TWITTER AND SOCIETY
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As a high school pupil, Morgan Jones had already shown a keen interest in news. He had been editor for *RJ Voice*, the newspaper of the Regis Jesuit High School (a private, Catholic college in Aurora, Colorado), as well as been involved with the school radio station, RJ Radio (Jones, n.d.). The 18-year-old, self-described techie was spending the 2012 summer break with his parents in Denver, before going to Rice University to study engineering. In the early hours of 20 July 2012, he was playing the fantasy role-playing video game Oblivion when he saw a note on Facebook from a local TV station about shootings at a movie theatre (Herman, 2012).

It later emerged that the reports referred to a shooting at a midnight screening of *The Dark Knight Rises* in Aurora, Colorado, in which 12 people were killed and 58 wounded. The suspected gunman, 24-year-old James Holmes, was arrested shortly after the rampage. On that night in July, Jones tuned in to the Aurora police scanner and started posting updates under his username,
Integ3r, on Reddit, the largest Internet message board in the world with 35 million monthly users (Shaer, 2012).

The timeline provided a minute-by-minute account of the tragic events of the night (Integ3r, 2012). Jones pulled in fragments of information gleaned from police, from mainstream media outlets, and from messages and photos shared on Twitter by people at the cinema, adding new details and correcting old information as he went along. “I stayed up all night, and I am exhausted now, but it feels like I’m helping out people who need to know this stuff”, he said the following day (quoted in Herman, 2012).

The night of the Aurora tragedy, Jones performed some of the communication functions that had previously been limited mainly to professional journalists working for media institutions with the structures and technologies to gather, process, and distribute the news. The cinema shootings were emblematic of how news flows in a networked media ecosystem, facilitated by social media such as Twitter. Social media services like Twitter have developed into platforms for news storytelling, becoming integral to any major news event, from the Sichuan earthquake in China in May 2008 to the Iranian election protests in June 2009 to the 2011 uprising in Egypt (Hermida, 2011, p. 672).

By 2012, 340 million tweets were being posted daily (Twitter, 2012), on topics ranging from the mundane to the comical to the momentous. Clearly not all of the content could be considered to be news in the public interest, but likewise, neither is everything published in magazines or other media formats. Twitter provides a distribution network for firsthand news accounts by eyewitnesses in near real time. Sometimes, this happens inadvertently—as in the case of Sohaib Athar, a Pakistani software engineer who unknowingly live-tweeted the U.S. raid on Osama Bin Laden’s compound (Butcher, 2011).

Concurrently, Twitter serves as a channel for the distribution of material from journalists and the mainstream media. Exchanges around news events circulate as reports, rumours, and speculation are shared on the network and are challenged, contradicted, or corroborated. Surges in tweets are often linked to major news events, like the torrent of conjecture ahead of President Obama’s announcement of the death of Bin Laden. There were more than 4,000 tweets per second on the topic by the time the president finally appeared on TV (Hermida, 2011, pp. 671–672).

Twitter facilitates the instant, online dissemination and reception of short fragments of information from sources outside the formal structures of journalism, creating social awareness streams that provide a constantly updated, live representation of the experiences, interests, and opinions of users. Such uses
of Twitter can be considered “ambient journalism” (Hermida, 2010a, 2010b), a telemediated practice powered by networked, always-on communications technologies and media systems of immediacy and instantaneity.

It builds on the term “ambient news”, which refers to the easy availability of news through a host of media platforms, such as electronic billboards in public spaces such as train stations or free commuter newspapers that convey news and information produced by professional media (Hargreaves & Thomas, 2002, p. 44). “Ambient news” works much like ambient music that plays in the background (Crawford, 2009, p. 528); a listener will tune in to the music when there is a change in tone or style that catches their attention. Applied to Twitter, “when important news breaks and spreads across the Twittersphere, shifts in tone and topical focus of incoming tweets may cause that user to pay attention to the story” (Bruns & Burgess, 2012, p. 2).

Ambient journalism concerns the collection, selection, and dissemination of news by both professional and non-professional para-journalists, where users undertake some of the institutional tasks commonly associated with the journalist. These tasks range from an individual sending a message about a breaking news event to alerting their online social network about a story in the mainstream media to curating the flow of information in real time. Users become part of the flow of news, reframing or reinterpreting a message through networked platforms that extend the dissemination of news through social interaction, introducing hybridity in news production and news values (Chadwick, 2011; Papacharissi & de Fatima Oliveira, 2012). As Hardey (2007) stressed, the key differentiator is that digital media technologies such as Twitter are “inherently social so that users are central to both the content and form of all material and resources” (p. 870).

