This is a tough area to make rules about: the content should dictate the style and length, but journalists also often overestimate the value of their own content, so be ruthless: just because you've invested effort doesn't mean it has to be used. Consider transitions if you feel clips are at the right length but put together seem jerky. The software program you use will give you a number of options for transitions such as dissolves and fade in and fade out. Don't be tempted to use more elaborate transitions: remember the focus is the story, not your knowledge of editing software.

How long should it be?

One advantage of producing for the web when compared with television is that there is no rule about length—you don't have a schedule to worry about. But should we keep it short?

Research by video hosting company Wistia suggests that increasing the length of a video *does* have a negative impact on engagement: anything longer than two minutes leads people to engage less with a video (Fishman 2016). If you're making a short video, then, it is best to keep it under that threshold.

A good example of this is Fortune Magazine's YouTube video series "My Breakthrough Moment in Leadership". In each video, a different business leader describes their "breakthrough moment". Because it's simple, the videos generally sit around the one-minute mark, and the completion rates (how many people watch to the end) are very high.

For longer more feature-based videos, however, try a length between six and 12 minutes: "Every second counts between 2 minutes and 6 minutes, but there's hardly any drop-off between 6 minutes and 12 minutes", the Wistia analysis notes (Fishman 2016). It may not seem long to you at first but think about how much footage you will have to shoot and edit on your own.

Beyond that length there has been an increasing focus on 20–30 minute video by news organisations: The Guardian, for example, have a documentary department that commissions independent film-makers and production companies, while the New York Times, Economist, and Der Spiegel are among other organisations investing in similar content. Check out Hootsuite's regularly updated guide "How Long Should a Social Media Video Be?" (blog.hootsuite.com/how-long-should-a-social-media-video-be) for the latest advice on different platforms.

Adding audio

Many online video journalists like to dispense with voice-overs where the journalist introduces a piece or adds running commentary. They prefer to let the visuals of the story, the narrative of the video, and the people in the piece tell the story. The argument is that voice-overs hold up the story (because people want to see action not talking heads) and that their use is too much like broadcast television (this is a stylistic preference).

However, there is nothing to prevent a journalist from recording a separate piece of audio to run with the video if it helps to give context and add meaning to the story. This can be recorded on the phone or camera itself or separately using a microphone attached to your computer.

Adding audio to video on mobile can be problematic on some devices, so it may be easier to record audio as a video clip and then detach it from the video track in the editing.

Don't be tempted to add loud music to add to the dynamic of the piece or music with lyrics that will detract from the message: the listener might feel like they are being emotionally manipulated, or simply not like your taste. It is also likely to raise copyright issues. Remember to get permission if you use music and other copyrighted material. If you do need to add music there are many websites where you can download copyright-free music for free (search.creativecommons.org allows you to search some of these, such as ccMixter) if you feel it adds to the story, but make sure you give appropriate credit.

Clever use of audio or natural sound can make your story much more evocative. Don't show a picture of a baby crying without letting your viewer hear the sound. This is known as letting your package *breathe*. And try not to show pictures of people talking if your voice-over prevents the viewer from hearing what they are saying. This is known as *goldfishing*.

Creating titles and credits

Your editing software should allow you to create titles and credits that you can type and place on the video. Interviewees should have their name and title clearly displayed, set left or right, at the bottom of the screen. Be sure to use credits for byline purposes and for commissioned material such as archive footage and music. Check the size of the text—it can appear very small online. As with transitions, resist the temptation to choose more elaborate caption designs. Keep the typography and colour simple—and the focus on the story, not your telling of it.

Step 4: Publishing video online

Video files need to be compressed into a file format that works online. MOV is popular among journalists but there are other formats such as MPEG, MP4, and AVI. Most multimedia organisations host video themselves and will have guidelines on formats and other considerations depending on the content management system they use. Others will allow you to upload video directly to a video-sharing site such as Vimeo or YouTube, which accepts all of the above file formats and many more besides.

The compression process can leave your crisp video footage looking blurred, so experiment to see how compressed it needs to be. High definition (HD) is nice, but it too will need to be compressed and it also uses up far more memory (HD comes in more than one size) and takes longer to upload. If your story is time-sensitive, the HD version can wait—get it up as fast as you can.

Once you've uploaded to a site like YouTube, take time over settings like the title, description, tags and categories (see below), and licences. Videos will default to a YouTube licence, but if you choose a Creative Commons licence, this means that other people can find your video in the YouTube Video Editor or in Creative Commons searches and make new content. This can help you to reach new audiences and make it easier for people to collaborate with you. For the same reason, it is a good idea to leave embedding on: World Press Photo research found that videos that are embeddable receive five times as many hits as those that are not (Campbell 2013).

Video optimisation

Uploading a video to the web should never be the end of your video production process: it is vital that you add extra information that helps search engines understand what your video is about and make it easier for users to find.

First on the list should be your *video title and description*. Use the same SEO principles outlined in the chapter on writing for the web to make sure that these help search engines understand your video content, but remember that they are also normally displayed in search engine results and in searches within YouTube and Vimeo, as well as other platforms such as Instagram TV and Facebook Live: so a strong title and description can increase the chances that someone clicks through to watch your video.

The same applies to any article containing your video: don't just publish the video on its own without any text: make sure you write something that introduces the video and makes it easier for search engines to understand.

It's important to remember that YouTube itself is the second biggest search engine after Google, so chances are that many people will come across your video there rather than in the article it relates to. For that reason, remember to use your description to link your video to any article it appears in, and also to link to other relevant pages such as your author page.

Choose a good thumbnail for your video: this can be changed in the video settings. More broadly, take some time to optimise your channel as a whole, too: add a welcome video, a channel description, links to social media and other YouTube channels, and create sections if relevant. Playlists can be used to gather related videos together.

When it comes to social media make sure you make video that people want to watch all the way through: Facebook, for example, take into account not only how many people have watched a video but also for how long, so it's better to have a short video that people watch in full than a long video that people are going to stop watching halfway through. If a user turns on the sound or makes the video full screen that also helps.

Captions have become a key feature of video created for social media: a study by Verizon Media of US consumers found that 69% viewed video online with the sound off in public places—and even when watching in private, a quarter still watched with the sound off (McCue 2019); 80% of consumers also said they were more likely to watch the whole video if it had captions.

The context in which people are likely to be watching the video can make this even more important: 80% of video views on LinkedIn take place with the sound off, most likely because its audience are professionals who use the platform at work. The company says that videos designed to be watched with the sound off are 70% more likely to be watched all the way through (Bunting 2018).

On Facebook and Instagram, the first three seconds are especially critical, not only in grabbing the attention of users—but also because the platform will only count a "view" if the video has been watched for that long. Live videos are given particular weighting while they are still live, but are less likely to be seen afterwards: Facebook has found that users watch videos three times longer while they are live compared with when they are no longer live (Kant 2016).

Captions and accessibility

Captions aren't just useful for people who happen to have sound turned off on their devices—they're an essential element in making your content accessible to people who are deaf or hard of hearing.

There are two types of captions: closed and open. Closed captions are separate from the video itself and can be turned on or off, while open captions are created within the editing process to be part of the video itself, and so cannot be turned off. It is possible to have both—and closed captions offer a number of advantages such as making it easier to translate videos and making them more searchable (search engines will use the caption transcripts as a source of information about the video).

Many platforms have auto-transcription functionality that will use voice recognition to create transcripts and closed captions. Instagram Stories have a captions sticker that will do this, for example, and elsewhere on that platform you can turn on captions in the account settings, then auto-generated captions in advanced settings while uploading content on Instagram TV. TikTok likewise allows you to add auto captions in the settings when uploading content, YouTube Live allows you to turn this on in the stream settings, and YouTube Studio allows you to add subtitles to a specific video once you have uploaded it.

However, automatic transcription is prone to mistakes—especially if the audio is not clear or there are competing sounds in the video (another reason to make sure audio is clear wherever possible). So if the platform allows you to edit the captions, as most do, make sure you check what it thinks was said, and edit it accordingly (search for instructions on how to do this on your chosen platform).

In some cases, you can upload your own transcription file. Twitter has automatic captions turned on by default, for example, but it is best to upload a caption file with the correct text in the .srt format (search Twitter's Help Center Accessibility section for its guide to uploading caption files). YouTube specifically says that they encourage publishers to add professional captions rather than rely on automatic captions, which "may not be ready at the time that you upload a video. Processing time depends on the complexity of the video's audio" (Google 2022).

Third-party auto-transcription tools, such as MixCaptions, AutoCap, and Amara, can help you generate an initial captions file that you can then edit.

Audio description

Aside from captioning video to make it accessible, you should also consider *audio description*: this is narration added to a video to describe elements that someone would need to be aware of in order to understand what is happening. In particular, it serves the purpose of making your visual content accessible to people who may be blind or have low vision.

You can find online tools for adding audio description to videos, such as CaptionSync and the 3Play Plugin, but the broader principle is to try to ensure that your video does not rely on presenting information visually, especially if it is hosted on social media (where audio description tools might not be supported).

If your video is caption-led, for example, with video only used to illustrate the story that is being told through those captions, then this will not be accessible to someone who is blind—you will be discriminating against them. A simple example might be a recipe video where the ingredients of the recipe and the steps are all presented through captions. Instead, consider narrating the video so the same information is conveyed. Likewise, when a new person is introduced on screen, avoid relying on the caption to tell us who is speaking—get them to introduce themselves (or introduce them through narration, for example, "Emma Boyd was the first police officer to arrive at the scene"). If the video is part of a social media update, you can also use the accompanying text to provide important information.

The World Wide Web Consortium (W3C) provides a "Does My Media Need Description?" checklist at w3.org/WAI/media/av/description/#checklist as part of its wider section on Making Audio and Video Media Accessible (w3.org/WAI/media/av).

Checklist to consider when posting video:

- Write titles like you would write a headline for the web, with keywords that make them searchable
- Write descriptions like you would write the first paragraph of a story, and add useful links
- Make sure category and tags are correct
- Choose a good thumbnail image
- Consider using a Creative Commons licence
- Remember to cross-promote online video in print or broadcast—and vice versa: link from your video upload to any stories that use it
- Use captions for social media: most video is watched with the sound turned off
- Use auto-transcription for closed captions and SEO—and edit the transcription if needed
- Consider adding audio description if the video would not make sense without captions
- Create shorter versions for social platforms where relevant, linking to the full video online
- Consider using shorter clips within a text article, as well as publishing the "full video interview" as a separate piece, allowing users to choose how they consume the content and providing more opportunities for discovery
- Consider "chunking" longer video into parts that can be found and viewed separately, but link to each other
- Consider uploading to multiple platforms: social networks tend to prioritise "native video" uploaded directly to the platform, rather than links to videos elsewhere

Live video

Live video has been available to journalists online for over a decade: livestreaming services Bambuser, Qik, Ustream, and Justin.tv all launched in 2007, while YouTube announced its own livestreaming service YouTube Live in 2011 and the video game livestreaming platform Twitch launched the same year. But it was the launch of Meerkat in 2015 that really kicked off the rise of live video for mainstream publishers.

Within a month, Twitter had launched its own live video app, Periscope. And just five months later, Facebook launched Facebook Live. The race was on, with the trend spreading to other platforms too: in October, Twitch launched Twitch Creative, an attempt to expand outside of video game playthroughs, and in 2016, Tumblr and Instagram added live video capability too. In just 12 months, live video postings on YouTube had increased by 130% (Shead 2016). Eventually, the other platforms followed, too: Vimeo in 2017, LinkedIn Live in 2019, TikTok in 2020, and Pinterest in 2022.

Publishers have been quick to take the opportunity to go live: in April 2016, BuzzFeed famously spent 45 minutes livestreaming two employees trying to make a watermelon explode with rubber bands, with over 800,000 viewers watching at one point.

Facebook Live was put to more serious use in June of the same year when BBC Newsnight decided to stream a "day of Facebook Lives" in the wake of the UK's EU referendum result. Normally limited to 45 minutes of airtime on air, the team essentially used Facebook Live to create its own 24-hour channel for one day. Similar "parallel" broadcasting could be found during that year's Euro championships and Olympics as TV presenters invited viewers to continue watching on their Facebook page, while on radio a phone-in with the Newcastle manager on BBC Newcastle was streamed on Facebook Live and attracted 100,000 views.

A more in-depth use of live video was demonstrated by New York Times journalist Deborah Acosta, who used Facebook Live to stream her quest to find the person who had taken photographs she found on a pavement (Spayd 2016).

Most platforms provide guidance on best practices for livestreaming. Facebook's have been whittled down to just five tips (Meta 2017):

- Go live when you have a strong connection
- Engage with your audience
- Broadcast for longer periods of time to reach more people
- Tell people ahead of time when you're going to broadcast
- Be creative and go live often!

Analysis also suggests that vertical live video with short captions tends to do best in terms of engagement on Facebook (Cucu 2021). TikTok's "Going LIVE" page repeats much of the advice of Facebook but also recommends planning in advance, sticking to one camera angle, and considering lighting and sound (TikTok 2020). Audio is just as important in live video as in recorded video—it is often the first thing to be forgotten, so make sure you give it as much consideration as the visuals. It's also important to ensure that blind and partially sighted users can still understand what's happening through the audio. Hootsuite's guide to inclusive media advises: "Live video hosts should be familiar with descriptive video techniques, taking pauses to describe what's happening on screen" (Sehl 2020).

Summary

Online video is not one form of journalism: it is several. It is the solo mobile journalism of "backpack journalist" Kevin Sites and the longform video popularised by Vice News; gamers on Twitch; lifestyle vloggers on YouTube engaging with their communities; and Buzzfeed's social-savvy video and broadcasters livestreaming long after their programme goes off air. It is reporters including raw footage in their text reports or animating backgrounders to explain the context of their story. It can be vertical, horizontal, or square; raw, edited, or live; six seconds or feature-length.

Some of the techniques of broadcast journalism simply aren't appropriate online, and often the story is best told by taking the reporter out of the way. But other principles still apply: the need for a strong story, engaging characters, and ruthless editing to tell a story succinctly. Beyond broadcast, it is important to take lessons in storytelling from cinema and documentary too: the importance of sequences, for example, and narrative in longer pieces. And remember, good video means clear audio.

As video journalists we are publishers too: it is important to make sure that we think about how our video is understood by search engines and why people might share it on social media; how people might interact with it and the contexts that they might experience it in, from an article to a YouTube page to a social media update.

But all good video starts from one thing: an idea. You don't need to be piloting drones and filming 360-degree video to create compelling content; you just need to keep an eye out for stories that can be made better with some moving imagery. Keep it simple to begin with and build from there.

Activities

1. Analyse how news outlets use video on different platforms

Make a list of news outlets that you'd like to work for. See if they have a YouTube channel, and track down any accounts on Instagram, Facebook, Twitter, TikTok, and LinkedIn. Check different parts of those platforms, too—for example, on Instagram look at photo captions, Stories, Reels, and Instagram TV.

Look at how they use video differently across those channels and ask:

- How does one organisation tell the same story in different ways on different platforms? Do they edit to different lengths? Make the footage vertical rather than landscape? Is it more caption-driven on some platforms? Presenter-driven?
- How do organisations differ from each other on the *same* platform? For example, does the BBC World Service use Facebook Live in the same way as CNN? Or have they adopted different strategies and editorial styles?

2. Analyse how individual journalists use video on different platforms

As well as "branded" accounts, you will also find individual journalists using video to tell stories across social media (you can use filters on some platforms to only see their Twitter videos, Facebook Live, and so on). Look at a few accounts and ask:

- Who tells the story? (For example, the reporter, a source, or captions)
- What is the point of the story?
- Why do you think they took this approach?
- Was it successful? Why do you think it was successful?

3. Create a behind-the-scenes video for one of your stories

Pick a story that you've written and use video to provide behind-the-scenes insights for your followers.

- Decide how long your video will be—keep it short
- Make some notes of key elements you want to include
- Identify how it should begin—what is happening, followed by why it matters
- Identify how it should end—inviting comments or adding a poll are both good options
- Try not to read from a script, keep it natural. If you fluff your lines start again—or carry on and just cut out the mistake in editing (people are used to jump-cuts in social video) or leave it in to keep it raw and informal
- Post it to a social media platform or YouTube—read comments and respond—appropriately!

4. **Organise a remote interview so that you can edit it into a video**

Identify someone you can interview via video call—try to pick someone who can add some new information to a current news story (such as an expert or witness), or someone who is newsworthy (such as someone in a position of authority or renown).

- Spend some time organising your own filming set up, so you are well-framed and lit
- Make sure you have a good stable internet connection and you're in a quiet place—and include the same advice in your communication to the interviewee
- Spend some time at the beginning of the call helping the interviewee to set up the shot at their end so it matches yours (for example, the eyelines are at the same level)—inform them in advance that you'll be doing this
- Be prepared to ask the interviewee to repeat an answer if there was a problem with the connection, background noise, or it needs some other tweak, such as the inclusion of the question
- Ask the interviewee if they have any video or images related to the story that you can use as "b-roll" (material to cut away to), or if they can get someone to film them talking to you on the laptop
- Once you've finished the interview, use the steps in this chapter to log the video and do a "rough edit" on paper before editing it for real
- Get feedback on your video—and edit it again. The first edit is rarely the last one!

5. **Video an event**

Get permission to shoot video at an event such as toys, gadgets, or wedding trade shows:

- Start with establishing shots of the venue and people as they pour in
- Take mid-shots of exhibits, displays
- Interview exhibitors and customers using close-ups
- Find the most popular stand and video someone testing a product (it could be you)
- Find out what the themes and trends are and close the video with a good quote

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Online resources

BBC Editorial Guidelines www.bbc.co.uk/editorialguidelines
BBC Safety Guidelines: Unmanned Aerial Systems [drones]: bbc.co.uk/safety/resources/aztopics/unmanned-aerial-systems

Docubase (an interactive documentary directory): http://docubase.mit.edu/
Instagram Creator Handbook: https://www.dropbox.com/s/t5bt8qq1pf28kwf/Instagram%20Creators%20Handbook%20-%20IGTV.pdf
Meta For Creators—Instagram Reels: facebook.com/creators/tools/reels
PBS Newshour Student Reporting Labs Guide to Conducting Virtual Interviews: https://docs.google.com/document/d/1jOO7Ja1BKLTYisd2Z4V6C1P-muvTm3EGtZL_1hZMIh8/edit
Vimeo Video School: vimeo.com/blog/category/video-school
Virtual Reality Journalism: https://towcenter.gitbooks.io/virtual-reality-journalism/
TikTok Creative Centre: https://ads.tiktok.com/business/creativecenter/pc/en
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10 Data journalism

Chapter objectives

This chapter will cover:

- Why data journalism is in demand in the news industry
- What data journalism is
- How to come up with data journalism ideas
- Where and how to find data
- How to tell stories with data
- What “dirty data” is—and how to clean it
- Data visualisation techniques, types, and tools
- The importance of statistical literacy
- Mistakes to avoid in data visualisation
- Tips for infographics, scrollytelling, charticles, and “steppers”
- Animation in visualisation
- Chart and map creation tools
- What is sonification—and how to tell data stories with music

Introduction

It is not easy to make a mark in the current journalism jobs market—so the story of Josh Katz is particularly striking.

While most students spend years trying to get through the doors of the most famous newspapers, the New York Times *asked* Josh Katz to do an internship there. And when he did, he ended up creating the newspaper’s most popular piece of content that year—even though it wasn’t published until December 21. When his internship ended, they gave him a job—as a staff editor on a new project.

Why was Josh in such demand? He had data journalism skills. And equally importantly, he had an idea for a project that would end up being shared by millions of users across the US.

“How Y’all, Youse and You Guys Talk”—a data-driven interactive feature based on data about dialects around the US—was launched on the New York Times site when most readers were winding down for Christmas. Within ten days, millions of users had accessed it—more than any other piece of content in the 355 days before it went live.

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Data journalism has the ability to create rock stars. In fact, former Guardian data editor Simon Rogers calls it “the new punk”. In 2012, data journalist Nate Silver, who began writing about baseball data before founding the political data blog FiveThirtyEight, became perhaps its most famous “star” within the media industry when he started to drive an enormous proportion of traffic to the New York Times, who had bought his site. At one point, 71% of political story views were on FiveThirtyEight posts. But the site was also driving traffic across the whole site:

> Earlier this year, approximately 1 percent of visits to the New York Times included FiveThirtyEight. Last week, that number was 13 percent. Yesterday, it was 20 percent. That is, one in five visitors to the sixth-most-trafficked U.S. news site took a look at Silver’s blog.
>
> (Tracy 2012)

A year later, after a bestselling book and approaches from the movie industry, Silver was poached by ESPN, allowing him to return to his love of sport. “Nate disrupted the traditional model of how to cover politics”, said The New York Times public editor Margaret Sullivan (Sullivan 2013). And along the way, like any good punk, he had managed to stir up the status quo. “Punditry is fundamentally useless”, he once said (Allen 2012).

What is data journalism?

Some people think data journalism has to be especially technical, mathematical, or investigative. In reality, it doesn’t have to be any of those things.

The most famous stories of the last two decades—from the MPs’ expenses stories of 2009 to Wikileaks’ warlogs stories the following year, to revelations about extraordinary rendition and torture of terrorism suspects and the Panama Papers—have all been data journalism stories.

But data journalism is also behind everyday reporting, from school league tables to the most popular pet names, from clown crime waves to places to avoid eating. It is used on TV, radio, newspapers, and magazines—and, of course, online.

Yes, data journalism can be about statistics and spreadsheets. But data journalism is also used by music journalists, entertainment reporters, and new fashion publications. Sometimes the resulting story might not mention any numbers at all. As Susanna Kempe of Emap’s fashion website WGSN once said of the data-driven approach:

> The fundamental difference is that an old-fashioned publisher is about publishing the past, what has happened, and what we do is all about saying what will happen. And because of that we enable our customers to be successful in the future. It’s a dramatic shift.
>
> (Smith 2011)

Data journalism is, basically, any journalism that involves structured information. And when everything is online—from government spending and last month’s weather to music sales, fashion gossip, social network connections, and sports performances—that basically means the world is your oyster. Here are just a few examples to illustrate how diverse data journalism can be:

- Hardship funding for students doubled last year (BBC)
- Non-white footballers played better when stadiums were empty during the pandemic (The Economist)
- How much energy does the "greenest government" get through? (I, Scientist)
- London fashion week—which colours are always in style? (The Guardian)
- Presidents' Speeches Getting Dumb & Dumber (Vocativ)
- Calorie calculator: How many calories does your favourite local dish contain? (Channel News Asia)
- Lost Mothers: A project investigating the dangers of pregnancy and childbirth in the US (ProPublica)
- Reality cheque: We taught AI to spot the most used props this election. Here's what it found (Guardian Australia)
- Live counter: Watch how much NHS money is going into private hands (Mirror)
- Where My Money Dey? (Act Now/Code For Africa)
- Best Electric Cars: Bloomberg's Guide to Green EVs (Bloomberg)
- Universities where students sign up to "sugar daddy" dating sites to pay fees (Telegraph)
- Cost of living: The price of women's clothing is increasing much faster than men's—here's why (Sky News)
- From Poppy to Sherlock: The UK's most popular pet names (Guardian)
- The Fallen of World War II—Data-driven documentary about war and peace (Independent)
- 12 Charts That Explain Why You'll Never, Ever Be Able to Afford a Home (BuzzFeed)
- Sex by numbers: How do you measure up? (Telegraph)
- Using GPS Trackers to Investigate Where Unwanted Clothing Ends Up (YLE, Finland)
- What The Numbers Say About Who Will Win at the Oscars (BuzzFeed)

In short, if there's information about it online, you can do data journalism with it. That means not just numbers and statistics, but words and speeches, colours and images, sounds and video, and even people's connections with each other.

Centuries of journalists working with data

Data journalism might feel like a new form of reporting—but it's far from it. The front page of the very first edition of The Guardian in 1821 led on a table of school spending (Rogers 2012), and in the late 1840s, the editor of the New York Tribune was commissioning journalists to investigate data on politicians' travel expenses (Klein 2015). A few decades later, the journalist Ida B. Wells was using data to factcheck the reasons used to justify lynching (Lind 2015).

Computers were used in 1952 to predict the presidential election for CBS News (quite accurately, as it happened). Then, more significantly, in the 1960s, Philip Meyer used social science methods to investigate the causes of riots in Detroit (Cox 2000).

Meyer became a pioneer in the field, the author of a seminal work in the field—*Precision Journalism*—and the father of what became known as computer-assisted reporting (CAR). CAR was a precursor to data journalism: its techniques centred largely on working with spreadsheets and databases on your own computer.

What changed in the 21st century was that computers became networked, and publishing moved from one-way media like newspapers and TV to the interactivity of the internet. The phrase "data journalism"—sometimes "data-driven journalism"—was coined to describe this new and broader method (given that computers were now "assisting" almost all journalism).

Adrian Holovaty was central to this change, and if there is a year for the birth of modern data journalism, it is probably 2005 when Holovaty launched ChicagoCrime .org. The website combined a number of qualities of the new method: first, its data gathering was networked and automated: every weekday, his computer program would go to the Chicago Police Department website and gather all crimes reported in Chicago. Second, it could be viewed in any way the audience wanted: users could browse by crime type, ZIP code, and city ward. Third, it was strongly visual: a map that people could interact with.

Holovaty himself was influenced by the BBC's Backstage project, which opened up its content for developers to remix. And predating both was the work of MySociety in the UK, which opened up data on the activity of politicians and made it easier to hold power to account—the classic watchdog role of journalism—with projects like TheyWorkForYou, Democracy Club, and WhatDoTheyKnow. The site was even threatened with legal action by politicians who didn't like citizens being able to see how they voted.

Getting started with data journalism

Data journalism can involve all sorts of skills and people, from those who are good at getting information in the first place to those who can pull stories out of it (analysis), those who can write the stories, tell those stories visually (data visualisation), or make them interactive.

A diagram showing the various stages that *might* be involved in any data journalism project is shown in Figure 10.1.

The key to data journalism is to start with simple projects that build different types of skills. For example, creating a "top ten" table might help you build basic spreadsheet skills, then you might try creating some charts using a free online tool. In another project, you might move on to mapping, you might work with a bigger dataset, or acquire data in a different way.

The main principle is to learn by doing projects that excite you: don't learn tools for the sake of learning tools or you'll quickly get bored or frustrated. Be driven by your passion.

Don't panic!

Data journalism can involve a range of skills, from data-gathering skills to programming, visualisation, and design. But you don't need to use all of those skills all of the time, and most data journalism stories either involve a small number of skills, or a team of people who cover a number of skills between them. There are very few data journalists who have them all. In fact, those people who *do* have all these skills are so rare that they are known in the industry as "unicorns".

Figure 10.1 The inverted pyramid of data journalism

Listen to this: The author of this book was interviewed by DataJournalism.com alongside the Sky News data journalist Carmen Aguilar Garcia, and Michelle McGhee, a journalist-engineer with The Pudding. Listen to their podcast at bit.ly/3d4E1HY.

Coming up with ideas for data-driven journalism

Data journalism ideas start in exactly the same way as every other journalism idea:

- You are either reacting to new information (in this case, data)
- Or you have an idea—perhaps based on a lead or tip-off—and decide to seek out the information that allows you to write a story about that

You will have probably seen a lot of stories based on reacting to new data: whenever new unemployment figures are released, for example, it often makes the news. When schools, colleges, and universities release their results at the end of the year this inevitably generates stories about whether education is getting better or worse—or exams getting easier. Identifying forthcoming data releases (most are public) is a good way to get started with simple data journalism techniques.

Sometimes that data is supplied directly, from a source or in a press release. The story “From Poppy to Sherlock: The UK’s most popular pet names”, for example, came from a press release by a pet insurance company, and major international stories such as the Panama Papers came from confidential leaks where a team of journalists had to react to the information they’d been given and find the stories in it.

In contrast, *proactive* data journalism stories tend to start with a question. “London fashion week—which colours are always in style?” is exactly that: a question. The same applies to the data-driven story “Which singer has the best vocal range in the UK—No, it's not who you think”.

Having a hypothesis helps: "Presidents' Speeches Getting Dumb & Dumber" is a story that comes from testing a hypothesis—but be prepared to change your hypothesis as you start to look at the evidence (in this case they may have started with the hypothesis that speeches were getting more complicated, for example, but changed that based on what they found).

Sometimes that hypothesis can be as simple as "things are working as they are supposed to". Are things that are supposed to go down, going down? Are things that are supposed to be getting better doing just that? Do people have access to the services and opportunities they are supposed to? Are people being stopped and searched by police because they've done something wrong—or are the powers being misused?

Sometimes proactive data journalism begins with someone complaining about something or an observation of unfairness. The Atlantic story "In Champaign-Urbana, Illinois, 89% of Those Arrested for Jaywalking Are Black" is one of those: it is based on a hypothesis that there were disparities between two communities in the number of arrests.

Another form of a proactive story is to come up with an idea to *follow up* on a current news story, providing a data-driven angle on the issue. A national announcement about child poverty, for example, may give you the idea to follow up with an analysis of regional data to give readers a local picture of the situation. A sports team struggling may be the inspiration for a historical overview of their decline over time. A politician's claim about immigration may be factchecked against the reality. In these cases, it helps to be able to react quickly before the news agenda moves on.

To come up with a data journalism story idea it is worth trying both approaches:

- To be *reactive*, you need to be regularly checking new sources of data, whether that's government data releases, company reports, or press releases
- To be *proactive*, you need to be curious about the world around you, and issues that are already in the news

Look at lots of examples of data journalism as well: often you can adapt one idea in a number of different ways. If the story was done about one country or region, for example, why not repeat it for a different place? If it was focused on a particular category (of crime, for example), see if you can repeat it for a different category; or see if you can adapt the idea for a different field entirely (a story about the most searched-for fashion brands could be adapted for the most searched-for sports personalities). You can also simply take an idea that was done a year or two ago and repeat it with newer figures. If an idea has worked before, there's a good chance it will work again.

Eight types of stories you can tell

When generating data-driven story ideas there are eight approaches you will find useful time and time again. Data is regularly used to tell stories about how big or small a problem is; to identify whether things are getting better or worse; to identify unfair variation in people's experiences (for example, in health or education); and to identify people, places, or organisations that are doing particularly badly—or well.

Scale stories—those which identify a big problem or the size of an issue that has become topical—are often the easiest and quickest to do. If a particular crime hits the news, you can be sure that an editor will want a piece on just how common that crime is. And unusual

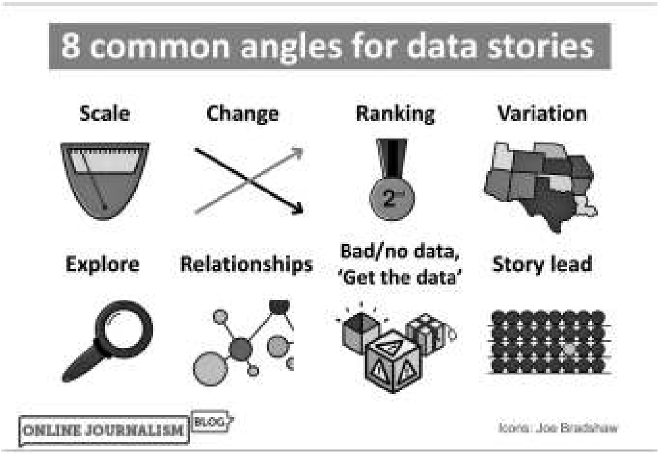

Figure 10.2 Eight common angles for data stories

events like a whale getting stranded on a local beach will often be followed up with a simple piece revealing "Here's how often whales have been beached in the last ten years".

Change stories are even more interesting—if you do find that things have changed. The release of unemployment figures, for example, will see reporters analysing the figures to see if unemployment has gone up or down. A lack of change can be newsworthy too: if the government has pledged to cut crime and it's not changing, then that's important to report.

Ranking stories are all about what, who, when, and where are the best or worst when it comes to a particular metric. Which area is the most expensive to live, for example? Which school is reporting the best results? What time are people most likely to listen to sad songs on Spotify? Which celebrity has the most followers on social media?

Variation stories focus on areas where we would expect people to be treated equally or have equal access to certain facilities—and they're not or don't. The BBC data unit story "IVF: NHS couples 'face social rationing'", for example, maps out how where you live in England can mean the difference between being able to access fertility treatment and not.

One emerging branch of data journalism that has a particular focus on this type of story is "algorithmic accountability" reporting. ProPublica has been a leader in this field: its Machine Bias series looks at the power that algorithms have on people's lives, often leading to a variation of outcomes for people where you would want fairness: people being sentenced differently, or given different insurance quotes, despite no meaningful difference between them on the dimensions that matter.

Those four types of data-driven stories—scale, change, ranking, and variability—tend to be the basis of news articles. But the other four types tend to be used more for features and in-depth reporting.

Exploratory stories, for example, might use a combination of angles to look at a particular issue for a listicle or explainer (see the chapter on web writing for more on these formats). BuzzFeed's feature "12 Charts That Explain Why You'll Never, Ever Be Able To Afford A Home", for example, is a special form of listicle known as a *charticle* (see below for more on charticles): this explores a topical issue (housing) through a range of charts on different dimensions of the issue (price, tax, earnings, house building, etc).

Exploratory angles are also often interactive, with a "call to action" like "explore", "play", or "Take the quiz". Simulators like the Washington Post's record-breaking "Why outbreaks like coronavirus spread exponentially, and how to 'flatten the curve'" are exploratory, as well as games, calculators, and chatbots, among other formats. See the chapters on interactivity and chat for more on these formats.

Relationship stories provide a different potential angle if the dataset suits it. People often seek to establish relationships by looking at data, but the reality is often more complex: correlation is not the same as causation (see the section later in this chapter for more on correlation), so even though two things may be going up or down at the same time, it does not mean that the two are related—as The Guardian's "Is rise in violent crime due to cuts to neighbourhood policing?" explores.

Relationship stories, then, more often than not revolve around *debunking* a relationship between two data points. Channel 4 News's FactCheck, for example, looked at data to answer the question "Are migrants causing the A&E crisis?" and found no relationship between the size of the non-British population in an area and the performance of accident and emergency departments.

Needle in the haystack stories are another type of story you can do with data skills: this involves using datasets to find individual instances of behaviour that may be suspicious or unethical—in other words, a story lead. Often you are already interested in a particular organisation or individual and want to see what you can find out about their activities: there may be an unusual payment buried in the data or a pattern of behaviour that raises questions. The data provides the jumping-off point, and the authority, to begin asking questions—or to identify the key people, places, or companies that you need to start talking to. The results can be major investigations that lead to real change.

A final category of story is where the data either wasn't easy to access (before you got involved) or where data is flawed (and you've helped to draw attention to it). These might be described as *bad data*, *no data*, or *get the data* stories.

Stories about problems with data quality can be incredibly important: power is exercised, money spent, and lives affected on the basis of data, so if the data is flawed then the exercise of power is likely to be flawed too. If a police force is underreporting crime, a hurricane-hit country is inaccurately reporting deaths, or tests sent are being counted as "tests conducted", then there is the risk of those in power making false claims unchallenged.

Story ideas can come from checking those claims, from hearing about someone who has been through the system and seen its gaps, or from simply scrutinising existing data for problematic features: stories on homelessness data being "not fit for purpose", and concerns over gender pay data came from journalists noticing "red flags" in the data.

Sometimes there is no data at all—and instead of thinking that this is the end of your story, consider that it might be the beginning. Are there concerns being raised about the lack of information or transparency that you can report on? The BMJ's investigation "Are medical schools turning a blind eye to racism?", for example, leads on the line that schools were ill-prepared to tackle the problem because they didn't collect data on it. Vice's story "7 Universities Say They Have 'Zero' Reports of Sexual Violence, But the Numbers Don't Add Up" highlights the likelihood that those universities aren't monitoring the issue actively enough.

Caroline Criado Perez's book *Invisible Women* is an example of an entire book being dedicated to a "data gap"—it's essential reading for any data journalist not only as an example of the stories that can be told about those but also because it highlights a range of problems to consider with data you might use for other stories.

If it's not easy for people to get hold of important data, you might also work on a project to collect the data yourself and make that available to readers. The resulting story might lead with the call to action: "Get the data", or it might take the shape of a "tracker" or "dashboard". After a number of incidents in which US police shot civilians, for example, two projects were launched to gather and share data on such incidents (which were not officially recorded): The Guardian's The Counted and Washington Post's Fatal Force. The data published by these organisations made it easier for people to hold power to account. In another example, the German investigative project Correctiv launched a tracker on its website less than a week after Russia's invasion of Ukraine to help users keep track of data on sanctions.

Finding data

If you want to be alerted when new sources of data are published, there are a range of places that will provide alerts. Typical sources include:

- National, regional, and local governments
- International and multinational organisations such as the UN, EU, or World Bank
- Bodies that monitor organisations (such as regulators or consumer bodies)
- Scientific and academic institutions
- Health bodies
- Crime and justice bodies
- Charities and pressure groups
- Business
- And the media itself

In the UK, for example, government statistical releases, research, transparency data, and freedom of information releases are all published centrally on the gov.uk site's Publications page (gov.uk/government/publications), where you can subscribe to email or RSS alerts based on keywords, categories, information types, or a combination of those. For example, if you are interested in sport, media, or the arts, then it is worth getting updates from the Department for Digital, Culture, Media and Sport.

Most countries have a national statistical body, such as the Australian Bureau of Statistics, the UK's Office for National Statistics (ONS), or Statistics Canada. Some have more specific statistical bodies—the US has both a Bureau of Labor Statistics and a Bureau of Justice Statistics, for example. Those agencies will often provide alerts and a calendar of future data releases so you can plan ahead. For other bodies, data may be announced in press releases, so it is worth seeing if they provide an alert facility or asking to be added to their mailing list.

Many countries have open data portals such as data.gov (in the US) and data.gov.uk, and regions and cities sometimes do too: London's is at data.london.gov.uk and Ontario's is at data.ontario.ca.

As well as formal open data portals, watch out for projects that seek to open up data from the outside: OpenCorporates, for example, provides open data on millions of companies around the world. OpenDataCommunities.org provides open data on hundreds of local authorities. Try searching for "open data" and your topic to see if there's a portal providing data.

Try also searching particular organisations' websites to see if there is a section where they publish their responses to Freedom of Information requests. These not only often provide useful data, but also ideas for stories (such as repeating a request a year later)—see below.

Closer look: Right to Information laws and "FOI/FOIA"

A great way to get data for exclusive stories is to use Right to Information (RTI) laws. These laws, such as the Freedom of Information Acts in the US, UK, and Australia, give people the power to ask for information from public bodies including data and documents. These requests are often abbreviated to "FOI requests" or "FOIA requests".

Public bodies include police forces and the justice system, hospitals, schools and universities, public transport bodies, the military, arts councils, local councils, and central government, and pretty much any organisation run directly with taxpayers' money. Bodies have to respond to your request within a particular period (four weeks in the US and UK), but there are also exemptions such as if the request would cost too much to fulfil or it would breach someone's right to privacy.

Many countries have an online platform to make it easier to submit an FOI request: WhatDoTheyKnow in the UK; FYI in New Zealand; OPRA Machine in New Jersey, USA; and Right to Know in Australia are just some of those based on the Alaveteli platform. As well as submitting FOI requests through the site, you can use these to find similar FOI requests and the responses to them. However, your request will be public, so if you don't want other people to see it, you can also use the site to find out the relevant email address to send your FOI request.

When requesting data through an FOI request, it is always useful to specify the format that you wish the information to be supplied in—typically, a spreadsheet in electronic format if you want to avoid having to convert PDFs or Word documents. You should also request as much detail as possible: try asking for breakdowns by incident, day, week, or month rather than aggregate totals.

Look for books about FOI laws in your country for tips on using FOI in different sectors and phrasing your request so it is not refused under one of the exemptions.

Using search engines to find data

If you are using a search engine to find the data you are looking for, it can help to specify the type of file you want (e.g. spreadsheet) and the type of domain it is on (e.g. government sites). This will ensure your results aren't dominated by news stories that don't contain raw data.

You can do this by using the *advanced search* facility: on Google, this is at google.com/advanced_search (or just search for "Google advanced search") or you can use "search operators" such as *filetype:* or *site:*. Note that there is no space between the operator and whatever file type or domain you want to specify.

Here are some examples of how you might use these:

- School spending filetype:xls
- "disclosure log" site:ac.uk
- alcohol licensing applications site:bolton.gov.uk

- "hate crime" site:police.uk filetype:pdf
- twins site:nhs.uk filetype:xls

There's a lot more you can do with search operators, such as specifying words in the URL or title, excluding words, and specifying number ranges. See the chapter on search for more operators. For an extensive guide to Google search see googleguide.com/advanced_operators.html.

Gathering data yourself

There are two basic approaches you can take in gathering data: compiling it from other sources such as newspapers or other reports (secondary research, as used by the award-winning Migrants Files and the Bureau of Investigative Journalism's Naming the Dead project) or collecting it yourself through methods such as observation or surveys (primary research).

Whichever method you use, you should understand potential weaknesses in the methodology and seek to address these. The selection, size, and generalisability of the sample; the selection and phrasing of questions; the environment; the use of a control group; your own presence; and myriad other factors must be considered to ensure that your methods stand up to scrutiny.

Needless to say, there are countless books covering research methodology and you should read these if you are to do any research of your own. Even if you don't, they will give you an understanding that will prove very useful in looking at the methods used to gather other data that you might use.

Live data

Sometimes news organisations use live data in their data journalism, particularly in sports and elections. This requires a certain amount of preparation and organisation: you'll need to identify where you will get the data from, and how you might filter it (sometimes live data comes from an API or is "scraped"—see below). You'll need to consider how you might visualise it most clearly, or even automate some of the reporting (some of the BBC's live election coverage on Twitter is automatically generated based on incoming data).

If the live source is one that the public can contribute to themselves—such as a social media feed—you'll need to consider whether people might try to "game" that data, intentionally skewing the results for political reasons, commercial gain, or simply for fun.

Analysis of live feeds from social media sometimes uses a process called "sentiment analysis", which identifies a likelihood that a particular passage of text is, for example, positive or negative. Sentiment analysis has a number of weaknesses: it is not always good at detecting irony or sarcasm, for example ("Oh what a brilliant shot *that* was").

You should also be careful not to suggest that public sentiment on social media is the same as public opinion in general (social media users are not representative of the wider population—and stronger opinions are over-represented). Any coverage should make these weaknesses clear and be careful that results are not presented as representative of the general public.

Closer look: APIs

Some organisations will provide up-to-date or live data via an "API". API stands for "application program interface" and is mainly provided as a way for developers to write scripts that "fetch" data from the API so that it can be displayed in maps, charts, or tables whenever someone uses their app or website (when you use the Twitter app, for example, it is able to show you the latest tweets by fetching them from Twitter's own API).

For most journalists, an API can be hard work. If you come across an API while looking for data, see if there is an option to get all the data in a bulk download. If you can't get that, look for a "documentation" page that explains how you can "query" the API for different bits of data and specify the format you get it in. In practical terms, "querying" an API means generating a URL: when you visit that URL, it will provide the data in a file, often in a format called "JSON".

JSON looks intimidating but you can convert it into a more traditional spreadsheet by using a free converter: search for "JSON to CSV converter" to find one that works for you.

Ultimately, some APIs are more helpful than others, but if you have a friend or colleague who understands programming, or are willing to learn some yourself, it can make a big difference.

Closer look: Scraping

"Scraping" is the process of automatically gathering information from webpages or online documents. It can be especially useful in data journalism because it allows you to combine data from potentially thousands of webpages into one easy-to-analyse spreadsheet. Data that would otherwise take weeks to compile can be compiled for you—and updated regularly.

The technique was used for the Mirror's article "Which singer has the best vocal range in the UK": a scraper was used to gather information from over 260,000 sheet music arrangements on the site musicnotes.com and then identified the highest and lowest note for each artist. It was also used by the Bureau of Investigative Journalism to gather figures on rape convictions from over 80 police reports.

To scrape information, it must be in a consistent format. So, for example, results from searching a jobs database can be scraped because each page of results has the same structure but results from different job listings websites cannot because each site will use its own way of presenting that information.

There are also some tools that will scrape websites for you without any programming knowledge. These include OutWit Hub, Octoparse, and a number of browser extensions such as Web Scraper and Table Capture. For more challenging scrapers, you will need to learn some basic programming (see the chapter on interactivity).

Cleaning data

Sometimes data will need to be "cleaned" in some way so that it can be properly or accurately analysed. Examples of issues that require cleaning include:

- Misspellings or variations in spelling
- Numbers that are being treated as words (or vice versa)
- Unnecessary columns or rows
- Duplicate entries
- Mistyped entries
- Mixed data that you want to separate (such as different parts of an address)

Because it needs "cleaning", data like this is often called "dirty data".

Finding out if your data is dirty might involve checking that the spreadsheet software understands things the same way you do: a computer, for example, will see "New Town", "Newtown", and "newtown" as three separate towns when they may not be.

Even simple changes to your data can make a big difference. Spreadsheet software, for example, assumes that your headings are in your first row: deleting unnecessary rows before those headings, and making sure the headings only fill one row, can help with analysis. Likewise, Excel will assume any empty row is the end of one table and will only sort, filter, or calculate up to that point. Removing empty rows solves that problem.

The more detailed your data, the more likely that it will need some form of cleaning. If each town only appears once, for example, then there's no opportunity for confusion. But if each town is named multiple times, there is scope for it being mistyped (if the data has been manually entered by someone).

Some tips for cleaning your data include:

- Use a spellchecker to check for misspellings. You will probably have to add some words to the computer's dictionary.
- Use "find and replace" (normally in the Edit menu) to remove double spaces and other common punctuation errors.
- Remove duplicate entries—if you are using Excel there are a few ways to do this under the Data tab—search for duplicates in Help. Sorting can also help identify these.
- Watch out for extra spaces at the beginning and end of text; they are often easy to miss and may prevent matching in some programs.
- Sort your data in numerical columns from largest to smallest: look out for unusually small or large numbers that may be errors (e.g. a decimal place is in the wrong position).
- If you want to split an address or name into separate columns, try using the Text to Columns option under the Data menu in Excel.
- Google Sheets has a built-in data cleaning option called Sheets Smart Cleanup: click on the Data menu then select Data cleanup and Cleanup suggestions.

Closer look: Tools for cleaning data—and converting PDFs

For cleaning challenges that take up a lot of time, it is worth exploring a dedicated cleaning tool like Open Refine (openrefine.org). Open Refine's import wizard allows you to easily merge heading rows, ignore rows before your headings, remove empty rows, and even merge sheets or files (select more than one when creating the project).

Once imported, you can also perform "common transforms" such as removing double spaces and inconsistent formatting across an entire dataset or use the "cluster and edit" option to identify entries that are similar (such as the New Town/Newtown/newtown example above) and mass-edit them. If you're willing to learn more advanced techniques, you can perform customised transformations on cells, such as splitting on certain characters or creating new columns based on existing data. There are plenty of tutorials online to guide you through these processes.

A common cleaning job for data journalists is converting PDFs or other documents into spreadsheet files. There are various tools that will do this. If you have Adobe Acrobat you may be able to use that to do larger conversions; or you can buy PDF conversion software from companies such as Wondershare, Nitro, and iSkysoft. Online services such as PDFtoExcelOnline.com offer free PDF conversion up to a certain limit; and Tabula (tabula.technology) was designed by journalists to help extract tables from inside PDFs

Questioning data

Once you have the data in front of you, it can be easy to be overwhelmed by the possibilities: typically, any dataset will have many different stories in it, and it may be tempting to start looking at one, only to be distracted by another, and then another, and before you know it a whole afternoon has passed you by.