Drawing on the research in new literacies (Lankshear & Knobel, 2007, 2011; Prinsloo, 2005), this chapter aims to contextualise and unpack the interplay between social media—specifically Twitter—and emergent paradigms in journalism (Hermida et al., forthcoming; Lotan et al., 2011; Papacharissi & de Fatima Oliveira, 2012). It frames Twitter and journalism in the light of what the renowned U.S. foreign policy analyst and Editor-at-Large of The American Interest magazine, Walter Russell Mead (2012), described as the disruptive and painful “transformation from late-stage industrial society to early-stage information society” (para 32). This approach diverges from a bias in journalism studies that sees it mostly drawing on the routines and practices of print media (Deuze, 2008).
TWITTER AND NEWSROOMS

Since its launch in 2006, Twitter has made significant inroads into newsrooms, with journalists rapidly embracing the service to report breaking news, to gather information, to connect with sources, and to drive traffic to websites (Ahmad, 2010; Farhi, 2009; Hermida, 2011). The adoption of Twitter has largely mirrored the path of earlier new media technologies such as blogging, with journalists extending established norms and routines as they incorporate novel tools and techniques into daily practice. In his study of the use of social media in mainstream media, Newman (2009) concluded that “the use of new tools has not led to any fundamental rewrite of the rule book—just a few tweaks round the edges” (p. 39).

Within newsrooms, a common practice has been to use Twitter as a channel to promote content and attract readers to a news website, as social media provides a ready-made free distribution network. Messner, Linke, and Eford (2012) found that leading U.S. newspapers and TV stations mostly used their official Twitter accounts to send out links to the latest news stories on their websites. In his study of TV stations in San Antonio, Texas, Blasingame (2011) found that many newsrooms automatically generated a tweet with a link when a new story was published online.

On an individual level, journalists are navigating some of the tensions that emerge as the affordances of Twitter interact with established journalistic conventions. Some studies indicate that journalists are extending traditional practices to social media, using new tools to do old things. Research into the use of tweets by Dutch and U.K. newspapers suggests that newsrooms are using tweets from ordinary people to represent the vox populi, especially among the British tabloid press (Broersma & Graham, 2012, p. 411). In some cases, journalists are approaching Twitter as another newsgathering tool, just as they would have used the telephone in the past. A 2011 survey of 500 journalists in 15 countries found that almost half used Twitter to source angles for a story (Oriella PR Network, 2011). Only a third said that they used social media to verify information, relying instead on traditional sources such as PR agencies and corporate spokespeople. But there is also some evidence of journalists pushing the boundaries of accepted practice: for example, Lasorsa, Lewis, and Holton (2012) found that the journalists they studied offered personal opinions on Twitter, straying from traditional norms of objectivity.

As with every new communication technology, there is a process of negotiation, as established ways of working rub up against new affordances. Social
media platforms such as Twitter have a communicative structure that can chafe with the notion of the journalist as the professional who works “full-time to access, select and filter, produce and edit news, which is then distributed via the media to network members” (Domingo et al., 2008, p. 329). Social media bring together interpersonal communication, content production, immediacy, and large-scale distribution in a way that blurs the line between the public and private, and does not have the spatial, social, or temporal boundaries of print or broadcast media (boyd, 2010; Bruns & Burgess, 2012).

**JOURNALISM THROUGH THE LENS OF NEW LITERACIES**

Technological innovations from the telegraph to the telephone to Twitter have informed the norms and practices of journalism. As new technologies for information and communication appear, so does the demand for new skills, knowledge, and understanding. Media theorist Neil Postman (1992) noted how new technologies “alter the character of our symbols: the things we think with. And they alter the nature of community: the arena in which thoughts develop” (p. 20). In other words, new literacies emerge as communication tools evolve.

Literacies refer to the ability of individuals to interpret and communicate information in a meaningful way in order to participate in society. The nature of these literacies changes as a result of shifting social contexts, and the development and use of new media. New literacies researchers separate the technical and cultural aspects of literacy (Kalantzis & Cope, 2011; Lankshear & Knobel, 2007, 2011). The technical aspect refers to the properties of digital media, combining written, oral, and audiovisual modalities of communication using screen-based, networked services and devices. The cultural aspect refers to the mind-set that informs these literacies. The mind-set is the general way of thinking about the world, based on a set of assumptions, beliefs, and values that shape actions and reactions.