For example, say you obtain a dataset showing every callout by police to educational establishments in the country, including the reason for the call. Here are just some of the stories you could tell:

- "Police called out to universities 20,000 times in one year"
- "Police called out 300 times in a year to school X"
- "University X worst in country for police callouts"
- "Police callouts to colleges for drug crimes double in a year"
- "Violent assault tops the table of police callouts to schools"

So before you begin questioning your data, decide what the most important *newsworthy* aspect of the data is *for your audience*—and *how much time you have* to do the story. A number of factors will influence this: if a particular issue is topical, or something has happened recently, that may steer you in one direction. If one story idea is likely to be more surprising, then chase that. You might also choose to explore more easily answered questions first in order to hit a tighter deadline, only tackling more challenging ones if you have the time to do so (i.e. if the story will still be newsworthy later).

In the stories listed above, for example, we might choose different stories for the following reasons:

- You only have an hour to turn around a story: "Police called out to universities 20,000 times in one year" (this just requires a quick sum)
- Your audience is local: "Police called out 300 times in a year to local high school" or "Local university one of worst in country for police callouts"

- A particular issue (for example college drug crime) has been in the news recently: "Police callouts to colleges for drug crimes double in a year"
- You look to see which category is biggest, and think the result will surprise your readers "Violent assault tops the table of police callouts to schools"

If your audience is local, check the scale of the issue for local organisations. If your audience is national, identifying broader trends may be more relevant, and have more impact. Make sure you stay focused on finishing one story before you move on to the others.

Once you have the main story, you can always do further work on the data to provide other details that give context to that: you might lead on the fact that one particular school has a lot of police callouts, but also find out if callouts across all schools have gone up or down in order to mention that later on in the piece.

You can ask questions about data in a number of ways. Some are as simple as clicking a button, while others require a bit more thought. Common techniques used to ask questions in a spreadsheet table include:

- *Sorting* the table by a particular column to bring the biggest or smallest values to the top
- *Filtering* by one or more columns to focus on a particular category or area
- Performing basic *calculations*, such as subtracting one figure from another to find out how much something has changed
- Using "wizards" such as a *pivot table* (this gives you totals or averages for a particular aspect of interest)
- Using spreadsheet *functions* to perform more advanced calculations such as averages, or operations such as bringing in extra contextual data from another table

Sorting and filtering your data will tell you simple stories such as who's top and bottom, and in which categories. It is relatively easy to filter data in a spreadsheet: go to the Data menu in Excel or Google Sheets and select the filter option. Drop-down menus should appear at the top of each column, which you can now use to filter on any of those.

Sorting is also done in the Data menu. If you are sorting, always just select one cell in your data (don't select a whole column or it might try to sort *just that column*, which will mix all the data up—although it will check if that's what you really want to do first).

Calculations

Basic calculations (often called a spreadsheet *formula*) can be performed in a spreadsheet by typing into any cell, and starting your calculation with an equals sign. That equals sign tells the spreadsheet that you want to calculate something rather than just enter data. So, for example, to add five and ten, you would type:

=5+10

Simple calculations that can give you stories as a journalist include:

- Subtracting an older figure from a recent figure to find out how much something has changed
- Dividing that change by the older figure to find out what percentage something has changed by
- Dividing a part by the whole to find out what proportion it is of that whole

See the "Closer look" section on averages and percentages to find out more about these and other calculations.

Most of the time you don't need to type in the specific numbers in your calculation—instead, you can use a *cell reference* that points to the cell in the spreadsheet containing any value you want to use in your calculation.

Any cell in a spreadsheet can be described by giving its column and row. Columns are identified by letters (A, B, C, and so on) and rows are identified by numbers. The first cell in column A, for example, is A1 (column A, row 1); the second cell in that column is A2; and so on. If you wanted to add the first two numbers from column A, then, you could write a calculation like this:

=A1+A2

The spreadsheet would then look in those cells, fetch the numbers, and perform the calculation.

There are two big advantages of using cell references like this: first, if the figures are updated or corrected, it means you can change the numbers in the cells, and you won't have to redo the calculation—it will simply update to reflect the new values in A1 and A2.

The other advantage is that a calculation can be copied down into other cells to repeat the process for different numbers. For example, if you had the most recent year's crime totals in column B and the previous year's crime totals in column A, you might type the following formula to calculate the change between each year's figures in row 2:

=B2–A2

There might be a row for each police force, but instead of having to write the calculation again for each one, you can just copy it down. When the formula is copied and pasted into the row below, it will become =B3–A3, and if you copy it again into the row below that it will paste it as =B4–A4. This can be a really quick way to perform dozens of calculations all at once—and the results can then be sorted and filtered to bring the most newsworthy results (the biggest changes) to the top.

Pivot tables

One of the most powerful ways to use a spreadsheet to ask questions about data is to use a *pivot table*. This is useful when you are dealing with very detailed data—for example, with hundreds of rows representing lots of different events or organisations.

A pivot table will take that detailed data and organise it by a particular piece of information in your data. If your data has a row for every school in the country, for example, you can use a pivot table to organise the data into totals for each region (as long as "region" is one of the columns in the data). For more about pivot tables see the ebook *Data Journalism Heist* (leanpub.com/DataJournalismHeist).

Functions

Some questions can be asked using *functions*. These are special words that spreadsheets use to solve a common problem, such as calculating an average or extracting partial text from a cell. Here's an example of using the SUM function in a calculation:

=SUM(A1:A300)

The function is a form of recipe—and most of the time it will need to be given ingredients to work properly (SUM, for example, needs to know which cells or numbers it is summing up). You provide those ingredients by including them inside parentheses after the name of the function.

Here, for example, is a formula using the AVERAGE function to take all the numbers in cells from B1 down to B500, and use those as the basis of the calculation:

=AVERAGE(B1:B500)

Spreadsheet software has hundreds of functions that perform all sorts of tasks, from adding up numbers (which is what SUM does) to calculating averages (AVERAGE and MEDIAN), counting how many entries there are (COUNT and COUNTA), testing whether a cell is blank (ISBLANK) or a particular type of value, or whether it meets a particular criterion (the function IF does this). Functions can also be used to extract data from cells (such as particular characters) and clean them up, and they can also be used to combine data (VLOOKUP is a very useful function for combining two tables).

To find functions for other calculations, just do a quick search on what you want to do and the word "spreadsheet function". Once you've found a function that looks useful, find a tutorial to walk through so you can understand how it is used. For a full guide to using spreadsheet functions to find stories, see the ebook *Finding Stories in Spreadsheets* (leanpub.com/spreadsheetstories).

Closer look: Quickly generating percentages using spreadsheets

Spreadsheet packages can save you a lot of time as a journalist. Excel and the free spreadsheet software Google Sheets can quickly generate an average or percentage from sheets of numbers using formulas.

To calculate a percentage, divide the part by the whole. For example, if you want to find out what proportion 10 is out of 100, the formula would be =10/100 (think "ten out of a hundred").

The result is normally shown as a decimal: 0.1. You can format this to display as a percentage by clicking the % button—or you can right-click on the cell and select Format cells… then choose *percentage* from the options given.

To calculate a percentage change, you need to first work out the *change* (new figure minus older figure) and then divide that change by the older figure. For example, if sales of a particular outfit increased from 100 to 150 then the change is 50 (150−100). Divide that change by the older figure (100) to get the percentage change: in this case, 0.5, or 50%.

Putting the data into context

One of the most important things to look for in your data is *what isn't in it*. For example, if you were looking at data on police callouts to schools, it's likely to be missing the number of pupils at each school. This means we won't be able to know whether a school is calling out more police than other schools because it has a worse crime problem (i.e. an individual at that school is more likely to be involved in crime)—or simply because it has more children and teachers (i.e. an individual is not any more likely to be involved in crime—there are just more of them).

Similarly, whenever you are dealing with a total number of events for each part of a country, you can expect that the most populated areas will generally have the most of anything. In the UK for example, Birmingham is by far the biggest local authority in the country, and London's Metropolitan Police is the biggest police force. In the US, California is by far the most populous state. Those organisations and locations are likely to feature at the top of any ranking—whether that's pollution or arrests or pet ownership—so you should always look to find out how they rank *per person* instead (events "per capita").

To do that you simply need to divide the number of events or items by the number of people. Having the populations for every local authority or state or police force, or the number of students at each university or school—will allow you to do that.

Always try to speak to experts to find out if there are other contextual factors that might be important as well. In a talk at the OpenVis conference, data journalist and artist Mona Chalabi described a story she worked on using data that showed that Jewish and Muslim people were over-represented in prisons. Some former prison inmates wrote to Chalabi to explain that one potential cause for the over-representation was prisoners declaring themselves religious in order to access better meals (kosher or halal food) or extra recreational time out of their cells. "So the ability for people to get in touch and explain to me the 'why' is super important—I'm not saying I'm going to accept those anecdotes at face value but it gives me new lines of enquiry" (Chalabi 2016).

Another important aspect of context is *how the data was gathered*. Journalists are trained to be sceptical about what we are told—and data should be no exception. Data can be biased either intentionally or unconsciously, and at different stages. Data scientist Heather Krause recommends creating a *data biography* for data journalism projects that details where the data came from, who collected it, why they collected it, and how: "Just as you'd do a background check on a human source before publishing what they told you", she writes, "you need to understand your data" (Krause 2017) (Table 10.1).

Table 10.1 Questions to ask to assess the credibility of data

Factor	*Questions*
Funding	Who paid for the data to be collected?
Motivation	Why was it collected?
Project design	Who designed the data-gathering project, and how did they design it, for example. sampling, classification, cleaning
Data collection and sourcing	What methodologies were used to collect the data?
Analysis	What methods were used to analyse it—and what assumptions were made? (e.g. did they choose a mean average or a median?)
Interpretation	Where did they exercise discretion in, for example, focusing on one particular dimension of the data, or in classifying the results, for example, whether a particular value was "high" or "low"
Communication	Did they communicate one part of their analysis, but leave other aspects out? Did they use particular language to encourage a more positive or negative view of the results? Were charts designed in a certain way (e.g. the use of scales, colour, and text) to make things look better or worse than might have otherwise been the case?

Based on Heather Krause's data biographies (Krause 2017).

Correlation is not causation

When first starting out in data journalism many people try to establish *causes* of things. You should avoid this unless you are very confident with statistics because it is very difficult to do, and easy to get wrong.

The main problem is that just because two things happen together, you cannot prove that they are related. If there are a lot of crashes near speed cameras does that mean that the cameras have failed? Or was that the reason why they were put up in the first place? If there's a lot of crime near schools with high levels of poverty, does that mean that the poverty is causing the crime or that crime is causing people to move out of the area—and only the wealthy parents can afford to? Or are both caused by a third, unmeasured variable?

During the first few months of the Covid-19 pandemic, for example, there was a strong positive correlation between the wealth of a country and the number of deaths from the virus—meaning that the wealthier a country was, the higher the number of people dying from coronavirus in that country. The reason wasn't that wealthy countries were worse at fighting the virus—it was that wealthy countries were better at diagnosing people with the virus and collecting data on it.

Normally to establish causation you need to be able to control various factors (called variables), and typically journalists cannot do that.

So by all means report the facts—that there is a lot of crime near schools with high levels of poverty or crashes near speed cameras—but don't speculate on cause and effect unless you can back that up to a statistician. And always seek to quote an expert who can provide some factual context.

Closer look: Statistics

If you're dealing with numbers, it is important to have some basic statistical literacy. Averages are a good starting point: what is an average? Well, there are actually three different types: the *mean* is what you get when you add up all values and divide by the number of people, organisations, or events involved. But mean averages can be misleading: an average wage might be skewed by a few very big earners at the top. The *median* is a much better average when dealing with man-made figures: this is the mid-point at which half of values are higher and half are lower. Finally, there is the *mode*: the most commonly occurring value, useful to identify best-sellers.

If you are not clear about what type of average someone is talking about, ask the person who has supplied the data.

Another useful term to understand is *margin of error*. This indicates how accurate the data is: for example, if someone says that the number of people unemployed in your town is 14,000 but the margin of error is plus/minus 2000, then that means the real figure could be anywhere from 12,000 to 16,000 (you may also see the terms lower and upper "confidence interval" to refer to those two figures).

The reason for this is that most data is based on *samples*: the larger the sample, the more accurate the results are going to be when generalised to the wider population. But it is still generalising, and that introduces room for error. In fact, even the margin of error is typically only the range within which the survey is expected to be right 19 times out of 20.

For an accessible read on the subject see Darrell Huff's *How to Lie with Statistics* (1991) or Ben Goldacre's *Bad Science* book (2008) and blog (badscience.net).

If you are in any doubt about your figures, you should double-check your findings wherever possible with statisticians in the field you're covering. The Royal Statistical Society has local groups you can speak to and regular events and projects to help improve statistical literacy in reporting.

Combining data

There may be a number of reasons for combining data: you may need to put figures into context, for example, by adding populations to your data. You may have one dataset that uses codes to represent something (such as country codes) and need to combine that with another dataset that explains what those codes mean (the country names). Or you may want to combine spreadsheet data with a map to create a visualisation (see the section on visualisation).

If you need to combine data in a project, and there's lots of it to combine, one common way to do so is spreadsheets' VLOOKUP function. This "looks up" a particular value (e.g. a school name) and brings back data associated with it (e.g. its pupil numbers). You will find lots of tutorials on VLOOKUP online.

To merge data, the two datasets you wish to combine will need a common "field"—a column of data that they both share. They don't both have to have the same name at the top of the column, but it must be possible to match up the entries in the column. Normally this might be a column containing the names or codes of the organisations, institutions, or areas that both have in common (e.g. the column of school names or police forces).

If you have a choice, codes are generally better for matching than names. This is because names may be written differently in different datasets: a police force that might be referred to as "Avon and Somerset" in one, for example, could be called "Avon & Somerset" in the other. That slight difference will be enough to stop you from getting a match for that particular row.

Carmen Aguilar Garcia, The Guardian

Carmen Aguilar Garcia is a data journalist who has worked in both broadcast and print organisations—as Sky News's first ever data journalist, and then in The Guardian's dedicated data team.

There are many ways data contributes to TV output at Sky News. Perhaps the most visible one is when an online data story translates into a TV piece. When that happens, the data team has to write or help write the script, select the charts that will go on screen, build them if those built for the digital piece are not suitable, and help the graphics team to finesse them for TV.

Many of the data stories are digital first and some digital only, despite being a TV channel. But there are other less visible and perhaps silent ways in which the data team adds value to broadcast journalism. We can help TV reporters find the story or a new angle of the story and assist the newsroom to better understand and use statistics. We can point out the best places to tell the story from in a piece to camera or where to find cases of study. We could use data to add context to the story or we could tell it in a more visual way with maps and graphs.

Over the years, the understanding of what data journalism is and how it adds value to traditional reporting has improved in Sky News, and so has the collaboration with TV reporters and correspondents. It has also been key to the improvement of data literacy in the graphics team and the availability of the right tools for the newsroom.

As a result, the data team has grown, there is more data content in Sky News across all platforms, there has been an improvement in the workflow and quality of the graphic elements, and there have been multiple examples of a successful collaboration between the data team and TV reporters and correspondents.

But perhaps the most important one is the relevant place data has won in the newsroom. It is now at the heart of the news gathering and reporting and it is one of the key areas in the company's future strategy.

There are similarities in the way that Sky News and The Guardian approach data journalism—but also differences. Both are interested in reactive data stories based on the news agenda, as well as original journalism, and in both the data team tries to collaborate with other departments, especially with specialists and correspondents.

As for the differences, the data team at Sky News covers the whole process from gathering data to visualising the story. The Guardian has a data team, a graphics team, and a visual team, so the data team is very much focused on the story. There is also a difference in the type of stories, as there is more space for medium- and long-term projects at The Guardian.

I come up with some story ideas by periodically reviewing scheduled data releases from statistical and public bodies. Sometimes I find stories directly in those releases or come up with ideas based on them, but this is more of an exercise to get familiar with the data available and where it is published.

But many of my stories—and I think the best—haven't started with the data but with an idea, a hypothesis, a question, a curiosity, a similar story that I have read, a different angle for a story, an academic paper, a blog post from an activist, a chat with colleagues/friends…

Good starting points include the news agenda, reading news articles—but not only news—and being subscribed to data newsletters. I don't think these ways of coming up with data story ideas differ much from "traditional" story ideas. The data comes later when solving the questions or approaching the story from a data perspective.

Communicating the story

When it comes to telling data journalism stories, most people immediately think of data visualisation—but there are other ways to tell the story too. These include:

- Writing the story
- Bringing it to life on screen or in audio
- Creating something that is personalised to the user

- Creating a social project (such as a crowdsourcing exercise or the ability for others to make things with your data)
- Creating a tool that people can actually use.

It's important to think about which method suits the story best, which one will work for your audience, and which one is practically achievable.

Narrating: Writing a story that uses data

The most common way to tell a data story is to just *write* it. Data stories fill newspapers and magazines every day, from short updates such as "news in brief" (NIB) stories to longform features. Charts and visuals might be part of the story, but as an illustration rather than the focus.

The key thing when writing up a data story is to try to make the numbers *relevant* and *meaningful*—especially if they are big numbers. When the Mirror wrote about the health service "wasting £25million a year by paying over the odds for basic supplies like toilet rolls and syringes" they made it meaningful by leading on the fact that "*Saving on loo rolls would pay for 700 nurses*" (Hayward 2014).

Similarly, a story about parking charges generating £3.9 million for hospitals didn't lead on that large (but abstract) figure—it ran under the headline "*Nurses charged almost £200 a month just to park their cars at work*": something a reader can imagine and relate to. And when the Evening Standard wrote about attacks by prisoners on wardens, they led on the five attacks every day rather than the 4000 attacks in the previous two years. Why? Because we can *feel* those five attacks much more than we can 4000.

Big numbers without context can be misleading. It might sound like a lot for a police force to spend £35,000 over two years calling a service that tells you the time, as one paper reported. But it only works out as each officer calling once or twice each year. The "big number" story is often a last resort for the reporter who has not much of a story at all.

A good data story should also have more than just numbers. You should seek out quotes too: if it affects real people, it's important to hear about their experiences so the reader can understand why the figures matter. If it needs explaining further or contextualising, seek out experts to interview. You may also be able to find quotes in reports and research that you can use, with attribution (e.g. "writing in a recent report, X said"). If the story is critical or negative, you should seek a response to the figures from the organisations responsible. A spokesperson might suggest a mistake has been made in the calculations—but don't take their word for it! Check your calculations and consult an expert if you're not sure.

Humanising: Finding case studies

Many good data stories don't start with numbers—they start with people or, in the jargon of the newsroom, a *case study*. This is especially the case with broadcast journalism, where a strong anecdote and a new face on the screen (or a new voice) can capture the audience from the start, and only a few, most significant, figures will make it into the broadcast.

Regardless of whether your story is using text, video, or audio, if your reporting leads you to victims of a particular issue, and their stories are compelling, then be prepared to put the data into the background and focus on them. Strong case studies can bring a data story to life in a way that the numbers will not, and sometimes the data is just the first step in identifying who is particularly affected or establishing how widespread the problem is that they face.

In short, the case study tells us why we should *care*, then the data tells us why this *matters*.

Making data journalism social

As a raw material, data can be extremely social. People may want to create new things with your data and share them—whether that's a chart focusing on a particular aspect of the data or an impressive infographic or map. The Guardian datablog, for example, maintained a Flickr photo pool for years where users could share visualisations they had made with Guardian (or any other) data.

Users may also be affected by the issues represented in the data and want to contribute their stories to your reporting. When The Center for Investigative Reporting, for example, pulled together data on the backlog of disability benefits claims for armed forces veterans, they also appealed to veterans willing to "share your experience applying for disability benefits" to take a few minutes to fill out a form to tell reporters more.

Because social distribution is such a major part of both publishing and newsgathering, it is important to think about the social dimension of your story, and whether to share the data that underpins it. Ultimately, you stand to benefit not only from more readers, but also users volunteering their analysis, technical skills, and personal experiences. What have you got to lose?

Personalised data journalism

One of the best ways to make your data journalism social is to make *personalisation* part of the story. Personalisation is the process of making a story more personal to a reader by helping them to find the aspect of it that relates to them. For example, a story on the gender pay gap might include a feature that allows them to see the figures for their industry or employer; a story on crime might invite them to look at crimes in their area; and it is common when reporting on a new budget from the government to show how it affects different demographics so that the reader can find out how they're likely to be affected.

There are three main ways that personalisation might be used as part of a story:

- To illustrate the story (much as a photo might do), an interactive element such as a widget or calculator is embedded at some point where the reader can stop and explore or skip and continue to read. The data team at the Reach newspaper group, for example, created a 'How deprived is your area' widget that could be embedded in any stories about the issue across its dozens of local newspaper websites. "More than 200,000 people put their postcodes into the widget", wrote strategy director David Higgerson. "Far more than I would imagine would read a straight-forward 'data tells us x' story about deprivation" (Higgerson 2015).
- Alternatively, the personalisation might *be* the story: in this case, the headline might invite the reader to 'explore' the data, perhaps through a map, or 'find out' how something affects them by using a calculator or entering personal details.
- A third type of story integrates the personalisation into a traditional article: most of the article will be the same for all readers, but it might mix in references to the reader's own location or other data (fetched using geolocation or account details) in order to make comparisons more meaningful.

The New York Times's article "See How the World's Most Polluted Air Compares with Your City's" is one example of this third approach—and one of many examples of how personalisation has been used to help readers better understand an international story—climate crisis—from a more local perspective.

There are ethical considerations in using personalisation in your reporting: one of the roles that journalism plays in society is to form bridges between communities and help readers to be aware of the issues affecting communities other than our own. This creates a tension in personalisation: without it, some audiences may not read about the issue at all, feeling that it's not relevant; but inviting a user to find out the impact of an issue on their own area or "people like me", also has the potential to keep them ignorant of how that issue affects others. Any use of personalisation, therefore, should address this tension, and attempt to ensure that the resulting story still puts the personal dimension of the story into a bigger context: introductory paragraphs, for example, might establish the "bigger picture"; and personalised passages might include a comparison with the worst affected.

Creating a personalised story can be technically demanding—especially if you are creating an interactive widget or calculator, or drawing on features such as geolocation. But you can also create personalised experiences with a simple map, a searchable table (Airtable is one tool that allows you to do this), or a quiz creation tool. See the chapter on interactivity for more on personalisation and other formats that can be used to tell personalised stories.

Using data journalism to create tools for audiences

Personalisation is just one example of creating a *tool* from the data in a story. Calculators are a particularly common example of data-driven tools—regularly build by data teams in the wake of government budget announcements to help readers work out how they will be affected by changes in taxes on income and goods (The Mirror's "Tax calculator: Find out how the 2022 Spring Statement affects your wages" is just one of many examples).

Change often provides a need for using the same technology to help readers in similar ways: The Washington Post's "Summer road trip? Our gas calculator can help you see your costs" is just one of many calculators created to help readers adjust to inflation. The FT's "Would carbon food labels change the way you shop?" is a tool that helps the reader consider potential changes to their food consumption in order to reduce their environmental impact. And as panic buying spread during the early weeks of the Covid-19 pandemic Reuters produced a story—"Don't hoard!"—with a food calculator that helped readers work out "you how much you really need". Online calculator creation tools, such as Calconic (calconic.com), can be used to experiment with this approach.

If you are working on campaigning journalism you might use data journalism techniques to build tools that empower readers to make informed decisions, find others with shared experiences, or hold power to account. Once the reader has found out how their local school is affected by budget cuts, for example, you might provide a tool for them to email their local politician about it or find online groups campaigning for that school. You might build a tool that allows them to add to a shared dataset, send a Freedom of Information request for information, or categorise hundreds of documents in order to make it easier for others to scrutinise. This was what The Guardian decided to do when MPs' expenses data was released (Bradshaw 2009). Most of the stories in the data had already been broken exclusively by their broadsheet rivals The Telegraph (who had access to a leaked version) over many weeks, but creating a tool allowed The Guardian to find a new angle on what would otherwise be an "old" story.

Data visualisation

> At their best, graphics are instruments for reasoning about quantitative information. Often the most effective way to describe, explore, and summarize a set of numbers—even a very large set—is to look at pictures of those numbers.
>
> (Edward Tufte, *The Visual Display of Quantitative Information*, 2001, p. 9)

Data visualisation is so widely associated with data journalism that often the two are assumed to be the same thing. But while you can do data journalism without the visualisation, it is much harder to do visualisation without data journalism.

Broadly speaking there are two typical reasons for visualising data:

- To find a story (or allow readers to find them)
- To tell a story

Quite often, it is both.

In one example, designer Adrian Short obtained information (via a Freedom of Information request) on parking tickets from Transport for London that showed the number of tickets issued against a particular offence plummeted from around 8000 to eight in the space of one month. But the drop only became obvious when Short turned the raw data into a chart.

Data visualisation can take a variety of forms, from traditional bar charts, pie charts, line graphs, and maps to more striking formats such as network graphs, tree maps, and new formats such as hedgehog maps and animated bubble charts.

In longer-term projects in larger organisations, the data journalist may work with a graphic artist to produce the visuals that illustrate their story—but in smaller teams, in the initial stages of a story, or when speed is of the essence, a journalist is likely to need to use visualisation tools to give form to their data.

The key to successful data visualisation is to be clear about what sort of story you are trying to tell: opting for fancy impressive chart types is pointless if the charts don't actually *work*. In journalistic terms, it's the equivalent of using long fancy words just to impress people.

Broadly speaking there are four types of stories you may want to tell with charts:

- Stories about composition: for example, "95% of spending goes on party conference"
- Stories about comparison: for example, "New York attracting more tourists than Paris"
- Stories about relationships: for example, "Larger schools more likely to call out police"
- And stories about distribution: for example, "Ambulance callouts peak in the early hours"

The last two categories tend to be less concrete and harder to make stories out of. Also, when it comes to relationships, you are touching on issues about correlation versus causation, so be careful. For that reason, most stories are either about composition or comparison.

Different types of visualisation fit different story types (Table 10.2), for example:

- Stories about composition can be told with pie charts or tree maps. Or if it is composition over time, stacked area charts. Composition of words can be communicated with a word cloud.

- Stories about comparison can be told with bar charts or column charts. If it is comparison over time, a line chart works well. If the comparison is geographical (e.g. north versus south), a map may work.
- Stories about relationships can be told through scatter charts or bubble charts—but only if those charts show a clear relationship such as a broad "line" of dots, rather than a random scattering. Network diagrams can also be used to show relationships between people or organisations in a network.
- Stories about distribution can also be told through scatter charts or histograms. If the distribution is geographical—such as a clear difference between north and south, the capital and suburbs, or where there are visible clusters and "deserts"—maps can work well.

Exploratory data visualisation

In some cases, your visualisation may *not* be trying to tell a story, but instead helping the user to find their *own* story (or stories) in the data. This type of chart is known as *exploratory visualisation* (as opposed to the explanatory type of chart that tells, or explains, a clear story).

Exploratory chart stories often use a question (e.g. The Pudding's "How is flooding affecting your community?") or a "call to action" (e.g. "Find out how flooding is affecting your community") in their headline. Or, if the chart is part of a more "explanatory" story (often an exploratory chart might be added at the end) you might use the same approach to title the chart or map.

It is just as important with an exploratory visualisation to ensure you have chosen the best chart for your purpose: are you hoping to help your user explore comparisons—or the composition of something? Are you expecting them to want to explore the distribution of items along an axis (or two axes)?

Scatterplots can be quite interesting for readers to explore, for example, as readers look to see who or what is at the extreme ends of the scales—but make sure there is some motivation for them to do so (i.e. the subject is one that readers are motivated to explore). Maps are especially often used as an exploratory storytelling tool as readers are

Table 10.2 Choosing the right chart for the story you want to tell

	Composition stories	*Comparison stories*	*Relationships stories*	*Distribution stories*
At a specific point	Pie chart Tree map Word cloud	Bar chart Column chart Map	Scatter chart* Bubble chart* Network graph Chord diagram	Scatter chart Bubble chart Histogram Heatmap Map (if it shows a clear distribution)
Over time	Stacked area chart Steamgraph Multiple word clouds	Line chart Bar chart race	Animated scatter chart Animated bubble chart	Histogram with time as the x-axis

*If the chart shows a clear relationship.

often interested in finding out how an issue affects places familiar to them. The general principle when designing such visualisations is sometimes known as the Visual Information Seeking Mantra: "Overview first, filter, then zoom" (Schneiderman 1996), meaning that a good exploratory visualisation should provide an overview of the whole to begin with, but then the facility for a user to filter and zoom in to a particular point, which then reveals more details (for example, clicking on a particular point may reveal an information window with more data).

Some types of charts allow for exploration by combining different perspectives. Stacked bar charts, for example, show comparison (between bars) and composition (within each bar) at the same time. Whenever you use a chart like this, be clear about the trade-off you are making—you will gain more exploratory potential, but at the expense of clarity.

Closer look: Tips from a Pro: David McCandless

David McCandless is a writer and designer, and author of the books *Information is Beautiful* (2010), *Knowledge is Beautiful* (2014), and *Beautiful News* (2021). His work has appeared in The Guardian, The Independent, and *Wired* magazine. These are his five tips for visualising data:

- Double source data wherever possible—even the UN and WorldBank can make mistakes
- Take information out—there's a long tradition among statistical journalists of showing *everything*. All data points. The whole range. Every column and row. But stories are about clear threads with extraneous information fuzzed out. And journalism is about telling stories. You can only truly do that when you mask out the irrelevant or minor data. The same applies to design which is about reducing something to its functional essence.
- Avoid standard abstract units—tons of carbon, billions of dollars—these kinds of units are over-used and impossible to imagine or relate to. Try to rework or process units down to "everyday" measures. Try to give meaningful context for huge figures whenever possible.
- Self-sufficiency—all graphs, charts, and infographics should be self-sufficient. That is, you shouldn't require any other information to understand them. They're like interfaces. So each should have a clear title, legend, source, labels, and so on. And credit yourself. I've seen too many great visuals with no credit or name at the bottom.
- Show your workings—transparency seems like a new front for journalists. Google Drive makes it incredibly easy to share your data and thought processes with readers. Who can then participate.

Maps

As soon as people get hold of geographical data, they want to map it. But just because you have some geographical data doesn't mean you should map it.

Here's why: maps, like all methods of visualisation, are designed for a purpose. They tell *particular types of stories* well—but not all of them. For example, if users cannot find themselves on a map or the story is not about the visible distribution or clustering of those points, but about comparison or composition, you are probably better using a visualisation device designed for that purpose, such as a bar chart (comparison) or a pie chart (composition).

A map can actually give a misleading impression of comparison due to varying population density: a large area with fewer people will take up more space on your map, and be easier to see, than a smaller area with more people.

There is also more than one type of map:

- A map of *points* places a marker for each location in your dataset. This has to be a specific location, such as that of an event or business. Sometimes the size or shape of the marker may be determined by another value or category.
- A *heat map* indicates the density of points without showing their specific location. This can be useful where you don't want to include the specific location for privacy reasons or because it's approximate.
- *Flow maps*, and route maps, indicate connections between points—they might be used to indicate the number of flights between airports for example.
- *Shape maps* show locations that cover a larger area, such as a whole country or region: this might be needed if your data relates to police forces, health bodies, or other authorities. Often shapes are coloured to indicate a value: these are called choropleth maps.
- *Cartograms* are a form of shape map that aims to weigh each area by the number of people in it or the number of politicians it elects (rather than the amount of ground it covers). These are often used during elections to provide a clearer picture of how people are voting

The key rule is this: make sure you are clear about what story you are trying to tell or the story that users will try to find. The test is whether a map does that job best.

Mapping points and heatmaps

To map points, you will need as precise a description of locations as possible. Ideally, this should be a latitude and longitude—but if you have postcodes or zip codes you can find tools online that will convert those into latitude and longitude references, a process called *geocoding*. Bear in mind that these will not be exact, and you may need to clarify that they are only indicative of the general location. Beware of place names that also exist elsewhere: for example, there is a Cambridge, Massachusetts, as well as a Cambridge, England. You may need to check the results and clean up the data to correct any places that have been incorrectly converted.

Try to keep colour-coding as simple as possible with map points (consider if there's any need to have differently coloured points, and if so, the fewest possible number of categories to colour-code). Avoid using markers or size to convey information that's already communicated in other ways.

Mapping shapes

Shapes are harder to "draw" than points on a map. This is because shapes are actually data too: a description of the paths needed to draw each shape. As a result, to create a shape-based map you will need to either find a tool that already has those shapes pre-programmed or find data on the shapes that will help it to draw them.

Data on the shapes of countries and regions are often called "shape files". The mapping tools Flourish and Datawrapper, for example, have a number of shape files stored in their databases, including shapes for countries, US states, and UK constituencies and authorities. This means that you can upload your own data and mix it with those shapes to generate maps that combine the two: shapes coloured according to a specified field in your data.

You can also merge your data with shape files using those tools. Both use a language called GeoJSON to describe region shapes—you will need to find (or create) a GeoJSON file for the regions you want to use and import it along with your data when creating the map. You can find tutorials from both services with more on the process. A final approach is to draw your own shapes using a tool like Google My Maps.

Word clouds

If you are working with text rather than numbers, there are ways to visualise that as well. Word clouds, for instance, show which words are used most often in a particular document (such as a speech, bill, or manifesto). This can be particularly useful in drawing out the themes of a politician's speech, for example, or the reaction from people online to a particular event.

They work best when more than one is used to draw comparisons: word clouds have been used in the past to compare the inaugural speeches of different presidents or the election manifestos of different parties.

Word cloud tools include EdWordle, Tagxedo, and Tagul. But remember you can also use bar charts to compare frequencies—often with more clarity. Word frequency tools like Wordcounter.com will tell you how many times each word is used, which you can then use in a chart.

Network diagrams

Network diagrams show relationships between different entities: those might be people, companies, bands, or anything else. Based on *network analysis*, they can be very useful in showing power relationships. Channel 4's Who Knows Who project, for example, used network diagrams to show "the connections between politicians, celebrities and business leaders, and where power really lies in the UK". Similar ideas have been developed by They Rule in the US, Who Runs HK in Hong Kong, and Reuters's project Connected China.

Tools for creating network diagrams are harder to learn than basic chart tools. Flourish offers network diagrams as one of its visualisation templates, or you can use the dedicated network visualisation tool Kumu.io, or the standalone tool Gephi.

Elements of visualisation

Choosing the chart is just one of a number of design challenges that the data journalist must consider. Others listed by Hullman and Diakopoulos (2011) include:

- Text (including any annotations)
- Colour and font
- Default views or comparisons
- Animations

- Partial animation (e.g. when the chart or map is loaded)
- Search suggestions and goals (such as the "call to action")

The journalist must also consider whether to exclude any data points from the chart—or put another way, which elements to focus on—for the purposes of clarity. A bar chart with 100 bars, or a pie chart with 75 slices, for example, is not going to be easy for someone to understand and read clearly. "Overly complex graphics will quickly convince readers to ignore your article", argues journalist and academic Staci Baird (Baird 2010), comparing graphics' role to that of headlines and photos in attracting readers. *The Wall Street Journal Guide to Information Graphics* advises designers to "Filter and simplify the data to deliver the essence of the data to your intended audience". It makes a distinction between the research stage when the journalist is gathering more data to conduct more in-depth analysis and the "edit phase" when "it is important to assess whether all your extra information buries the main point of the story or enhances [it]" (Wong 2010).

Pie charts represent a particular challenge: as well as being the most commonly used chart, they are also the most commonly *misused*: a search for "bad datavis" will throw up dozens of examples of pie charts. Comparing the slices of a pie chart is much harder than, say, comparing different columns in a column chart, so if you do use a pie chart stick to five or fewer slices by focusing on the "top five", or grouping together "the rest" into a separate category.

The same technique can be used with bar charts and line charts: choose only the most important data points—the top ten or those in a particular category—to ensure that the resulting chart is clear and focused, and make sure that the title and other text is clear about what is included and what is not.

Remember that if you do want the reader to be able to see other dimensions of the data, you can always use more than one chart or combine them into an infographic.

Tips on using colour effectively

The "less is more" rule applies to colour, too: most chart creation tools will allocate a different colour to every bar, slice, or line. But taking some time to customise the colour can make a massive difference to the clarity of your chart.

Instead of having a "rainbow" of colours for data points, choose one eye-catching colour for your "story" element (for example, the column, line, or slice that your story focuses on) and a less striking colour for *all the other points*. For example, in a bar chart showing crime in different areas, you might make one bar (the one the story is about, such as the local area) red, and all the other bars the same light grey, making sure there are labels on each bar so colour isn't used for labelling. The reader's eye will naturally go to the red—the point of contrast—which is the point of the story and the one you want them to be able to find most quickly.

In a line or pie chart, you will need to use different shades of the second colour, such as different greys or cooler blues and greens to ensure that the focus colour (the red, for example) still stands out.

Before choosing a colour consider any meanings that colour may have: red can signify "danger" and negativity for Western audiences, so avoid using it in contexts where it may suggest a particular interpretation of the values being shown or the people represented. One article by journalists at The Correspondent, for example, uses a migration map published by the European Border and Coast Guard Agency to explore "How maps in the media make us more negative about migrants". The use of red, among other things, in the map, they point out:

> Makes us feel like we are being overrun by huge numbers of anonymous enemies, coming at us en masse from all corners of the globe to disrupt our orderly lives.
> (Vermeulen, De Korte, and Van Houtum 2020)

Remember that colour's interpretations are culturally specific: for some countries, orange is a "happy" colour, while in others it's associated with mourning, so don't assume your audience will interpret it in the same way as you. In a similar vein, using blue and pink for male and female, respectively, may be seen as unnecessarily reinforcing gender stereotypes—or just plain cliched. When The Telegraph decided to explore the gender gap in politics, for example, they chose to use green and purple—the colours of the suffrage movement—for male and female, respectively.

There are many tools you can use to help choose a colour palette. Colorbrewer (colorbrewer2.org) is designed to generate palettes for maps, for example, but can be used for other charts as well. It will suggest colour combinations that work for users with colour blindness, and which also suit the type of data you are showing. The contrast between colours should be enough for people to read, too: you can use contrastchecker.com to tell you if your colours don't reach the threshold that is required.

Tips on editing chart and map text

Although charts and maps are supposed to be a visual storytelling form, text is massively important in a number of ways:

- The title of your chart—and any subtitle or further text underneath
- Labels on axes or data points
- Footers with details on the source data and any caveats
- Any legend explaining what colours or shapes represent
- Any annotations highlighting particular points
- Information windows that appear when points are clicked on
- An alternative description for users who cannot see the chart

Start with the title: you might begin by writing a title that merely labels the data you are showing, for example: "Price of chocolate bars 2000–2020". But this is quite dry. Instead, write the title as you would a headline, telling us a story: "Chocolate bars double in price in 20 years" or "Chocolate is getting cheaper".

If it's an exploratory chart or map, use the title to invite the reader to explore. So instead of "Food hygiene scores in Normalville" you might go with "Find out how restaurants in your area scored on food hygiene" or "Where are the failing fast food joints? Explore our interactive map".

You can use the subtitle or second paragraph to provide extra context—like the second paragraph in a news story—or guidance on how to explore if it's exploratory.

The footer is important: it's the place where you should indicate the source of the data, the time period covered, and what aspect of the data you focused on if you needed to leave data out (for example, does the chart only show the top ten or a particular category). If you needed to combine categories for clarity, that should also be mentioned here. And the footer is a good place to credit yourself and the publication in case this chart gets separated from the story.

Axes on a chart should be clearly labelled: is that thousands of people or households? Is it the percentage of sports teams or players? If you're using colour or shape to indicate some information, such as category, then there should be a legend to explain what each colour or shape means.

With scatterplots and maps, you might have the option to specify what information appears when someone clicks on a particular point and an "information window" pops up. Most visualisation tools fill that window by pulling data from columns in your data that you specify (in a food hygiene map, for example, you might want that window to show the name of the restaurant, the rating they received, and the date they were inspected—three different columns in your data).

Data journalists are increasingly using annotations to create a narrative across their visualisations, too: a simple line chart can be given a beginning, middle, and end by adding an annotation to peaks and troughs explaining what was happening at each point to cause those; a scatterplot might be made more inviting by labelling a few of the most newsworthy points.

Most chart tools provide accessibility options including alternative descriptions: make sure you create one. Equally, if the chart is going to be published as a flat image (an exported still or a screenshot), you should also make sure an alternative description is included so that the image will be accessible for users with screen readers. In either case, you do not need to create an alternative description that lists every quantity in the chart—instead, focus on the trend that it is showing or the key point that is being communicated. An example might be: "Bar chart showing universities with the most complaints. University of Normaltown is top with one thousand complaints".

Choosing the right scales

Most charts have a y-axis and an x-axis along the left and bottom edges—and the scales of those will be set automatically by the chart creation tool you're using. You should pay attention to these to make sure that the data is accurately presented.

The y-axis—going up the chart on the left—is the main one to focus on, as this determines how high bars will be in a bar chart or how much lines will rise and fall in a line chart. With bar charts, this should always have a baseline of zero: charts that start from other points can be misleading because they make differences between amounts look more pronounced than they actually are.

Line charts, on the other hand, don't have to start the y-axis from zero—but you should still consider why you might set your baseline to begin from a different value. A good example is temperature: if you wanted to show changes in body temperature, it would not make sense to have a scale from zero to 100, for example, because body temperature wouldn't be expected to drop or rise to those values.

Indeed, starting a line chart from zero can be as misleading as not starting a bar chart from zero: showing changes in global temperatures on a zero-based scale can make those changes look minimal—where small variations have a massive difference, and we wouldn't expect the global average temperature to drop to zero. Showing the numbers of teachers or doctors employed overtime on a zero-based scale might seriously downplay the scale of job cuts—when we would never expect there to be no teachers or doctors at all. Instead, try to pick a point that is meaningful and relevant: global temperatures, for example, are often visualised against a baseline of the average of the last century (if the purpose is to see how much they have changed from that).

You should also consider what values you are scaling the bars or lines to: percentages, for example, may be easier to understand and a more accurate way to tell the story than absolute values (Wong 2010).

After considering the y scale on a chart, check the scale of the x-axis across the bottom of the chart too: if it is chronological or numeric, it should also be given some thought. With time-based axes, consider if the timescale is an appropriate one (watch out for this in other people's charts, too: sometimes organisations will choose a timescale that starts from a high or a low in order to make change look worse than it is). Decide in advance what your timescale is going to be, based on what data is available: five years—sometimes ten years—is quite common to get a long-term view; three years is sometimes chosen to focus on more recent developments, or where longer-term data isn't available or relevant. You might choose a timescale that relates to the story being focused on: a period covering two different governments being in power, for example, or just the current government's time in office, or the period before and after a particular policy was introduced or changed.

Three-dimensional effects and icons

You may be tempted to make the slices of your pie charts, or your bars, three dimensional—but beware: fancy 3D effects are considered bad practice in data circles. This is because they add extra visual information that distracts from the information being conveyed through the other dimensions of the chart (such as the length of a bar or the angle of a slice). In fact, it can actually *distort* the chart by adding perspective that can make angles look narrower. Adding 3D is like adding overly long words to a news report: it might show off your skills—but it will make the story harder for a reader to understand.

Another option you might come across while making charts is the use of icons. Icons can be used in a number of ways:

- To represent the *category* of an event or organisation on a map (car icons might be placed on a map to indicate car accidents, while bicycle icons might be placed on there to indicate accidents involving cyclists, for example)
- To represent the number of people or events through *repetition* (seven teacher icons might be used to represent 7000 teachers, for example)
- To represent the number of people or events through *size* (a nurse icon twice as large as another nurse icon might be used to represent that there are twice as many nurses in one country than another, for example)

If you are using icons consider whether they reinforce or challenge stereotypes: if you wanted a "nurse icon" to use to represent the numbers of health workers in different areas, for example, you will find that a search for nurse icons will mainly return results showing a female nurse. But that doesn't mean you should choose the first result you find!

Sequence in visualisation: Infographics, charticles, scrollytelling, and click-to-advance chart stories

The best data visualisation doesn't just present data—it presents a *narrative* by using sequence to create a form of movement. That sequence can take a number of forms:

- In an infographic, sequence is created through *layout*: the reader looks at the main chart first, and then the story moves through a second, third, and further graphic elements
- A charticle is a form of listicle that uses a chart for each item in the story (e.g. "Here are 7 charts that explain why the cost of living is rising"). It creates sequence through numbering
- A "scrollytell" is a long feature where elements of the page might change as you scroll down it—in data-driven scrollytells, those elements might be charts and maps, which might zoom in, or be re-drawn, to focus on a detail, or replaced with another as the story progresses
- In click-to-advance chart stories—or slideshows—similar transitions are triggered by the user clicking "next" (or on mobile, tapping the screen)

These formats often adopt a narrative structure similar to Schneiderman's Information Seeking Mantra, "Overview first, filter, then zoom" (Schneiderman 1996): starting with a chart that shows the bigger picture and then following that with charts that drill down (filter) to specific aspects of that picture, highlighting or presenting key figures (zooming) separately (in an infographic they might be presented as standalone large numbers; in other formats, a zoom with an annotation may be used instead). Once one part of the story has been told, the process of drilling down and zooming can be repeated with another aspect to extend the story further.

A second common approach is to "tour" multiple sources of data instead of different facets of a single dataset. This more episodic structure provides a wider, more varied picture of an issue (often with a wider variety of chart types), sacrificing depth in order to achieve greater breadth.

Infographics

Infographics not only use charts and maps but also other graphical and typographical elements such as quotes (from case studies or experts), photos, and individual numbers in big type. The skill is to combine these in a way that leads you through the story of a particular topic—and principles of contrast, repetition, alignment, and proximity (sometimes called the CRAP rule) can be very useful in this respect:

- Contrast: pick your most important element (whether that's a chart, a map, or a figure) and make it much bigger than all the other elements: perhaps four or six times as big. The clear contrast will tell the user where to look first.
- Repetition: try to make the other, smaller, elements on the same screen the same size as each other. This will make it easier for the eyes to move between them. You should also repeat colours—one more often for less important elements, and one colour for contrast on the more important aspects. Shapes and line thicknesses should also be repeated.
- Alignment: align different elements with each other. It helps to have a basic column structure (for example, your main element might take up three "columns" while all other elements are aligned within one column each).
- Proximity: don't leave large gaps between elements but do leave enough room for them to be readable.

If your infographic is longer than one screen, you should treat each screen as a distinct "page" on that infographic. Think of these like chapters: each one should have its own introduction (an element of contrast). And as a whole, the infographic's chapters should form a beginning, middle, and end that takes the user through the infographic.

Charticles

Another way of telling stories through multiple charts is a *charticle*: this is a form of "listicle" (list article) where each item in the list focuses on a chart. Examples include "Coronavirus lockdown: Eight ways the lockdown has changed the UK" (BBC News) or "12 Charts That Explain Why You'll Never, Ever Be Able to Afford a Home" (BuzzFeed).

A charticle typically opens with a paragraph that establishes the topical background to the story (what's happening that makes these charts relevant right now) and what the article will do, either by raising a question ("How could you be affected if the UK does leave the EU without an agreement?") or by describing what you're about to show ("Here's what poverty and inequality look like as [the new president] begins").

The rest of the charticle is then made up of a series of numbered subheadings, each of which has a paragraph of text illustrated by a chart. As with the listicle format, the emphasis here is on brevity: audiences don't expect a lot of text in a charticle—they expect to be given the key points of a story quickly and efficiently. This can be done by presenting a series of charts showing different angles in the same dataset, but more often it is done by presenting a series of charts from a variety of datasets that provide different insights into the same issue, ending with a chart or paragraph that looks ahead to the future. See the chapter on web writing for more on listicles and charticles.

Steppers and slideshows: Click-to-advance multi-chart interactives

The multi-chart interactive, sometimes called a "stepper" (because it consists of a number of steps) or slideshow, presents a series of text blocks and charts on a single screen, with the user prompting the move to a new "slide" in the story by clicking. Bloomberg's "How Americans Die" (bloomberg.com/graphics/dataview/how-americans-die) is one example: an exploration of how and why mortality rates have changed that the reader experiences by clicking through 19 charts. Each chart provides a different view of the data—zooming, or fading, into a breakdown of one particular age group, gender, or ethnicity, and to different particular causes of death. Overlaying each chart is a paragraph or two telling a story that the charts illustrate, and the charts themselves are interactive.

This format lends itself especially to social media platforms where "tap to advance", or swiping, is the default way of navigating stories. Instagram carousels (an update with multiple images) and Snapchat and Instagram stories can all be used in this way (see @the.pudding on Instagram for some examples). It requires you to be disciplined and succinct in your writing, as only a limited number of words can be used alongside each chart.

Scrollytelling techniques in data journalism

Scrollytelling is a format where elements of a story are animated, faded in, or transformed by the user scrolling. That can include photos and videos, but also charts or maps: a "scrollytell" might be used to introduce and fade out different charts and maps at different points or create a smooth sequence between different views of the same chart or map.

The transition between different views is typically used to draw the attention of the reader to different elements in a chart, helping them to "read" specific data points quickly alongside the accompanying text. Colour is often used to highlight different bars, lines, or slices of charts, for example, when they are being talked about—or one element might be annotated or highlighted while others are faded out.

Zooming and panning are also often used: to focus the story on a narrower scale, to zoom out to the "bigger picture", or to shift (pan) from one period, or part on the scale, or location, to another.

In the Australian Broadcasting Corporation's (ABC) scrollytell "How the election result has changed our cities" (abc.net.au/news/2022-05-25/election-results-maps-capital-cities/101091036), for example, as the reader scrolls through paragraphs of text about the election results, a map in the background changes: first colour is added to represent which parties were in power in different parts of the city before the election, then those colours are changed to show how the election had changed the picture, and then specific colours are highlighted as the article text focuses on particular parties, and the map zooms in and out as the article first focuses on specific districts, and then other parts of Australia.

Another common technique is to "draw" and "redraw" the parts that make up a chart: icons might be lined up to introduce them to the reader, then piled up to make a bar chart, and then re-classified in order to draw a second chart or moved around to draw a histogram instead. The technique can be used to help the reader to understand the scale of the numbers being visualised by starting with one of the items before zooming out to all of them to demonstrate what a small proportion it is of the whole. In the Associated Press scrollytell "Gaza's Toll" (projects.apnews.com/features/2021/gaza-toll-of-war/gaza-toll-one-neighborhood.html), one such section shows a yellow square to represent the destruction of a particular building in the story, which "leaves behind 419 metric tons of rubble. But", the story continues, as it pans out to show hundreds of yellow squares, "that rubble represents just a tiny fraction of the nearly 3 million tons of wreckage from all four wars" (Geller and Akram 2021).

The key with the scrollytell is to ensure that the story and the map or chart work in tandem, both focusing on the same element at the same time, with the scrolling action helping to trigger a transition in the chart that helps the reader focus on the relevant data point(s). But don't use the scrollytelling format unless there's a good reason for it: if there isn't enough detail in the chart to warrant this animation, use a simpler and less time-consuming format instead—and check how it works on different platforms (such as Apple News or Flipboard) and devices. See the chapter on writing for the web for more on scrollytelling.

Animation in visualisation

Sometimes movement is added literally, through the use of animation. A bar chart, for example, allows you to compare values at a single point in time; but an *animated* bar chart (a format called a "bar chart race") can tell the story of how those values have been compared over a particular period of time. There are many bar charts online that use this format particularly well to show the all-time top scorers in a particular sport: bars representing certain sportspeople might race ahead early on, before other sportspeople emerge, catch up, and overtake them (you can create animated bar and line charts with the visualisation website Flourish.studio).

Animation can also be used to show movement: a map of flight, trade, or immigration routes might be animated to draw attention to the distance being travelled, for example.

It is often used to emphasise or de-emphasise different parts of a chart or map through panning and zooming on different places. The mapping tool StoryMap JS (storymap.knightlab.com) is built around this effect: once the locations and times of different events are entered into the tool, it will provide a map that begins at the first event location before panning and zooming to each subsequent location in the series. And one of the most common effects in "scrollytelling" is to zoom into, or pan across, a map, as you scroll through the story that relates to it.

Scrollytelling sometimes uses animation to show a *process*: The Pudding's "How Artists Get Paid from Streaming" (pudding.cool/2022/06/streaming) is one such story—animating the movement of money from streaming platforms to a distributor and then to the artist.

Animation can be used to explain the visuals that the person is seeing by slowing or breaking them down for easier comprehension. The data documentary "US Gun Killings In 2018" (guns.periscopic.com), for example, tells a story about the lives cut short by shootings in the US by animating a curved line for each person killed—but the first line is animated slowly, slowing and pausing at the point that the person was killed, in order to help the audience understand what is being shown. The next few lines are animated at a medium pace, as the user takes in the information more quickly—setting them up for the "full speed" animation as thousands of lines rain across the screen, providing a sense of the sheer scale of life lost to the issue.

And animation can be used to convey uncertainty in the figures being communicated: during the 2016 US election, the New York Times famously used a gauge with a "jiggling needle" to indicate the predicted gap between votes for each presidential candidate. The animated jiggling generated strong reactions, with many people disliking its erratic nature—but it was intentional: the animation was designed to convey that the figures were uncertain, rather than fixed; that predictions were not to be treated as concrete things. And they were right to do so: despite predictions that Hilary Clinton was more *likely* to win the election, she did not (see below for more on communicating uncertainty).

Making music out of data: "Sonification"

One particularly innovative branch of data journalism is the process of turning data into sounds: *sonification*. The New York Times—as ever—has been one of the earliest innovators in this space: in 2010, it created an "Olympic Musical", *Fractions of a Second* (Cox 2010), which turned the finishing times of Olympic finals competitors into sounds in order to tell a story about how close—or far—the difference was between a winner and a loser in different sports.

The story used the same sound—a bleep—for each data point. But later innovators would experiment with pitch and tempo with more musical, or dissonant, results. In 2015, investigative radio show Reveal used the technique to "illustrate the craziness of the changes in Oklahoma's rate of earthquakes in the past 10 years" (Corey 2015) in an article titled "Listen to the music of seismic activity in Oklahoma": "The lower the pitch and the louder the note", the article explained, "the bigger the earthquake".

The tools for creating such sonifications—or "audiolisations"—were becoming more commonplace and easier to use. In 2019, Google funded the creation of

TwoTone (twotone.io), a web interface for sonification that included a range of different instruments, scales, and tempos to choose from.

Perhaps the best place to get started with sonification is Miriam Quick and Duncan Geere's podcast series dedicated to the approach, Loud Numbers (loudnumbers.net), and the YouTube video on the site of the associated "sonification festival". Writing in DataJournalism.com about data sonification, they explained:

> We've got old-skool jungle music soundtracking a story about inequality in the United States, the history of EU legislation presented as baroque counterpoint, and the media frenzy around Brexit sonified using the "news music" so beloved of TV news journalism.
>
> (Geere and Quick 2021)

Chart and map creation tools

Spreadsheet tools have chart creation functionality built-in, which can be useful for your own rough-and-ready exploration—but when it comes to communicating findings with a wider audience, it is best to use a dedicated chart creation tool. These will be easier to customise and have more interactive features.

Some of the tools for turning data into charts or maps were created by people who worked in data journalism themselves: Datawrapper (datawrapper.de) was founded by Deutsche Welle data journalist Mirko Lorenz and developer Gregor Aisch, for example (Lorenz 2022); and data journalist Duncan Clarke and developer Robin Houston laid the foundations for Flourish (flourish.studio) while at The Guardian (Frankel 2018). Both tools have changed over the years to reflect changing demands of newsrooms, adding—among other features—"locator maps" that allow you to visualise the location of a news event, and (on Flourish) sports charts that make it easy to map a player's positions on a field or court. Flourish also allows users to join multiple charts together into a "stepper" slideshow with its "story" tool.

More general-purpose visualisation tools can also come in useful: Infogram not only allows you to create a range of charts quickly, but also to combine them with text, counters, and other features in long infographics. Infographics can also be created from a range of templates on Canva—which bought Flourish in 2022. If you want to show networks you may need a dedicated tool like Kumu.io, or Gephi, while word clouds can be created more quickly with EdWordle, Tagxedo, and Tagul.

As well as web-based tools, you can also download standalone visualisation software. Tableau and Power BI are two of the most widely used tools in this category: both allow you to create multi-chart stories and dashboards that can be embedded online—but also have impressive built-in data analysis functionality such as the ability to clean and merge datasets.

Two widely used pieces of mapping software are ArcGIS and Mapbox: if your map can't be drawn by a web-based service, it may be worth spending time tackling your problem with either of those.

For ultimate control over your visualisation, you may need to learn a programming language such as JavaScript: this will allow you to use collections of code called "libraries", which solve common data visualisation challenges: Raphael, Kartograph, and Leaflet.js are just some of the libraries focused on mapping; while D3 is widely used for charts.

Summary

If you want to get an edge in a highly competitive journalism jobs market, data journalism is a hugely desirable skill to have. Data journalism skills can help you produce exclusive stories that hold power to account or create attention-grabbing visuals and interactives. If you're very good, you can do both.

There are lots of different ways to get into data journalism. You can focus on finding stories in new datasets released by government organisations or other bodies or develop your visual skills by creating compelling maps and infographics. You can develop skills in finding new data—for example, by using FOI or scraping. Or you can focus on interactivity and develop coding skills.

The best way to get started is to start simple—and pick a subject or story that you're passionate about, whether that's a hard news subject like crime or health, or a softer subject like fashion or music. Whatever it is, there will be data about it somewhere. Once you've mastered one simple skill, try to master another, but never ever feel under pressure to be a master of everything: even the best data journalists have gaps in their skill sets.

Because of the wide variety of skills involved, data journalism often involves collaboration. Look out for mailing lists and meetups where you can ask questions and share your work with others who might be able to build on it. Designers or developers might be interested in creating things with the data you have found, or you might be able to find data collected by others that you can work with.

Ultimately, data journalism gives you the opportunity to make a real difference with your journalism—and you don't need anybody's permission to do so. The power available online and on your laptop is quite incredible, and yet many journalists fail to make the most of it. With data journalism, you can use that power in all sorts of exciting ways—and invent new ways too.

Activities

1. Look for a data release calendar on some of the sources mentioned in the section on finding data. Which release do you think might be most newsworthy—and why? What potential angles could you explore (use the eight story angles listed in this chapter)? Discuss your thoughts with colleagues and friends. See if you can find a previous example of the data released to get a better picture of the information it will contain—does that give you any new ideas?
2. Look at a piece of research that has been released recently by the government or a pressure group. How was the information gathered? How big—and representative—was the sample? How long a period did the research cover? If any of that information is missing, try to get hold of it—and if they won't provide it, ask why.
3. Submit a Freedom of Information (FOI) request to your local authority or police force (if you're in the UK you can use the website TheyWorkForYou.com). FOIs are best for requesting documents or statistics—you could, for example, ask how much they spent on PR in the past three years, or to see any policy documents relating to dealing with complaints. Search online to see what other FOI requests have been submitted to that body—and the responses (WhatDoTheyKnow should have some examples if it's in the UK). This will help you formulate your own.
4. Use the advanced search techniques outlined in this chapter to find a useful spreadsheet about your local area or a subject of interest. Try out some basic spreadsheet techniques

to calculate a total and work out mean and median averages. If the data is detailed enough, with categories or places appearing more than once, try to create a pivot table to find out which company gets the most money or which department spends the most. Use a search engine to find tutorials that explain ways of solving those and other problems in a spreadsheet.

5. Put a recent speech by a politician into a word cloud creator (such as EdWordle, Tagxedo, or Tagul) and create a word cloud (you can normally find speeches on politicians' own websites or the part of government they work for). What does it imply about the politician's priorities or the point they're trying to make? Now try to create a bar chart showing the frequency of the top five or ten words instead (wordcounter.com will tell you the frequency). Which is better? Use some of the techniques in this chapter around colour, text, scale, and annotations to improve the chart. Then see if you can create more charts and combine them together into an infographic.

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11 Interactivity and code

Chapter objectives

This chapter will cover:

- What is interactivity
- Ways to think about interactivity in your journalism
- Tools for adding interactivity to your stories
- The debate over whether journalists should learn how to code
- Basic web design concepts: HTML and CSS
- What different programming languages do
- Basic programming concepts you need to understand
- Understanding APIs
- JavaScript journalism
- Choose your own adventure stories
- Timelines and interactive maps
- Sliders and interactive images
- Quizzes and polls
- Counters and tickers
- News games and other forms of interactivity

Introduction

In his book *Online Journalism* (Hall 2001), Jim Hall argues that, in the age of the web, interactivity could be added to impartiality, objectivity and truth as a core value of journalism. It is that important.

Interactivity is central to how journalism has been changed by the arrival of the internet. Whereas the news industries of print and broadcast placed control firmly in the hands of the publishers and journalists, online your users are an integral part of the journalism process—whether you like it or not.

This is partly because the web has grown up on devices (computers, mobile phones) with cultural histories of utility, very different to the cultural histories of television, radio, or even print. People do not, typically, switch on their computers or phones and sit back, waiting to be entertained: these are "lean-forward" devices that are actively *used*.

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But that's not all. Interactions with our content are key to the commercial side of publishing too. Journalists and publishers rely on users to help their stories rise up the search engine rankings and get found on social media; advertisers increasingly look for evidence of "engagement" with users beyond mere page views. Early research on interactive formats suggested that users spent more time on the page when information was presented in this format (DiSEL 2005) and also recalled more process-related information (in contrast, users appeared to recall slightly more basic factual information when information is presented in normal HTML (Ruel and Outing 2004)).

In the first decade of online journalism, advanced interactivity was labour intensive, requiring the involvement of web developers and designers. As a result, it tended to be used only for large stories and investigations. But as technology improved and news organisations experimented more, interactive formats moved beyond merely offering a choice of media—and the concept of offering a choice of elements was no longer limited to special interactive features: stories regularly provided users with the choice of digging deeper into galleries, video, or audio.

Interactive story formats now began to focus on creating a coherent "path" through the story, with interaction increasingly revolving around data-driven elements (see the chapter on data journalism for more). And interactivity moved beyond the webpage, taking in standalone "web apps", mobile-based interactivity, personalisation, automation, and bots.

In this chapter, we will look at the range of ways that online publishers have integrated interactivity into their content, the increasing importance of programming skills for journalists, and the tools and techniques that can help you bring readers into your storytelling.

What is interactivity?

Interactivity might seem a straightforward concept: fundamentally, it is the ability to *interact* with content in some way—but dig past that basic description and a reading of some of the literature around the concept reveals it to be much more varied and complex than it first appears.

Liu and Shrum (2002, p.54) define interactivity as "The degree to which two or more communication parties can act on each other, on the communication method, and on the messages and the degree to which such influences are synchronized". In other words, the interaction in interactivity can occur between a number of different elements.

Downes and McMillan (2000) address similar ground in their attempt to break interactivity down into six "dimensions":

- Direction of communication
- Time flexibility
- Sense of place
- Level of control
- Responsiveness
- Perceived purpose of communication

Put more simply, interactivity is not an either/or quality. Most online journalism instead exists on a *continuum* of interactivity, which mainly revolves around two aspects: communication and control.

On the communication side, interactivity means allowing users to communicate with the news organisation, with individual journalists and—crucially—each other. While

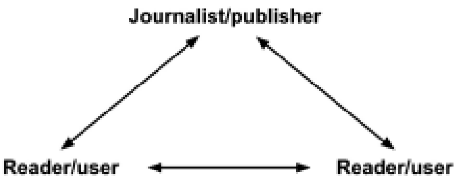

Figure 11.1 Three-way interactivity

much has been written about the arrival of two-way communication between journalist and reader using facilities such as comments, social media, and journalists' emails (Canter 2012; McElroy 2013), it is equally important to recognise the emergence of a three-way communication structure: between journalist and reader, and reader and reader (Figure 11.1).

Ultimately, the attraction for news websites is the same as that in print and broadcast: the ability to gather people with a passion for the same issue in the same place.

Thinking about control

Control in interactivity can be over *when* someone consumes their media (time-shifting) or *where* (providing podcasts that people can listen to on their phone, for instance). It can also mean control over *input* into a story—everything from allowing comments on a story to letting readers vote on what should be covered. And it can mean control over the news *output*: the BBC's personalised homepage and app, for example, allow you to customise the news you get based on your location, fields of interest, and particular organisations such as sports teams.

These control options are illustrated in the checklist below (Table 11.1). It provides a framework to prompt you to think about how you make your own journalism interactive.

For example, if you are working on a piece of journalism you might ask:

- How can I give the user control over the space in which this is consumed? Make it downloadable, perhaps?
- How might I give the user control over input? Perhaps by blogging or writing on social media about the idea for the article and inviting suggestions for angles, sources, research, and so on.
- How can I give control over output? Allow users to enter their postcode and find out how the story affects them.

Control over input and output

With linear media such as TV, radio, and print, it is the producer, editor, or journalist who structures how content is presented (the output). Digital media allows the audience to take some of that control. Examples include:

- At a basic level, *hyperlinks* allow the reader to dictate their experience of "content" through their choice of clicks (see the chapter on writing for the web).

Table 11.1 Interactivity: A checklist of user control

Ways in which you are giving the user control over…	*Examples*
Input	• Including reporter contact details • Comments form • Opportunity to submit user-generated content • Voting • Forum • Wiki • Live chat
Output	• Linking • "Chunking" longer content into shorter sections for separate consumption • Offering a choice of medium • Playback controls (pause, skip forward/back, etc) • RSS feed • Personalisation • Database search • Offering the user a choice at points in the story • The ability to apply filters on tables, charts, etc. • The ability to zoom on maps, etc.
Space	• Mobile-optimised content • Mobile app • Publishing on multiple platforms • RSS feed/subscription
Time	• Storing in a permanent form content that would otherwise be ephemeral (e.g. livestreams) • Republishing in permanent form content that would otherwise be hard to find (e.g. live tweets republished in a liveblog)

- With online video and audio, the user can *control playback*: pause, skip forward, and so on.
- Having *multiple media elements* in a story sometimes allows users to choose the medium they want to focus on.
- If it has been split into "chunks" (see the chapter on writing for the web), the user can choose which bit of a longer video or audio piece they experience.
- *RSS* allows users to create their own media product by selecting feeds.
- *Database-driven content* allows the user to shape output based on their input, for example, by entering their postcode they can read content specific to their area.
- *Interactive data visualisation* allows the user to filter and zoom into areas or subjects of interest to them.
- *Interactive editorial formats* allow the user to influence output in a range of ways. This may be as simple as selecting from a range of audio, video, text, and still image options. It may be playing a game or quiz, where their interaction (e.g. what answers they get right, how they perform) shapes the output they experience.

When it comes to interactive formats and visualisation, Jens Jensen—building on work by Bordewijk and Kaam—identifies four ways that interactivity might be incorporated (Jensenn 1998):

- *Transmissional* interactivity involves the user choosing from a range of pieces of information—for example, a user might get extra information about an element when their mouse hovers over it (e.g. an area on a map or image).
- *Consultational* interactivity provides multiple views of the same information—for example, by showing it from different perspectives (the user might be able to select a bar chart or a map showing the same data, for example—or choose between a podcast or transcript).
- *Conversational* interactivity involves some input from the user, which is then displayed as part of the story. A good example of this might be the "You Draw It" charts by the New York Times, which invite the user to complete a half-drawn line chart before revealing how close they were to the actual line.
- *Registrational* interactivity is shaped by information provided by the user about themselves: stories involving an element of personalisation would fall into this category

In terms of *input*, the news media has a rich history of user-generated content (the letter to the editor; the radio phone-in). However, these forms are still *reactive* rather than interactive "unless journalists or other readers (in subsequent letters) respond to the initial communication" (Schultz 1999). Online, input is much more integral: journalists can expect input on anything that they create and often invite input at the very start of the reporting process (see the chapter on community management).

Input can also form part of the publishing strategy itself, as explained in the chapter on community management. Indeed, you will notice that interactivity has become so embedded in online journalism practice that you will find its principles outlined in all the other chapters of this book. These include:

- Linking and embedding (writing for the web)
- Allowing audiences to interact with each other and the journalist or publisher (community management; liveblogging)
- Allowing users to explore and interact with data (data journalism)
- Allowing users to control multimedia (video and audio; writing for social media)

For the remainder of this chapter, then, we will focus on those technologies of interactivity not covered elsewhere, the role of programming and the "journalist-coder", and interactive storytelling forms.

Creating interactivity with third-party tools

Although some interactivity requires programming skills (see below), many of your ideas around interactivity will be achievable using third-party tools that you can find online. Often the first step to creating something interactive is to ask the question "Is there a tool for that?"

There are websites that will help you make video or audio interactive; others will do the same for images. There are tools to create interactive timelines, maps, sliders, quizzes, and polls. There are services that will help you create a story with multiple paths or make a dataset or map searchable.

Some of these tools come and go. But more often than not, you will find a similar service has sprung up elsewhere: good ideas are hard to keep down.

Technologies of interactivity: Polls

Polls are one of the simplest forms of interactivity and are often very easy to add to a page or within social media updates. Typically, this has two purposes: to "feel the pulse" of the audience (reader-to-journalist interactivity) and give the audience an opportunity to find out how other readers feel (reader-to-reader interactivity).

But you must be careful that you use a poll wisely: polls conducted via social media cannot tell you, or your audience, anything about the population as a whole—or even the readership of your publication. Most survey respondents do not represent the wider population or meet sufficient standards (Wu and Weaver 1997): research on online polls has found that women are less likely to participate (Zhao and Leung 2013), while polls can be hijacked by people who do not normally read your publication or can be artificially manipulated. This problem is sometimes called "freeping" after the website Free Republic, which directed its users to swamp a number of online polls with their votes.

It is important to ensure that readers understand the limitations of polls too: if 90% of respondents said they agreed with something, you must not report that "90% of people" agreed with it: it is 90% of those who responded to that particular poll. In fact, you should think carefully before using the poll results in *any* reporting because it's unlikely to be able to tell you anything meaningful. The BBC has very useful guidelines on the use of polls that you should read before using any poll results—including those conducted elsewhere—in your coverage (BBC 2016).

For these reasons, it is important to only use online polls within a fun context where the results are not taken too seriously. Robert Niles points out that "Polls won't tell you anything useful about your readership's *collective* behavior, [but] they can engage your readers to share *individual* stories" (Niles 2007).

They can also be useful entry or exit points for a frivolous story: The Guardian began adding a poll to the top of transfer rumour stories in 2015 that invited users to vote on whether the rumour was credible or not, while The Manchester Evening News used polls at the end of its transfer rumour posts to invite fans to vote on whether they would welcome the proposed transfer target.

There are countless websites for creating and hosting polls and poll widgets. Perhaps the best established is Polldaddy (polldaddy.com), which is also integrated into WordPress (en.support.wordpress.com/polls/). SurveyMonkey also provides a polling tool (surveymonkey.co.uk/mp/online-polls). Another option is to create a poll within a tweet or Facebook update and embed that update within your post.

Technologies of interactivity: Quizzes

Quizzes have always worked well within print magazines, but online the added attraction of instant results (no adding up scores!) and shareability have made them hugely popular on social media, while the data generated by quizzes add a commercial factor—and privacy dilemma—that should not be underestimated. Dozens of free tools online have made it easier than ever to create interactive quizzes, including Playbuzz (playbuzz.com) and Riddle (riddle.com), partly for that reason.

Quizzes can have one of a number of purposes. These can include:

- Giving the user a chance to test their knowledge (how much do they know)
- Providing a more fun way to take in information (what do they *not* know)

- Providing an insight into their character or other qualities (what type of person are they)
- Providing an answer to a question, such as the political party whose policies most closely match your own or how the latest budget announcements will affect you
- Telling a story in a different way by communicating story elements through the answers or using the quiz experience to replicate some other experience

They also tend to fit into particular genres: BuzzFeed's guide (Kopsky 2021) lists four types: trivia quizzes, personality quizzes, polls (see above), and checklists. Another genre—"guessing game" quizzes such as "Can we guess where you're from"—is specifically identified by research on Playbuzz (Libert 2015).

Empathy can be an important element in a quiz. The Mirror's quiz "Could you pass David Cameron's English test (and avoid deportation)?" (Mulroy 2016), for example, uses the format to allow users to experience the challenging nature of the questions for themselves.

Personalisation is another strength of the format. In order to address the "it will never happen to me" attitude to hacking, for example, The New York Times created a quiz feature that asked: "How Many Times Has Your Personal Information Been Exposed to Hackers?" (Keller, Lai and Perlroth 2016). As users ticked boxes to say whether they had used particular accounts, insurance providers, or credit cards, the page counts up the number of times those companies have been hacked. The quiz has also been regularly updated to reflect new hacking revelations too.

Increasingly, quizzes are being integrated into reporting rather than published as a standalone piece of content. In the Seattle Times investigation into police killings, "Shielded by the Law" (Miletich et al. 2015), a quiz (where users can "explore the data" by guessing key stats from the investigation) is just one element of a long feature that also includes video, audio, and interactive visualisation. The Guardian US interactive "Can you guess the voter turnout in your state?" (Popovich 2016) uses an initial quiz question as a way of introducing a personalised article on local issues affecting election turnout.

At their most complex, quizzes can become "choose your own adventure"-style interactive narratives: see the section below on multiple path stories for more.

Technologies of interactivity: Image maps

Images can be made interactive by turning them into "image maps". In an image map, specific areas of that image become clickable, with different things happening when a user clicks different areas. Examples include:

- A group photo, where users can click on each face to access more information about that person (text, video, audio, or other media)
- A photo of a key scene at an event, with people, buildings, and items that all might have a story behind them, and which can be clicked to find out
- A geographical map, where users can click on different places to read about them
- A floorplan showing the layout of a key site in a story: users can click on different parts to find out what happened there
- A diagram illustrating a process or concept: users can click to find out more about a particular stage or element
- An infographic where users might click through to the original data, animations, or interviews about key facts or quotes

In *Turning the Camera Around: Health Care Stakeholders* (NPR 2009), for example, NPR turned the camera on lobbyists in the audience for a hearing on a healthcare bill. Users could roll over each highlighted person to see their name and how much their organisation had spent on lobbying the previous year. And The Guardian used an image map of London's skyline to show how it was going to change as new buildings were due to be added to the city (Fenn, Powell, and Mead 2014).

You can create an image map in a number of ways. One is to use the HTML tag <map> for example (you will find plenty of tutorials online). The Image Map Generator (image-map.net) and Image-Maps.com are just two of various online tools that will generate the code for you.

However, there are also various tools that allow you to turn an image into an interactive image map even more easily—and with more multimedia options. Perhaps the best known is ThingLink (ThingLink.com), but the StoryMap JS website (storymap.knightlab.com) also provides similar functionality through its "StoryMap for Images" option at storymap.knightlab.com/gigapixel.

Technologies of interactivity: Timelines

Where your story involves a series of events, it can also be presented in an interactive timeline. The data visualisation platform Flourish (flourish.studio) allows you to create timelines, while dedicated timeline creation tools include Timetoast and Knight Lab's Timeline JS tool (timeline.knightlab.com). This gives you a spreadsheet template and will display your entries on a single scrollable line, or as a series of cards that can be "flicked" through. You can also find tools such as StoryMap JS (storymap.knightlab.com) and TimeMapper (timemapper.okfnlabs.org), which will place your timeline on a map.

Technologies of interactivity: Counters and tickers

A counter—sometimes called a "ticker"—is a very simple way to add animation to a story and bring a key number to life. Normally placed in the middle of the story in the same way that you might have a graphic explaining a "key statistic", the counter will start from one number (often zero) and begin increasing—or decreasing—that number at a rate determined by you. The code may also specify a number at which the counter will stop.

Halfway through one Telegraph article about Apple (Titcomb, Hope, Swinford, and Mendick), for example, is a counter. It begins: "Apple made £37.47bn in profits in the last year. Since you started reading, that's…"—and then comes the counter. The user can watch as Apple's profits-while-reading accumulate.

Flourish (flourish.studio) offers a "Number ticker" option to create and embed your own ticker, and you can also customise one with Rakko Tools's "Tick Counter Maker" (en.rakko.tools/tools/73). Or, if you want to count down rather than up, there is a range of customisable countdown timer templates on Canva (canva.com).

You may need to do some calculations to work out the rate at which your ticker needs to increase. To do this, take a total amount (e.g. £37.47 billion in the Apple case above), and divide by the period of time that amount covers, in seconds (in the example above, that would be the number of seconds in that year). That gives you the number *per second*, and you can set the counter to increase at that rate.

Technologies of interactivity: Sliders

Interactive sliders allow you to compare two images (which are overlaid on top of each other) by dragging a slider to change the amount of each image that is visible. They are best known for "before and after" situations: for example, the story "Third runway at Heathrow cleared for takeoff by ministers" (Johnston 2016) featured a slider that users could move to see either more of the "current flight paths" image or more of the "proposed flight paths" image.

A slider "bar" is positioned in the middle of the two images to begin with, so that 50% of each image is visible ("before" to the left of the slider; "after" to the right). The act of clicking and dragging the bar one way or the other "reveals" more of one image at the expense of the other, and vice versa.

The tool Juxtapose JS (juxtapose.knightlab.com) from Knight Lab makes it very easy to create sliders, and Flourish (flourish.studio) also has a photo slider option.

Technologies of interactivity: "Choose your own path" stories

Interactive stories have a rich history in literature, from children's "Choose Your Own Adventure" books to seminal works such as Julio Cortazar's 1963 novel "Hopscotch". In these books, readers are invited to make a choice at the end of each chapter, which then determines what chapter of the book they read next, and the overall path of the story that they experience.

The invention of *hypertext*—links on webpages—made it possible for writers to recreate the same experience on digital platforms. By 1997, Espen J. Aarseth was coining the term "ergodic literature" to refer to these "choose your path" narratives (Aarseth 1997).

There are a number of tools that make the process of creating "ergodic journalism" that much easier. One of the best-established interactive story creators is Twine (twinery.org), while Textadventures.co.uk also offers similar functionality alongside a community of creators.

But you don't need bespoke tools to create ergodic stories: if you can create links, you can create interactivity by publishing each part of the story on a different webpage (using free website tools like WordPress and Wix) or social media updates and offering the reader a choice of links at the end of each page.

The BBC Glastonbury Twitter account, for example, created an ergodic story about the music festival where the reader is transported back in time to 1970. It begins with a girl offering you two flags and asking, "which one do you want?" (BBC Glastonbury 2020). The two choices are presented as two quoted tweets: clicking on one takes you to another Twitter thread where you can continue to make similar choices as you pursue the objective of returning to the present.

Chatbots (see the chapter on email and chat) are another storytelling device with ergodic features: users are typically presented with a choice of options by the chatbot and their experience—the story—is determined by their responses.

There has been a particular focus on interactivity in video, too. Channel 4 News's "Two Billion Miles" (twobillionmiles.com) places the viewer in the position of a refugee trying to make it to safety, presenting different video footage based on the choices that the user makes. Video services like Eko Studio (studio.helloeko.com) and Rapt Media (raptmedia.com) are specifically designed to help produce such interactive experiences.

Ergodic stories work particularly well for stories where empathy is important. They can be particularly effective in putting the user in the position of an individual at the heart of a story and engaging them in the choices and consequences involved. In a world where complex issues are often over-simplified, interactivity allows us to dig deeper, demonstrating that often there are no easy answers and many grey areas. But this also comes with an ethical challenge: does placing the reader in the position of someone in a story compromise the objectivity of the story being told? It should still be possible to ensure that they get all the information that is vital to understanding that story—as long as you are conscious of the risks and address those.

Ergodic storytelling presents logistical challenges, too: one blog post about the planning behind the BBC's "Crossing Divides" project (crossingdivides.bbcnewslabs.co.uk) explains how a branching narrative would have required the team to "write, edit, translate, and re-edit 243 pieces of text per story, per character" (Hutton, O'Donnell, Passarelli, and Shultes 2018). This would have been too much work, so they instead adopted a narrative structure that continually brought users back to the main thread of the narrative.

This narrative structure—sometimes called the "fishbone"—is one of many that an ergodic story designer can choose from. Others listed by one guide to interactivity in documentary making (Munday 2018) include the "threaded" narrative (separate linear narratives, one of which is experienced after an initial branching point, before rejoining for a shared ending); the "concentric" narrative (an initial gateway to multiple separate threads of the story, with no shared ending), and the "parallel" narrative (branches always return to pivotal moments before branching off again). It is well worth exploring these forms if you are considering planning an ergodic story.

Creating interactivity with programming

Third-party tools limit what you can do with interactivity, and often create problems with long-term maintenance. What happens, for example, if the site is hosting your content and (as often happens) closes down?

Although these tools are useful for exploring ideas of interactivity, there will probably come a point at which you want to take more control, do more things, and learn more skills. And for that, you will need at least some programming skills.

Of course, entire books have been dedicated to individual programming languages or specific parts of them, and this chapter is not intended to teach you how to write in JavaScript or HTML. However, it should give you the basic principles and context required to start your journey into coding for interactive journalism.

Closer look: Should journalists learn to code?

If you have particularly ambitious ideas for online journalism projects—especially those that involve tools or personalisation—then programming expands the possibilities open to you. But there is also an ongoing debate within journalism about whether *all* journalists should learn to program.

There are a number of arguments in favour of learning to code. First, journalists are regulated and restricted by code in all sorts of ways:

- Code affects what information you can access (just knowing advanced search operators can make a big difference in your newsgathering skills—see the chapter on finding stories—but there is a lot of information not recorded by search engines, too)
- Code affects how well you can filter the information coming to you—vital when you're facing information overload (for instance, creating automated alerts)
- Code affects your ability to verify sources and documents
- Code affects your ability to protect sources
- Code affects your ability to empower sources to help you and each other
- Code affects your ability to engage users

Second, journalists have to use *content management systems* that often require a little bit of coding if they want to do anything special. Knowing what's possible also means you can communicate with key colleagues such as web designers and web developers when the content management system doesn't do what you need it to do.

Coding can be an enormous time saver, allowing you to automate some processes and making some stories possible that otherwise would be impossible. As the *Guardian*'s Charles Arthur says:

> When I was really young, I read a book about computers which made the point—rather effectively—that if you found yourself doing the same process again and again, you should hand it over to a computer. That became a rule for me: never do some task more than once if you can possibly get a computer to do it.

It can also be extremely satisfying, as former *Guardian* colleague Mary Hamilton adds:

> I love coding when it works well, I love that moment of unlocking something or creating something new and useful. I find it oddly exciting, which is probably why I carried on doing it after the first couple of times.

Coding gives you something extra in a very competitive jobs market: not just now but in the years to come as well, as technology companies become media companies and vice versa. As Nate Silver says: "If you're an aspiring journalist who knows how to code really well, you are in a very hot market" (Soper 2014).

But most importantly, coding allows you to be a better journalist. As Mark Donoghue says:

> Journalism taught me how to ask questions. Computer Science taught me the importance of asking the right question.
>
> Journalism taught me how to communicate. Computer Science taught me how to think.
>
> Journalism taught me how to identify problems. Computer Science taught me how to solve problems.

One of the strongest arguments for coding's role in journalism is that journalists need to understand the systems that govern society and their own work. And code is now one of those major systems. If we expect journalists to understand public administration and the ways that governments are given and exercise power, then they should also understand how code represents power.

And in that sense code is very much about the core role of journalism: which is to hold power to account.

If you want to start learning to code there are many, many resources online, including interactive tutorials on a range of languages and skills on sites like Codecademy, W3Schools, and Khan Academy. It's also a good idea to join one of the many local meetups for people interested in programming: the Hacks/Hackers network is specifically dedicated to journalists interested in data and coding, and has meetups in cities all around the world, but you can also search sites like Meetup for groups on web design, JavaScript, R, Python, and coding in general.

Closer look: What different programming languages do

There are many programming languages, each of which is used in different contexts for different purposes. Those that you will hear mentioned most often include HTML, CSS, JavaScript, Python, SQL, and R. Very few journalists learn all of these languages but instead focus on one particular part of the web development process.

HTML (hypertext markup language) and CSS (cascading style sheets) are the starting point for most people learning how to create interactive experiences. These two languages are used to create and format webpages, so you will need to know these in order to create anything web-based.

JavaScript is used to add interactivity to those webpages: for example, it can be used to add extra content to your page based on what the user does or change the properties of elements on the page. If the page needs to load content from a database, then Python, R, or other languages (such as Ruby and PHP) might be involved, too. Python is used in NPR's App Template (github.com/nprapps/app-template), for example, to generate static files that are then published online. The data journalism outlet FiveThirtyEight uses R in a similar way to create charts and underpin interactives (Flowers 2016).

Python and R are used most often in journalism, however, to find stories: fetching data, "cleaning" it up so it can answer particular questions, and then asking those questions to get answers that can lead the next day's homepage—SQL is a simpler language that can do these things too (see the chapter on data journalism for more on these processes). You can also use these languages to generate visualisations that tell the resulting story.

The basics of programming: HTML and CSS for journalists

HTML is the basic language of the web: it is the language that turns plain text into working webpages. Alongside that, CSS adds colour, style, and movement (see below). The distinction is important: HTML is about content and structure; CSS is about how that looks.

HTML is used to do the following:

- Turn text into linked text (hyperlinks)
- Create tables
- Insert images, video, audio, and other media
- Add emphasis such as italics or bold text
- Create headings and subheadings

You can recognise HTML easily because it is written between triangular brackets called chevrons, like so: . This is called an HTML tag. The tag makes text strongly emphasised (it will generally look bold). Here are some other common HTML tags:

- <em> makes text emphasised, or italic
- <h1> makes text into a level 1 heading, the most important heading
- <h2> makes a level 2 heading, which is slightly less important than a level 1 heading. Similar tags will create headings at levels 3 down to 6
- begins an unordered (bullet) list
- begins a list item in one of those lists
- <img> inserts an image
- <a> makes text into a link

When you use one of these tags, it is like pressing a button to turn bold "on" or to turn a list "on". Most tags, then, also need to be turned off by repeating the tag but with a slash at the start, like so:

- to turn strong emphasis off
- </h1> to indicate the end of your heading
- after each list item, and to indicate the end of the whole list
- at the end of the text you want to link

Most of the fundamentals of HTML can be learned very quickly indeed: it is a very simple language, and there are plenty of free courses, videos, and other resources online that you can use to learn it. But the most important thing is to try things out and experiment, learning through trial and error.

Style, not structure: CSS

One thing that HTML should *not* be used for is to change the style of the text. Sometimes, for example, people use tags like <h1> to make text bigger, but that is considered bad practice. Remember that HTML tags are about meaning, not style: the <h1> tag means text is more important than normal paragraphs or <h2> text. The <strong> tag is used to indicate that text should be emphasised strongly; the fact that it *appears* bold is a side-effect of that.

Appearance is controlled using a different language: cascading style sheets (CSS). CSS is used to:

- Specify the colour and typeface of text
- Specify the *size* of elements, such as text, images, shapes, and lines
- *Position* elements on the page
- Present your content differently based on the user's device: for example, depending on whether it is being viewed on a mobile device or a desktop computer

Normally CSS does this by *targeting* HTML tags within the page. For example, it might be used to say "make all links green", "make all <h1> text 30 pixels high", or "give all images a 1 pixel-thick red border". Here is an example of some basic CSS code:

h1 { font-size : 18px; }

The text at the start specifies the HTML tag that the stylesheet is targeting for the style that follows. This is followed by a pair of curly brackets containing the property *attribute* that you want to affect (in this case, the font size) and the *value* that you want to apply to that attribute. In this example, the CSS is saying that it wants to make any text within <h1> tags 18 pixels large.

Each style has two parts: first, the property (font size in the example above), then a colon, and then the value of that property (18 pixels in the example). Finally, a semi-colon indicates the end of that particular instruction.

You can apply more than one style to a single tag. In the example below, the CSS is specifying three things: a background colour, the colour of the text itself, and the font size:

```
h1 {
background: #00FF00;
color: #FF0000;
font-size: 18px;
}
```

Like HTML, CSS is a simple language to learn, with plenty of resources online. And like HTML, the best way to learn is by practising and trying things out.

"JavaScript Journalism"

JavaScript is widely used in publishing as the basis for all sorts of interactivity. Most of the examples mentioned in this chapter use JavaScript, and many of the tools, including Juxtapose JS, Timeline JS, and StoryMap JS, are JavaScript-based as well (the JS in the name stands for JavaScript).

The Washington Post's Ray Daly has argued that "JavaScript Journalism" deserves to be recognised as a genre in its own right (Benton 2013). His talks on the subject are well worth watching if you want to learn more (see the online resources at the end of this chapter).

Typically, most JavaScript interactives work by "listening" for things to happen on a page, such as a user clicking on a particular object, scrolling down the page, or entering information. These are called “events”, and when one of these events happens, part of the JavaScript is triggered. Here are some examples of typical interactions that are created with JavaScript:

- When a user clicks on an image, fade it out slowly and fade in a different image in the same place
- When a user scrolls down the page, move a video clip in from the edge
- When a user hovers over a video clip, turn the sound on
- When someone hovers over a particular part of a map, show a box with information about that area
- When someone clicks on a correct answer, add one to their score
- When someone reaches the end of a quiz, display their total score

Some JavaScript interactions work in a similar way to CSS by targeting different parts of the page. For example, JavaScript can be used to change the transparency property of an image to create the effect of “fading out” or “fading in”. They can also be used to add or remove text, images, or other elements to or from part of the page.

Other JavaScript interactions work by storing information, which is then used to determine what the page does next. For example, a JavaScript quiz will store your score and then change it based on your actions (choosing a right or wrong answer), before displaying it back to you at the end or using it to load a relevant humorous result (such as “which animal are you” or “how old we think you are”).

This ability to store information is central to some of JavaScript’s most powerful editorial applications. It opens the door to more personalisation, for example: choosing your town from a list might trigger the display of information specific to that area or entering your wage details into a web form can allow an interactive feature to calculate the impact of a newly announced budget on your household.

Another powerful feature of JavaScript—and other languages like Python and R—is that you can find lots of “libraries” of code made by other people to solve similar problems (see below). One of the most widely used JavaScript libraries, for example, is jQuery, which has a lot of built-in methods for creating animation and interactivity. Another is D3, which makes it easier to create interactive charts and data visualisation. There are also JavaScript libraries for creating interactive maps, sliders, quizzes, apps, and other types of content.

Closer look: Ethics, privacy, and client-side or server-side interactivity

Interactions on your website can be described as being either “client-side” or “server-side”:

- The *client* is (usually) the browser that someone is using to view your webpage
- The *server* is the computer hosting your website, which could be anywhere in the world

If an interaction takes place entirely within the browser, without any information being requested from your server, then it is described as “client-side”. *Client-side* interactivity has a number of advantages, including speed but also privacy: it may be important that information supplied as part of an interactive experience (such as someone's birth date, sexuality, or opinion) is not stored anywhere. However, note that if they choose to share the results on social media, this may also have privacy implications.

If information has to be processed by an application or database on your server, this is a *server-side* interaction. The advantage of this approach is that you might want to quantify interactions in more detail: for example, in order to count votes or to provide a breakdown of the choices made by users. Note that users must be informed of any use of personal data, in line with data protection laws.

Which programming language should I learn?

Journalists starting out in interactivity and data journalism often ask which programming language they should learn. Really, there is no single answer: it depends on what you want to use programming for. Journalists focused on *finding* stories often learn languages like Python, R, and SQL, which can be used to write code that fetches information, cleans it, analyses it, and visualises it. Journalists focused on *telling* stories often learn JavaScript because of its widespread use for interactivity. But all these languages can be used for both purposes.

The key thing is to find a project that you are passionate about and use that as a basis for exploring programming techniques. Keep it simple to start with—a quiz or counter, for example—and then look for tutorials on how to create that.

Programming concepts it helps to understand

If you're looking to get into coding, the chances are you'll stumble across a raft of jargon that can be off-putting, especially in tutorials written by more advanced developers (if this happens, look for tutorials written for a wider audience). Here are some concepts you're likely to come across—and what they mean.

Variables

A variable is a way of "containing" information so that you can use it in a line of code. To give some examples:

- You might create a variable to store a person's age and call it "age"
- You might create a variable to store the user's name and call it "username"
- You might create a variable to count how many times something has happened and call it "counter"
- You might create a variable to store a user's score
- You might create a variable to store something's position
- You might create a variable to store a list of possible answers
- You might create a variable to store data for a chart

Variables can be changed, which is their real power. A user's name will likely be different every time one piece of code runs. A score can change when someone selects a correct answer. A counter can increase by one every time something happens. A list of items can have items added to it or removed.

They can also be combined or used as the basis of calculations: an age (one variable) might be calculated based on a birth date (another variable).

Strings, integers, and other types of information

Programming is very strict about classifying different information that affects what you can do with it. Typical types of variables, for example, include:

- “Integers” (whole numbers) and “floats” (numbers with decimal places)
- Text—generally called “strings” and indicated by quotation marks like so: “17 August”
- Lists or “arrays”—explained below—normally indicated by square brackets and commas like so: [“Manchester”, “Glasgow”, “Paris”]
- Dictionaries or “dicts”—explained below—normally indicated by curly brackets, colons, and commas like so: {“Age”: 23, “Name”: “Jane”}

This is important because problems can occur when code encounters information in the wrong format. For example, you cannot perform a calculation with strings or in some cases combine text with numbers.

Preventing these problems in those situations often involves converting from one type of data to another. Computers are great at performing tasks repetitively but need explicit instruction on what they’re doing.

Functions, methods

Functions and methods are generally one-word recipes to do things that would otherwise take many lines of code to explain. Here are just two examples:

- The function *length* or *len* in some languages means “give me the length of the thing I specify”
- *count* in some languages means “count the number of items in this list”

Most functions need extra information called an *argument* or *parameter* in parentheses after it. For example, in this code:

```
length("Paul")
```

The function is “length” and the argument is “Paul”. “Paul” is used as the specific ingredient for “length” to work with and return an answer for (four characters, in this case).

Many functions come ready to use in the programming language from the start. JavaScript, for example, has built-in functions including *length*, *split, search* (look for characters in a specified string of text), and *replace* (replace characters in a specified string of text). Python’s built-in functions include *len*, *split*, *sum* (add up a series of numbers), *max* (give me the biggest number in a list), and dozens of others.

As well as built-in functions, you can create your own functions in your code. If you want to do anything more than once, it is a good idea to create a function to save you from writing that code over and over again.

A third type of function or method are those created by other people and shared in a *library*—see below.

The *documentation* for a function or method should tell you more about what exactly it does—and what arguments it takes. These *arguments* are also called *parameters*, when referred to in general, but both words essentially mean the same thing: one term is used for the general ("This function has one parameter: an object to be measured"), and another for the specific ("Taking the argument 'Paul'"). If you ever need to know what a function or method does, search for "documentation" and the name of the function and language being used.

Libraries and packages

A library, or package, is a collection of code that has been made available for other people to use. Just as a real-life library contains lots of books to help people do things (cooking; gardening; DIY), a library in programming makes it easier for people to perform certain tasks. Put another way: it is a way of using other people's code and can save a lot of effort.

Each library is focused on a particular type of problem. If you can think of a problem, it's likely someone has created a library to deal with it: drawing a map; "scraping" information from a series of webpages; converting a document; charting data or putting it into interactive tables; creating animations or effects.

Within that library will be a collection of functions and methods (see above) that have been created to help solve parts of that particular problem. In a mapping library, for example, there might be functions which draw the background map, and other functions that help place a marker on that map, and another function that controls its shape and colour, and so on.

To be used, most libraries and packages have to be *imported*—typically by using a bit of code that links to the file containing the library.

Why do people share their code in this way? Well, it's part of the culture of programming to contribute back to the community. Sharing your code means others can help you improve it or build extra features on top of it. It also helps build people's reputations. But most of all, it means everyone can make things more quickly and effectively than would be the case if no one shared their work.

Lists/arrays/vectors and dictionaries/dicts

Lists and dictionaries are special types of information that can be enormously useful in programming—but also confusing for those not used to them.

The terminology varies: in some programming languages, lists are called *arrays* or *vectors*, and dictionaries are called *dicts*.

A list (or array or vector) is just that: a list of items, which looks like this:

```
["Asia", "Africa", "Europe"]
```

Lists are enormously useful both for:

- Storing information (e.g. information that has been grabbed from a webpage or a user's answers in a quiz)
- Repeating actions (e.g. plotting or mapping each number or location in a list)—see below on loops

A *dictionary* is similar: it is also a type of list, but with this key difference: a dictionary is a list of *pairs*.

Each pair has a label (called a key) and a value, connected together by a colon, for example:

```
"Age": 24
```

The term *dictionary* is useful: think of it as a collection of words with an associated definition. Another way to think of it is as column headings (age, name, location) and values (18, Sarah, Chicago).

Each pair in a dictionary is separated by commas and the whole is placed in a list in curly brackets like so:

```
{"Age": 23, "Name": "Jane"}
```

This makes it particularly useful for storing data that has more than one label. For example, although you might use a list to store a number of different names, if you wanted to connect each name to a date of birth as well, you'd need a dictionary to do that.

This is precisely the logic behind the data format JSON, a format used by a number of APIs (see below).

Loops

As mentioned earlier, one of the great things about lists is that they allow you to repeat actions many times—one of the main uses of programming.

To do this, you normally use a loop. The loop starts at the first item in a list, performs some action with it, then repeats that action with the second item, and so on until it comes to the last item.

Examples include:

- Taking each location in a list and placing it on a map
- Taking each number in a list and sizing a bar in a bar chart to that amount
- Taking each item in a list of names and adding it to a partial URL to form the full URL
- Taking each URL in a list and running some code to grab information from it

These are called *for loops* because they repeat *for* each item in a list. A second type of loop is a *while loop*, which will repeat as long as (*while*) something is true or false. For example:

- Moving an image forward a pixel (animating it) "while" someone's score is below or above a certain value
- Continuing to advance the timer "while" it is below a certain value

APIs

API stands for application programming interface. APIs are often used to fetch information from another source or connect your interactive with something else such as a social media account.

Typical APIs with journalistic uses include:

- Social media APIs (what are people saying/sharing in a specified location/with a particular term?)
- News APIs (what content has been published by a specified journalist/with a specified category?)
- Political APIs (how has a specified politician voted? What constituency does a specified person represent?)
- Crime APIs (what crimes have occurred near this location on this date? What were the outcomes?)

Here are some examples of how APIs have been used in journalism:

- A ProPublica investigation used the Facebook API to connect their data with the person's Facebook profile. This could then provide personalised data about their school and tell them which of their friends had used the same app
- One interactive used the New York Times articles API to find stories about certain neighbourhoods and place them on a map (using another API: Google Maps)
- A BBC investigation used the political API TheyWorkForYou to see which politicians had asked the most questions in parliament (the API allowed them to request information on every question asked)

APIs are particularly useful in programming because they allow you to ask lots of questions and get lots of answers (generally as structured data), often based on live, or the most recent, data and without any middleman. Some APIs also require you to register for an *API key*. This is a sort of password that is used to ensure that you don't use the API too much. An API key normally comes with some sort of limit on the number of queries you can make (normally in the thousands).

The coding is often focused on the presentation of the resulting information—for example, on a map, in a chart, or in a timeline.

Tools to write, find, and share code online

To write code you only really need a basic free text editor. Built-in applications like Notepad or TextEdit are fine, but it is better to download alternatives that have been made with coding in mind. These text editors—such as TextWrangler, Atom, and Sublime Text—often include colour coding to help you differentiate between code and text and highlights to tell you when tags haven't been closed. They also include many useful keyboard shortcuts and menu options to save time with repetitive tasks (Collins 2016).

Once you've written your code, you need to remember to save it with the right extension: .html, .css, or .js for HTML, CSS, or JavaScript files, respectively.

There are also web-based "code playground" services that speed up the process of coding and testing code. Codepen (codepen.io) and JSFiddle (JSfiddle.net), for example, split the screen into three windows where you can write HTML, CSS, and JavaScript at the same time, and a fourth window where you can see the resulting working webpage. The results can be previewed live and shared with others—or downloaded in a zip file that can be unzipped as separate HTML, CSS, and JavaScript files.

Some of these services also allow you to browse experiments by other users that you can then "fork". *Forking* means to "clone" code in order to explore and adapt it. It is a good way to learn how other people have created a particular effect by changing small parts and seeing how it affects the page.

One service that is particularly widely used to share code, collaborate, fork, and publish is *GitHub* (github.com). You will find GitHub pages for individual journalists such as Conde Nast International's Jacqui Maher and ProPublica's Derek Willis, but also for organisations and teams and dedicated data journalism outlets like FiveThirtyEight. Here are some examples to check out:

- Derek Willis: github.com/dwillis
- Jacqui Maher: github.com/jacqui
- FT Interactive News: github.com/ft-interactive
- NY Public Radio: github.com/nypublicradio
- BBC News Labs: github.com/BBC-News-Labs
- BBC data unit: github.com/BBC-Data-Unit
- WNYC Data News Team: github.com/datanews

Once you have set up an account, try visiting one of the examples listed above. Each GitHub organisation account page will have sections for "Repositories" (projects) and for "People". The People tab allows you to see each person who is a member of that organisation, click through to their page, see what they're contributing to, and "follow" them. Following someone means you will be alerted when they make a new contribution to the project (this could be adding new code or new files).

You can also follow individual projects by switching back to the "Repositories" tab, going to a repository page, and looking for the "Watch" button towards the top of the screen. Clicking this allows you to opt in to notifications when the repository is updated.

GitHub also includes a way of easily publishing webpages from your files, called GitHub Pages (pages.github.com). This can be particularly useful if you need to test some code out but don't want to buy web hosting yet, and it can also be used to showcase your GitHub account in a more polished way. SRF Data, the data-driven journalism unit of Swiss Radio and TV, has a GitHub Pages site at srfdata.github.io, for example, while Guardian Digital Development can be found at guardian.github.io/developers.

Closer look: News games and gamification

> "Tell me and I'll forget; show me and I may remember; involve me and I'll understand".
> —proverb

Games—and more generally *play*—have become an increasingly important element in journalism. In 2010, the seminal book *Newsgames* (Bogost, Ferrari, and Shweizer 2010) mapped the territory of this new form—sometimes called "serious games"—and identified seven types of games:

1. *Editorial* news games convey opinions
2. *Infographic* news games adopt the techniques of visualisation detailed in Chapter 10 (a dashboard might be one example)

3. *Documentary* news games engage with broader historical and current events in a similar way to other documentary formats
4. *Puzzle* games include crosswords—which can include news content but do not need to
5. *Literacy* news games are those that seek to give the reader an understanding of the rules or benefits of journalism (BBC's iReporter game is one example)
6. *Community* news games are those that stimulate interaction between players, sometimes offline (one example would be peopleofthepandemicgame.com)
7. News game *platforms* make it possible for users to create their own games

Games are used particularly often for explaining or demonstrating complex systems: Philip Trippenbach, the co-founder of GameCamp, who worked as an interactive producer for news organisations, notes that games are less useful for telling the *facts* of what happened in a given past event, but have enormous potential to explain *how things work* (Trippenbach 2009).

Online publication Fusion, for example, commissioned a mobile game about the system of rigging elections to complement its documentary on the same topic (Lichterman 2016).

By 2015, news games were part of a wider movement towards *play* in publishing, with academic Maxwell Foxman arguing that games were just one of four categories of game *mechanics*: the other three being badges, points, and prizes; quizzes and questions; and situation-specific designs and packages (Foxman 2015).

These mechanics have long since spread to other parts of news production in a process called *gamification*. Examples might include giving a comment a thumbs up or down or rating the likelihood of a sports transfer rumour being true. The different forms of quizzes covered earlier would also be included here while being able to share the results of a personalised interactive feature on social media can be seen as a form of "badge".

Gamification is often incorporated when designing an interactive tool for users: when The Guardian created a web app for users to classify politicians' expense documents, for example, it included a progress bar and a leaderboard—two features of game design—to encourage more interaction. Al Jazeera's games on illegal fishing (Ruhfus 2014) and Syria's electronic armies (Ruhfus 2016)—use gamification techniques (Kohn 1999) such as points and missions as an innovative way to deliver a series of pieces of content.

When using gamification and games, producers are encouraged to have a clear idea of the purpose of the approach, and start simple, with a transparent approach making it clear what information the game is based on (Thulin 2022). User testing is vital to ensure the game has the right level of difficulty and serves users' needs. Games can have a number of different narrative structures: games expert Jesper Juul identifies three broad categories:

- Games of *progression* are linear, and the player often progresses via barriers, typically at the end of each level (an example would be Donkey Kong or PacMan).
- Games of *emergence* are more complex, and you play them by changing different variables to see their impact (a typical example would be SimCity or a football management game).
- *Abstract* games have no "world" at all: Tetris is an abstract game, for example (Juul 2005). Aside from puzzles, abstract games don't tend to be used in journalism for the obvious reason that stories are about the real world.

Because of their focus on explaining systems, many news games are games of emergence: early examples include The Gotham Gazette's "Budget Game", where users had to try to balance the city's budget, and The Economist's "Energyville" game, which tasked players with maintaining a city's energy supply in reaction to various financial, environmental, and technological changes.

An example of a progression-based game would be "Amateur Hacker Simulator" by the Mirror's data journalism outfit UsVsTh3m: this illustrated a story about security by challenging users to guess a password to progress to the next level, with each level harder than the last.

Many game genres use "choose your own adventure", or ergodic, storytelling techniques (see above): examples include ProPublica's news game about asylum, "The Waiting Game" (projects.propublica.org/asylum) and the FT's "Uber Game" (ig.ft.com/uber-game). One of the best ways to get started with news games is to use the techniques and tools in that section.

Closer look: Clickable interactives, multimedia interactives, and "steppers"

Clickable interactives or multimedia interactives provide a special interface to allow users to explore elements of a story. The BBC's "UK military deaths in Iraq", for example, allowed you to filter and click on profiles of servicemen and women who died in the country, while the Telegraph's "Walls around the world: The barriers being built to divide people" invites you to click on different construction projects to find out more about their political context.

One of the potential disadvantages of clickable interactives is that they can become out of date if new information is not incorporated. Some ways to address this include incorporating a live feed from a database or dataset that itself is updated (see news apps below). Remember that you may need to plan for the long-term maintenance of the interactive, including manual monitoring and corrections.

Closer look: News apps

ProPublica's Scott Klein describes a news app as "a big interactive database that tells a news story" (Klein 2012). But the database is just what powers the app: from the user's point of view, the "app" is typically the webpage that allows users to connect with and explore the information in that database. The webpage therefore provides, as one data journalist describes it, "windows into the data behind a story" (Davis 2012).

Unlike a mobile phone app, a news app—or "interactive news application" (Boss and Broussard 2016)—requires no download and can be viewed on a desktop as well. Interaction with the data comes through selecting options from drop-down lists, typing into a form, clicking on a map or chart, or even allowing access to background information from your computer such as your location or operating system.

ProPublica has been responsible for some of the best-known news apps. *Dollars for Docs* (projects.propublica.org/docdollars), allows users to find out if their doctor has received money from drug companies or device manufacturers; *Cruise Control* (projects.propublica .org/cruises) tells the story of problems on cruise ships while allowing users to search ships' health and safety records; and *The Opportunity Gap* (projects.propublica.org/schools) allows parents to compare school districts.

Because they need to communicate with a database, news apps often require more web development time than other interactive features, sometimes involving multiple members of the editorial team. These demands mean that apps often tackle longer-lasting issues or problems outside the news cycle.

News apps do face an issue around archiving and future-proofing: as Meredith Broussard notes, archiving news apps presents a particular challenge of software preservation rather than merely preserving static web content, given that apps typically consist of a combination of code, data, and media that may reside on different servers (Broussard 2015). Any news app creation, then, should consider such future-proofing and archiving challenges.

Closer look: Personalisation

Personalisation can work in all sorts of ways: when the New York Times created a story on the best and worst places to grow up, they made the text change depending on where the user's computer was located. "Consider Middlesex County, Mass., our best guess for where you might be reading this article", the text might read (if that was where you were). "It's one of the better counties in the US in helping poor children".

Other interactives ask the user to type in a postcode or zip code to find out what health, education, or crime is like near them. Time magazine used research on cycles in baby name popularity to ask *How Popular Will Your Name Be in 25 Years?* again based on the user typing it in. And the "Daily Bread" interactive by Where Does My Money Go? (wheredoesmymoneygo.org/dailybread.html) asks you to drag a slider to indicate your salary, and then tells you how much of that goes on tax, and how much of that tax is spent on defence, health, the environment, and so on.

Michelle McGhee, journalist-engineer at The Pudding

Michelle McGhee joined data journalism website The Pudding in 2021, after working as a visual journalist at Axios. You can find her work at pudding.cool/author/michelle-mcghee

Interactivity is a great tool for engaging the reader. I think it's especially useful when you want to personalise something (you input something about yourself and then the article is customised around that) or when teaching a concept that you want the reader to try out or play around with.

One thing to consider is how much effort you're asking for from the reader and whether it has the appropriate payoff. It's probably not a good idea to have interaction that's a heavy lift from the user and doesn't ultimately add value.

At The Pudding, we've done several stories where the user helps create the dataset by interacting with the story. One of my favourites is "This is an experiment to identify generational gaps in music" (pudding.cool/2020/04/music-challenge): several songs are played and you enter whether you recognise them. It's a fun quiz, and this data was used to make later pieces about what songs are recognised by different generations.

Another is The Birthday Paradox (pudding.cool/2018/04/birthday-paradox). It is an explainer about a maths concept that makes you a part of the story by asking your birthday and cantering on that as the explanation continues.

I also think the *You Draw It* series from The New York Times is an effective way to use interactivity: asking readers to take a stab at drawing a line chart before showing them the real thing to see how different their perception is from reality.

When planning a new project, I think about the core of what I'm trying to say and make sure I can articulate that. When people ask me what I'm working on, I try explaining it to them, and if I can do that (and still be excited about it), that's a good sign.

My educational background is in coding, so I gravitate towards stories in projects that utilise that skill set. But there are so many ways to tell stories, even data stories, without coding at all. There are plenty of tools online that let you make nice-looking charts from a dataset.

Coding is useful if you want a lot of control over exactly how you analyse data and how you show it. The possibilities are larger when making a data story for the web with code, but even without it, there are lots of ways to still tell stories.

Summary

Interactivity is a central feature of online journalism as a genre. The best online journalism exploits the potential of the medium to create the most effective way to communicate information and engage the user. Typically that involves allowing the user some degree of control over input or output, or the time or space in which they can experience the story.

As interactivity has become more and more established within journalism, certain formats and generic qualities have emerged. The quiz, for example, is now established as one of the most engaging and basic formats, and interactive maps have become commonplace.

This increasing role of interactivity has also led to increasing demands for journalists who either understand how coding works or who can code themselves. Most journalism takes place within teams and being able to communicate with developers or designers in that team, or adapt to situations that require a little coding, is an important advantage in a competitive jobs market.

One of the most difficult ethical demands on journalists is to make complex issues clear to audiences, and engaging, without oversimplifying them. Interactivity allows us to connect with people at a personal level while also providing opportunities to explore the complexities of important stories and ultimately empowers users as active citizens.

Interactivity does not have to be difficult. With dozens of third-party tools that you can use to make sliders, maps, and other formats, it's easy to get started: developing a creative mindset around storytelling ideas is the most important thing to begin with. And there are new developments every month in interactivity that bring new possibilities to make an impression on both your audience and your employers—make sure you explore them.

Activities

1. Map out possibilities for interactivity

Choose an issue you have recently read about—or that you are reporting on—and use the checklist of user control outlined in this chapter to list ideas for giving the user control over time, space, input, or output. Then go through this list of interactive formats and write down ideas for exploring that issue using as many formats as possible:

- Polls
- Quizzes
- Maps
- Image maps
- Timelines
- Sliders
- Multiple path stories
- Bots
- Clickable interactives
- Counters
- News games
- Personalisation
- Calculators
- News apps

2. Plan and create a quiz

Identify an issue that you can build a quiz around: it could simply be a quiz about the week's biggest or quirkiest news stories—or around a topical aspect of society that people perhaps don't understand as much about as they should (people tend to think crime, migration, and benefit fraud are much higher than they really are, for example)

Come up with ideas for enough questions that you can chop the weakest ones out. Make sure you get some photos or other illustrations for each question.

Use a quiz creation tool to put the quiz together, then embed it in an article with an introductory paragraph and headline. Look at other examples to see how they do it.

3. Create an interactive timeline of online journalism

Use one of the interactive timeline tools mentioned in this chapter, or another that you find online, and create a timeline for the key moments in web history outlined in the opening chapter of this book. Try to find or create images, video, audio, or other elements to illustrate each moment. Tweet the results to me @paulbradshaw!

4. Brainstorm a news game

Draw up plans for an interactive game around a particular issue. Think about the following:

- What are the key issues?
- Who are the key characters?
- What are the challenges that they face?
- What factors do they have to weigh up in making decisions?
- What sorts of storylines exist around this topic? (History, present, future)

5. Create an interactive map

Write reviews for ten tourist attractions or restaurants in your local area. Place them on a map using the tools mentioned in this chapter—or another one that you've found.

Review what you've created, considering the type of information you need and how it needs to be formatted. Could it be clearer or more succinct? More visual?

Embed it in an article with an introductory paragraph and headline that leads on the usefulness of the map, for example, "Find out about the city's top tourist attractions in our interactive map". Look at other examples of map-driven stories on news websites to see how they do it.

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For Journalism (resources on coding for journalists): forjournalism.com
Watch Ray Daly talking about "JS Journalism" at http://js-journalism.org/
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12 Community, social media management and UGC

Chapter objectives

This chapter will cover:

- What is community management
- Why media organisations are creating new roles in community and social media management
- How to plan a community management strategy
- Different stages in a community's development—and what to focus on in each stage
- How to identify key objectives in community and social media management
- Content ideas for engaging with your community
- How to research your community
- Why terms and conditions are useful in community management
- Measuring what works

Introduction

In 2012, specialist magazine publisher Future Publishing was preparing to launch a new title. *Mollie Makes* was aimed at a new generation of young people who enjoyed crafts. But for this magazine, instead of hiring an editor, working on their first issue, and preparing for an expensive print run, they tried something different: they employed a community editor first.

The community editor was to engage with the communities they were aiming the magazine at, find out what they were interested in, build relationships, and "build a buzz" around the magazine. It certainly seemed to work: when the print version of the magazine launched, it quickly became Future's fastest-growing title in the last decade, and Future began to adopt the practice for other new titles too.

Three years later, Cates Holderness, the community growth manager for BuzzFeed, demonstrated the importance of her role with a simple act that resulted in record-breaking visits to the website. It started when a follower of BuzzFeed's Tumblr account pointed Holderness to a Tumblr post about a dress. "Is this dress white and gold", she asked, "or blue and black?" When the image—and the debate surrounding it—was posted on BuzzFeed, the piece went viral. Massively viral. It was shared 16 million times in the few

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hours after it was posted, and the number of subsequent posts tripled that number within the week. At one point, 670,000 people were on the site at the same time. So many people were talking about the dress that it spawned its own hashtag—#thedress—and some sites even liveblogged the whole affair.

But this wasn't a piece of content created by a staff member: this was a piece of content that came from the community. It relied on relationships with users and Holderness's ability to take the pulse of the community, spot something interesting, and highlight it to a broader audience.

Future and BuzzFeed are just two of a number of publishers and broadcasters who see community management as a key part of the editorial team, whether that is as part of pre-launch audience research and promotion, stimulating, moderating, and responding to discussions across multiple social media accounts and forums, or acting as a channel for users to contribute directly to the website, broadcast, or print publication. It has become so integral to journalism's role that The New Ethics of Journalism lists "Engage community as an end, rather than as a means" (McBride and Rosenstiel 2014) as one of three guiding principles for journalists. But what exactly is community management?

What is community management?

Community management refers to a broad range of practices. For some publishers, community management is about building relationships with readers and working with them to produce the best possible journalism. For others, it is more like a public relations role, focused on maintaining their brand across social media, or a commercial role focused on spotting money-making opportunities. And in other cases, community management is simply about managing the vast amount of audience interaction taking place across their comment threads, forums, and social media accounts.

Staff who work in these roles can have a variety of titles, from "social media editor" or "community editor" to "moderator", "host", "head of audience engagement", or any mix of the above. And the skills needed can vary widely. Some people make a distinction between externally facing roles, which they class as "social media management"; and roles that feed back into the organisation: the classic "community management" (Table 12.1).

Writing in 2013, for example, Richard Millington said:

> Whisky magazine, PCGamer magazine, and, to a lesser extent, The Economist, do [community management] very well. These magazines have people responsible for fostering genuine relationships between members, organizing events for the audience, subtly influencing the discussions, moderation, building up stars, documenting the best material, creating content about the community.
>
> These are typically the exceptions.
>
> Many news organizations have highly active commenting areas "have your say!"—but very little in the way of a community. They attract online audiences, crowds, and, occasionally, mobs. News organizations don't want community managers. They want very good moderators.
>
> (Millington 2013)

But since 2013, things have changed. And for the purposes of this book, I will be looking at both community managers and social media managers, partly because roles often evolve from one type to the other and the skills often overlap. One thing they have in common

Table 12.1 A spectrum of distinctions in journalistic routines

	Independent	*Interdependent*
Perspective	Outside the community	Of the community
News judgement	Stories selected by the newsroom Stories named based on expert perspectives	Story selection informed by the community Stories named based on community perspectives
Sourcing	Experts and officials	Experts, officials, and the public
Interviewing	Who, what, when, where, why, and how	Follow the energy of the story to uncover aspirations and actions or… Who, what, when, where, why, how, and a sixth W: What's possible now?
Engaging	Comments	Conversations through comments, social media, and face-to-face gatherings
Story forms	Dramatic arc from conflict	Dramatic arc from the search for meaning, obstacles to be overcome

Distinctions identified by Peggy Holman (2014).

is this: they are responsible for the way that the media organisation interacts with their audiences.

In addition to these specific roles, however, *all* journalists need to have community management skills—and always have. Malmelin and Villi (2015), for example, identify four different roles that journalists adopt when collaborating with the audience community:

- Observer
- Developer
- Facilitator
- Curator

When acting as an *observer*, the journalist monitors the audience community's discussions to identify interests, needs, and concerns. As a *developer*, they help improve the online platform(s) and service so that users are more likely to contribute. Acting as a *facilitator* means helping to start and maintain online discussions and feed those back to the editorial team. And being a *curator* could involve highlighting the best work by members of the community, both online and in print (see the chapter on email and curation for more on this practice).

Community management is simply a recognition that journalists need to make sure that they have strong relationships with their audiences. Readers, listeners, and viewers are then much more likely to help with stories (either as sources or experts). In 2011, for example, research on financial and business journalists found that 81% of respondents were "engaging on a regular basis with their digital readers, thus fostering online communities" (Greenslade 2011).

In some cases, news organisations have explicitly required journalists to engage with their audiences. The Times of India group, for example, tied participation on WhatsApp with journalists' pay while The Guardian has monitored the impact of journalists' participation in comment threads to ensure a healthy conversation.

Why community management?

Researchers Malmelin and Villi identify two main advantages for publishers in working actively with the audience community:

- It helps strengthen engagement with, and loyalty to, the media brand
- It gives journalists a deeper understanding and knowledge of their audience, making them quicker to respond to trends and better at identifying stories they know will interest that audience (Malmelin and Villi 2015).

Communities represent a "strategic resource" for publishers, giving them a competitive edge, generating both symbolic outcomes, such as contributors feeling more important, and "instrumental" outcomes, in the form of stories (Lewis, Holton, and Coddington 2013).

There can be commercial motivations for community management initiatives too: interviews with social media editors found a common theme of reaching "new, bigger and more diversified audiences" (Dvir-Gvirsman and Tsuriel 2022). The podcast In The Dark used it as a new way to stimulate donations (Schmidt 2018), and the head of regional newspaper group Johnston Press once announced publicly that he expected half of their content to be created by "citizen contributors" by 2020.

Thinking about community management: The POST process

A useful framework to draw on when thinking about how you approach user-generated content (UGC) is the POST process for social media strategy outlined by Forrester Research (Bernoff 2007). This involves identifying:

- People: who is the community (or intended community) and where do they congregate online?
- Objectives: what do you want to achieve?
- Strategy: how are you going to achieve that? How will relationships with users change?
- Technology: only when you've explored the first three steps can you decide which technologies to use

People: Identifying your community

In order to be a community manager, you must first have a community. That may sound obvious, but different types of publications and programmes have very different audiences and different levels of community. A specialist magazine, for example, is likely to be able to identify its community very clearly. But publications with much broader audiences—for example, national newspapers—will have a more complex challenge, with more than one community. It will therefore need to identify, and work with, each one separately. And an investigative outlet like ProPublica might have a different community for each project (Blatchford 2018).

The smaller the community, the easier it is to identify and work with. You can categorise communities into five broad types:

- Communities of location (the smaller the "patch", the easier a community can be identified)
- Professional communities, based on the industry or role that people work in

- Communities of interest (hobbies, interests, or lifestyles)
- Communities of shared objectives (what changes are your audience trying to advance—or prevent?)
- Communities of issue (what problems or concerns do your audience share?)

Key to the definition is whether members of that community communicate with each other regularly:

> When audience members have more regular communication amongst themselves, they can be said to form an actual community; otherwise atomized media consumers simply form a crowd.
>
> (Malmelin and Villi 2015, p. 3)

Once you have identified a community, try to identify where they communicate and gather. There might be a Facebook group dedicated to their interest or cause, or there might be hashtags used regularly within their profession. There might be key blogs, forums, newsletters, mailing lists, or chat groups that are keenly read.

One technique is to start with a few key individuals and trace what they do: who do they follow on social media and who follows them? What platforms do they use and what groups do they belong to (search for their username: people tend to use the same one)? What hashtags do they use? What lists are they included on and who else is on those? Who comments on and links to their blog?

If the community is on your own site, Facebook page, or forum, then look at data on their activity: who is most active and when are people generally active? *How* active are they? What do users do? Do they lurk without contributing or do most people do more than that? Do they stay with the site or forum over a long period of time or is there a high level of "churn" (people leaving and being replaced by other users)?

Don't overlook the offline world too: what meetups and events exist in that field? What are the key organisations or places? Meeting in person is much more effective in building relationships than online communication, so try to meet whenever you can—even if it's just for a coffee to find out more about their world.

As you get to know the community, try to identify what motivates its members. In his book *The Art of Community* (2009), Jono Bacon identifies four different types of motivations:

- Utility-driven communities (people who want useful content, for example, to improve themselves or to further their careers)
- Socially driven communities (people who are a member of a community because of the social support that it gives them or how it contributes to their sense of identity)
- Change-driven communities (communities that share a desire for change)
- Emotionally driven communities (people who basically want to have fun or experience other emotions)

What motivates your community clearly links to the content that you might produce for it. Utility-driven communities might be interested in reading tutorials and tips, or interviews that explain how a person achieved success. Socially driven communities might want content that they can share with others, such as the latest gossip. Or they might want content that helps them express a particular identity (such as the latest trends).

Table 12.2 Objectives and strategies in community management

Objective	*Example community management strategies*
Users spend longer on our site	Give users something to do around content, e.g. comments, vote Find out what users want to do with content and allow them to do that on the site Acknowledge and respond to communities Showcase communities' work on other platforms, e.g. print, broadcast Create a positive atmosphere: prevent aggressive users scaring others away
Attract more users to our site	Help users to promote their own and other UGC Allow users to cross-publish UGC from our site to others and vice-versa Allow users to create their own UGC from our own raw or finished materials
Get to the stories before our competitors	Become part of and contribute to online communities
Increase the amount of content on our site	Make it easy for users to contribute material to the site Make it useful Make it fun Provide rewards for contributing—social or financial
Improve the editorial quality of our work	Provide space for users to highlight errors, contribute updates Ensure that we attract the right community in terms of skills, expertise, contacts, etc. Involve users from the earliest stages of production
Users keep returning to the site	Give users a sense of identity and belonging Set up regular email alerts or newsletters Stimulate online discussions

Change-driven communities might want to be kept up to date with possible opportunities or threats to that change. They might want to be alerted to causes that they should be involved in. And emotionally driven communities may simply want amazing real-life stories, entertaining interviews, or articles that help them to experience new emotions (e.g. travel pieces or sex tips).

Objectives in community management

Objectives vary enormously in community management from the superficial, promotional social media role to roles that genuinely seek to give a platform and a voice to your community. If you are being hired to perform the role, find out what your employer's objectives are in doing so in order to ensure you are focusing your attention appropriately.

Some common objectives for UGC and strategies associated with those are listed in Table 12.2.

Ideally, you want to identify an objective that your audience shares. Jono Bacon (2009) identifies some typical ways of pitching projects to users that can improve the likelihood that they will work together:

- "Solve this (common) problem"
- "Become an expert"

- "Join/don't be left out"
- "Change/improve X"
- "Influence X"

The benefits of membership and activity need to be clear and mutually beneficial.

Community management strategy

You will need specific strategies for your own specific community. Once you've identified and are following the community, try to find your best role within it (Table 12.1). Remember that the community is not here to serve you: barging in and asking for case studies will get you the same response as in any physical social space: blank stares and muttered insults.

Lewis, Holton, and Coddington (2013) distinguish between two useful concepts in community management: direct reciprocity and indirect reciprocity:

- *Direct* reciprocity is a simple relationship where two members both benefit from an exchange
- *Indirect* reciprocity, in contrast, refers to acts where an exchange benefits not the *giver*, but another member of the social network

Examples of direct reciprocity include liking or sharing a social media post, upvoting links, or linking to other blog posts in your field. When doing this you might expect that the other party may link back, retweet your Twitter updates, or upvote your links.

Examples of indirect reciprocity might include a source passing a story on to a journalist that will not benefit them personally (indeed, it might harm their career or family life), but which does benefit others in their community. Or a journalist sharing the information behind a story not because it benefits them directly, but because others in their community can benefit from it. Ultimately, they may still benefit indirectly: the journalist picks up new leads from new sources, for example.

Direct reciprocity is considered a *basic* building block of online communities. Examples include retweeting or replying to non-journalists on Twitter, according to Lewis, Holton, and Coddington, which are useful for providing a useful starting point for establishing "a pattern of responsiveness and mutual concern" (2013, p. 5).

But indirect reciprocity—one person helping another, who helps another—is the more productive, long-term approach:

> By working collectively, members expand their capacities to relay information more quickly and accurately, to connect one another with sources, to match resources with individual and community needs, and to build trust.
>
> (Lewis, Holton, and Coddington 2013, p. 6)

The simplest way to find a place in a community is by solving problems. Listen for questions that people are asking or complaints that they make. A key skill of a journalist is to find the answers to questions or get responses to complaints—so that's likely to be one way you can contribute. Those answers and responses, of course, also make for good story ideas and content (which can help you attract other members of the community).

Listen and link to good content from your community where relevant (whether that is on social media or on your website). You might also see the need for physical meetups or other events—don't be afraid to get stuck in and organise one.

What stage is your community at?

Richard Millington distinguishes between four different stages in online communities. What stage your community is at will influence how you spend your time.

- The *inception* stage is when a community is just starting. In this stage, growth is slow and there is no sense of community on your site. Most or all of the activity is initiated by you and there is little engagement.
- In the *establishment* stage, the community initiates at least half of the activity. There is now a limited sense of community, some engagement, and you are getting growth from referrals (people linking to you).
- In the *maturity* stage, 90–99% of activity comes from the community, and there is a strong sense of community with high levels of engagement.
- Finally, as the community grows too large it might move into the *mitosis* stage, splitting or growing into more specific groups that individually are now back at the inception stage.

Millington suggests that the stage of development should determine where you focus your own activity as a community manager: in the inception stage, for example, he recommends spending 40% of your time on growing that community: encouraging members to join, keeping them active, and initiating and prompting discussions as you build relationships with members. A quarter of the time, meanwhile, is spent on moderation.

Similar strategies have been adopted by successful hyperlocal publishers. Writing about the first year of the Dutch hyperlocal network Dichtbij, Bart Brouwers notes that community managers were "expected to spend half of their time reaching out to citizens (mostly through social media) and being out and about in their cities" (Jimenez 2012).

When a community moves into the establishment stage, Millington suggests only 25% of the time should be spent on growth, as you encourage members to invite their friends and share discussions and content. Other activities—strategy, content, relationships, activities, and technology—now take on a more prominent role as you plan for scale.

And in the maturity stage, the focus is on avoiding scaling problems: building processes into the community, organising events, and building the profile of the community.

Finally, in the mitosis stage as the community starts to splinter, Millington recommends identifying and creating popular sub-groups, promoting and supporting them, and managing leaders of those groups (and helping to train them).

Notably, in all four stages, Millington suggests only spending 10% of a community manager's time on content.

Codes of conduct: Terms and conditions

Having clear rules for acceptable and unacceptable behaviour is very important if you want to make sure people don't fall out and accuse you of favouritism. Codes of conduct or terms and conditions (T&Cs) don't have to be complex, but they show that decision making isn't arbitrary and should make it easy for people to identify whether something is acceptable or not.

T&Cs also help you legally: showing that you are a responsible publisher can help as part of a legal defence. Some issues to consider include hate speech, discrimination, and incitement; data protection (what do you do with information you have about users?); and copyright (what happens if someone says content has been taken and used without permission?).

Registration and data protection

It is likely that there will be data protection laws in your country that outline your responsibilities if you are storing data about users. If you process digital information about other individuals for journalistic purposes in the UK, for example, the publisher—or you as a freelancer—is obliged to register with the Information Commissioner's Office (ico.org.uk).

Data protection laws generally stipulate that you should make it clear why any data is being collected (to be able to receive alerts, promotions, etc.) and you can only use any data collected for the purposes that were given: the Information Commissioner fined the Daily Telegraph £30,000 for misusing the data it had collected from its subscribers so that it could send hundreds of thousands of emails on the day of the general election urging readers to vote Conservative (ICO 2015).

Writing for communities: Community management strategies

There are various pieces of content you can write that can help connect you to the wider community. Here are just some ideas:

- *The best people/sites to follow in your field.* Sites often create a list of key individuals or sites/resources in your field. Not only does this create a shared sense of identity, but it helps others in your community find useful resources and creates an impetus for people to highlight things you have missed.
- *"How I did it" tutorials and tips.* Tutorials can be very useful for particular communities, creating a role for you within those. They also bring readers "behind the scenes" and strengthen the relationship.
- *Discussion highlights.* If there is a regular online discussion in the community, there may be an opportunity to summarise that. Make sure that members are happy for you to do this, though.
- *Interviews with prominent community members.* Interviews are great ways of making contacts and also bringing yourself to the attention of the interviewee's community.

Live content: Chats, Q&As, and votes

Live content is a particularly good way of bringing a community together. That might be a live chat, a vote or poll, or a Q&A where members of the community can post questions to a prominent or interesting individual.

Polls and votes are easy things to do—but not necessarily do well. The benefits need to be clear. In some cases, longer surveys can be more productive than shorter ones: the Lancashire Evening Post grew its reader interaction by creating a large survey on the environment that it promised to present strongly in its paper. Associate editor Mike Hill told

Journalism.co.uk that a 40-question survey on local environmental issues gathered 1000 responses, a significant rise from the average hundred answers to the site's daily poll.

> Quite often when you are asked to fill in these surveys you don't want to because it's being used commercially, but because this [research] is for editorial, people want to respond.
>
> (Oliver 2008)

Reddit's AMA—Ask Me Anything—is a particularly successful example of the Q&A format being used in an online community, leading to partnerships with other media organisations, while The Guardian frequently hosts live Q&As on its careers section.

Hashtags can be used as a way of "hosting" chats on Twitter: the nursing community hashtag #nursechat is used to organise a weekly discussion on the platform while the BBC's Jeremy Bowen and Wall Street Journal's Sam Dagher have both hosted hashtagged chats #AskBowenBBC and #AskWSJSam on Twitter. These also provide an opportunity to curate the "best bits" in an article the next day.

Live chats often succeed based on the quality of the participants: if you can organise special guests that will help. But you should also consider inviting participants directly to get things started. The first time you host a discussion like this you may not get much participation but as with so much online publishing, persistence is key: by doing it week after week, people will come to realise that you are committed to the issue.

Similarly, liveblogs can be a great way of serving and attracting a community. At some point, you may be attending meetups, conferences, hackdays, or other events in your community (or even organising them). You should aim to preview, liveblog, and/or review those events (whichever is most practical). And you can always organise live events online too: the music magazine NME, for example, hosted a "listening party" to mark the 20th anniversary of the release of the Nirvana album Nevermind, which they liveblogged.

Crowdsourcing

Crowdsourcing is the process of inviting users to help you complete a task: normally finding, interrogating, or classifying information. The term comes from a combination of the words "outsourcing" and "crowd" and has been successfully used in a range of contexts ranging from science to politics.

In journalism it is often used in one of two ways:

- The "wisdom of crowds" approach, whereby a news organisation seeks a diverse range of expertise to help solve a problem
- And the "mechanical turk" approach, where a news organisation needs a lot of users to perform a similar task

The Florida News-Press, for example, used the "wisdom of crowds" approach when it wanted to investigate high charges to connect newly constructed homes to the water supply. Short on in-house resources to investigate the leads, they asked their readers to help.

> Readers spontaneously organized their own investigations: Retired engineers analyzed blueprints, accountants pored over balance sheets, and an inside whistle-blower leaked documents showing evidence of bid-rigging.
>
> (Howe 2006a)

In a smaller experiment, The Guardian's Charles Arthur asked readers to predict the specifications of Apple's rumoured tablet (Arthur 2010). Over 10,000 users voted on 13 questions, correctly predicting its name, screen size, colour, network, and other specifications—but getting other specifications, such as its price, wrong.

The "mechanical turk" approach is generally used when a news organisation has a lot of documents and wishes to involve users in poring through those. The Guardian's MPs' expenses app is one of the most famous examples. This provided an interface for users to investigate MP expense claim forms that used many conventions of game design, including a "progress bar", leaderboards, and button-based interfaces.

Users can, however, be sceptical of crowdsourcing projects, seeing them as a way of getting users to do lazy journalists' work for them. For that reason, it is important to make sure that there is some benefit for the user, and that it is clear that the journalist is working hard too.

In the MPs' expenses example, the organisation invested significant resources into creating a tool that made it easy for users to participate in the activity. There was also a clear civic benefit to the project—users were helping hold power to account—and it was clear that journalists would then pick up leads and work on those.

You should always be one of the biggest contributors to any crowdsourcing project, leading by example. And always make it clear what will happen to the work of users, regularly providing updates on progress so that users can see the results of their work (or of others).

Curation and UGC

User-generated content (UGC) is central to a lot of community and social media management, and reporters are increasingly expected to monitor content generated by the reader community to "curate" (select and combine) the best examples. Some news organisations have created dedicated roles for "community content curators" or teams dedicated to sourcing, stimulating, and verifying UGC, while others outsource part of the job to dedicated organisations: Storyful, founded by the Irish journalist Mark Little in 2010, was one of the first to offer a service monitoring and verifying UGC for news organisations. Another, Newsflare, was launched with a focus on acquiring rights to video clips being shared online and helping users to sell their content to news organisations (Mayhew 2016).

Publishers regularly highlight the "best tweets" of that day or week from readers or use comment threads on forums and Facebook to draw out users' experiences. It is important to let people know when their comments have been used or ask permission if they may not be aware that they may be used in that way.

There are various tools for curating content: Twitter's "Moments" allows you to combine a number of tweets into a single page, and Pinterest allows you to collect images and other media on one board. See the chapter on email and curation for more.

Moderating comments and forums

Comments can be an important part of a media organisation's online strategy, with clear benefits for publishers in reader loyalty: in the UK, The Times found that interactions with journalists in comment threads were a key factor in retaining subscribers, and a five-person comment curation team is employed to "keep the discussions alive, alert journalists when their articles have people talking and use polls to encourage the shyer readers to interact" (Southern 2019). The team found that exclusive pieces, case studies, columns, and opinion pieces tended to attract the most comments.

The quality of comments is notoriously variable, leading some organisations to shut off their comment sections. Much of this is due to how—or if—the comments are moderated. Research by the Engaging News Project found that nasty comments are reduced when journalists interact with comments (Steiner 2015). They recommended that journalists:

- Respond to questions
- Ask questions
- Provide additional information
- Encourage and highlight good discussion

The research also found that the layout of comments made a difference, with commenters preferring a structure that allowed them to pick out different types of comments.

It is useful to have policies in place regarding when comments are used on a story, when they are turned off, and what types of stories moderators should focus on. For legal reasons, comments are often turned off when a story relates to a crime where someone has not yet been convicted, while particularly controversial subjects such as immigration, abortion, and the Israel-Palestine conflict can lead to such heated (and generally unenlightening) comments that they are either turned off or pre-moderated (where comments only appear after they have been checked). The same applies to forums.

A lot of commenting on news stories has long since moved from the news site to social media platforms, and there is some evidence that this has increased their quality and quantity (Hille and Bakker 2014). In these situations, remember that you can embed social updates into news articles, bringing the discussion back alongside the content.

Journalists may be encouraged to participate in discussions elsewhere online. At the New York Times, for example, an audience development team monitors stories' social media performance not only to see what is being read most but also to pick up editorial leads. In one case, an article about college admissions was being intensely discussed on the Facebook page of conservative media personality Laura Ingraham:

> Recognizing her as an influencer, the social media team deployed [the author of the piece] to her page, where he answered the question Ingraham posed in her Facebook post about the story … The Times has set up its [analytics] account so as to be alerted when influential social media accounts post a Times article.
>
> (McDermott 2015)

As always, the key question to ask is: what is your objective? If the story stands to benefit from reader comments, corrections, or clarifications, comments can be very useful.

The Society of Editors and the World Association of Newspapers and News Publishers (WAN-IFRA) both offer free moderation guides online: see the links in the further reading recommended at the end of this chapter.

Guest posts and cross posts

A common content strategy in community management is to invite someone to contribute a guest post or to "cross post" on your site something that they have already written elsewhere (which you think your readers will find interesting).

With *guest posts*, you are suggesting the topic. It is key to keep the proposal simple: if it is a busy person without a lot of time, it should not appear too onerous.

One approach is to have a series of guest posts or contributions along a particular theme. This means that new contributors may already be aware of the series, and it is easier for them to look at previous examples to understand what is being asked. You should probably write one or two yourself to show how it's done.

The Guardian's Cine-files series used this approach to profile independent cinemas around the country. This was not only simple to do but it had a clear benefit: it meant the paper could cover a much broader geography than if they were limited to London-based reporters.

Some news organisations dedicate entire sections to guest contributions: The Guardian's Comment is Free is perhaps the best-known example, where dozens of experts are invited to write about topical issues.

Remember that guest contributors will not necessarily be aware of journalistic conventions and values: research on news participation at community newspapers noted problems with plagiarism and copyright violations, accusations and attacks on individuals and businesses, and failing to present both sides of the story: "ordinary citizens may not understand that there are many rules in journalism and that there is a process that news stories go through before being published" (Chung and Nah 2022).

The guest post format has also found its way onto YouTube as well, where prominent YouTubers will often appear in each other's videos. The advantage is clear and applies whether in video or online: by involving guests you are bringing their audience with them, while they benefit from exposure to your audience. It is the classic "duet" tactic borrowed from the music industry.

Closer look: Getting community management jobs

Community management jobs are often filled from within the communities themselves. Gawker Media, The Atlantic, and Daily Kos have all hired from their comments, while Samir Mezrahi, Ellie Hall, and Dorsey Shaw were all hired by BuzzFeed because of their Community posts.

This makes sense: these people are already demonstrating that they can connect with a community and don't have to begin from scratch when it comes to building relationships and reputations.

However, this doesn't mean you have to build your reputation on the community section of a news or magazine website: another common practice is hiring people who have built their own communities and reputations through blogging, YouTube, and other platforms. When Nate Silver "sold" FiveThirtyEight to ESPN, for example, they weren't just buying Silver: they were buying his audience. And when The Atlantic announced that it wanted to hire newsletter writers, Vox reported that it was: "recruiting writers who are already in the paid newsletter business. And it wants to convert those writers' subscribers into Atlantic subscribers" (Kafka 2021).

Measuring what works

> If you don't collect data you're probably reacting solely to the vocal minority in your community.
>
> (Millington 2012)

It is easy to focus your community management activity on what you think resonates with your community or on the problems that appear most pressing. But it is important to keep returning to your objectives and asking, "Am I achieving what I set out to do?"

Measuring the effectiveness of your work is crucial to community management—and it helps strengthen your case if you are asked what your role is for or want to ask for extra resources in doing it.

Some objectives can be easily measured: are you getting more users or are users reading more pages or spending more time on your site? Are people engaging more—whether that's sharing links, commenting, or replying? See the chapters on writing for social media and the history of online journalism for more on analytics.

Try to be critical about what you measure: lots of users or registrations is not always a sign of health. Regular activity is a much better indication. Likewise, does it matter if lots of people read your material if most of them never finish and never return? All of these can help you identify where your attention is needed most: not necessarily where users are most vocal, but where they are quietest.

Summary

Community management and social media management are vital elements to any media organisation's success: not only does it allow publishers to better know their audiences and identify potential opportunities, but it also helps journalists work with audiences to spot developments more quickly, and to report in ways that relate more closely to readers.

Roles in the field vary widely. You might be helping establish best practice for other journalists or working with the advertising department to identify ways to make money on social media. You might be organising events or commissioning content.

Other journalists might put out a "shout out" for audience contributions on social media, start a live audio chat on Discord, or organise a weeks-long cross-platform campaign to make things better for a section of their community.

This variety is what many social media and community managers love about the job, but it can also be distracting: it is important to make sure that you are measuring the impact of what you do, as well as the activity of the community itself to make sure what you do is working.

And when done well, community management can fulfil some of journalism's most important functions: holding power to account and acting as a voice for the voiceless. You can't ask for more than that.

Activities

1. Pick a news organisation or magazine and identify all the channels it uses to communicate with its audience. Is it easy for that audience to participate and contribute or are they treated as largely passive? Do they have different channels for different communities? What sort of content do they use to engage? What could they do better?

2. Use Facebook's Audience Insights tool to find out what type of people use Facebook where you live: their age, occupations, and favourite pages. Then look more specifically at people with a particular occupation, interest, or age group and see how that changes.
3. List some of the objectives that you have for engaging with communities (both online and offline) as a journalist. Now list the objectives that that community might have (for example, is there a local campaign? Or do they have professional objectives? Or family concerns?) Try to identify where the two might overlap.
4. Lurk in an online community for a few days to get a feel for how people interact, who the key individuals are, the key talking points, and what sort of role you might be able to play in it that isn't being played already. Write a piece of content that fulfils that role (for example, solving a problem, summarising a discussion, or an interview with a key individual).
5. Decide on a measurement that will help you identify if your strategy is succeeding. Measure it before you begin, and then regularly afterwards. This may take months, so wait until you've been doing things for a couple of months before deciding if it's working.

Further reading: Books

Millington, Richard (2021) *Build Your Community: Turn Your Connections into a Powerful Online Community*, Pearson.

Bacon, Jono (2019) *People Powered: How Communities Can Supercharge Your Business, Brand, and Teams*, HarperCollins Leadership.

Society of Editors (2018) Moderation Guide, https://www.societyofeditors.org/wp-content/uploads/2018/10/SOE-Moderation-Guide.pdf

Further reading: Online

Better News—Comments: betternews.org/topic/user-comments/
Feverbee—Rich's Blog: feverbee.com/richs-blog
Gather: letsgather.in

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Index