Lankshear and Knobel (2011) suggested that there are two mind-sets. They locate the two mind-sets in the historical development of society, labelling one as the modern/industrial paradigm and the other as the postmodern/post-industrial/knowledge society paradigm (p. 53). In the first mind-set, the world is uniform, monolithic, enclosed, individualised, stable, and linear. In the second mind-set, the world is distributed, open, collaborative, dynamic, and non-linear. Lankshear and Knobel applied this framework to explore how the shift to a post-industrial, knowledge society mind-set reconfigures everyday social practices around communication.
The industrial paradigm can be applied to print journalism, which developed at a time when access to the machinery of news production, publication, and provision was expensive. The newspaper is a stable and fixed product with a specific purpose—to provide news, information, and entertainment on a daily basis. Once it is printed, the hierarchy of information on the page cannot be changed. The story on the page is linear in nature, with a beginning, middle, and end. The story is usually written by an individual reporter, identified by the byline, though the material will have gone through various editorial layers. The journalist is identified by their attachment to a professional news organisation, where the processes of identifying, gathering, filtering, processing, and publishing are in the hands of a select few. The newsroom itself is an enclosed physical space that claims authority and expertise in the production of news. Outsiders are not welcomed, except through narrow, controlled channels such as letters to the editor. The news is shaped into a product that is pushed out to audiences, through home delivery or via newsstands.

Seen through the lens of new literacies, journalists have a mind-set rooted in the modern industrial period. As a wide body of research indicates, newsrooms have predominantly adapted digital media to existing norms and practices, rather than taking on the affordances of new forms of communication that challenge established ways of working (Lasorsa, 2012; Lasorsa et al., 2012; Robinson, 2007; Singer, 2005; Singer et al., 2011). By and large, journalism practices have become more technologised, with reporters doing old things in new ways, rather than negotiating the transition to a post-industrial knowledge society.

In order to function effectively, journalists have always required knowledge of both the technical and cultural aspects of literacy. What is new about Twitter are the differences in the technical and cultural aspects of the platform, compared to print or broadcast. The technical dimensions include the 140-character limit; the follower-followee structure system; the use of URL-shortening services; and the platform’s markers for mutual exchange and conversation, such as the hashtags and mentions. But it can be a bewildering space without an understanding of the norms and conventions of Twitter. This bewilderment might account for some early derision from journalists, such as when The New York Times columnist Maureen Dowd (2009) described Twitter as “a toy for bored celebrities and high-school girls”. Viewed through an industrial mindset, Twitter is a shambolic, messy, and noisy torrent of seemingly everyday details of life. These negative attributes are transformed into positive attributes
when viewed through the new literacies of a post-industrial mind-set, revealing instead a complex, networked communications environment.

Twitter exhibits core values of new literacies—“interactivity, participation, collaboration, and the distribution and dispersal of expertise and intelligence” (Lankshear & Knobel, 2011, p. 76). Participation is prioritised over publication, sharing over owning, change over stability, abundance over scarcity, relationships over information delivery. As an ambient news network, Twitter offers a mix of information and comment usually associated with current reality, but without an established order. In contrast with the print newspaper or the TV broadcast, anyone can publish and distribute at anytime, outside of the formal constraints of traditional journalism, with no established editorial structures or processes. The content flows continuously in near real time. Twitter breaks with the classic, narrative structure of journalism, and instead creates multifaceted, fragmented, and fluid news experiences. Journalism shifts from being a product to a process with no end state.

**AMBIENT NEWS BEYOND JOURNALISM**

As an open platform, Twitter itself offers a space for the co-construction of news. Writing before the widespread adoption of Twitter, Manuel Castells (2007) described the rise of mass self-communication that is "self-generated in content, self-directed in emission, and self-selected in reception by the many that communicate with many" (p. 248). Studies into the use of Twitter during the Arab Spring indicate how the production and dissemination of news is becoming ambient, as citizens become part of the flow of news, reframing or reinterpretating a message. (See also Chapter 28 by Bruns & Burgess on the uses of Twitter for crisis communication in natural disasters, in this volume.)

The hybrid nature of news production on Twitter was highlighted in a study by Lotan et al. (2011) into information flows on Twitter during the Tunisian and Egyptian uprisings. The researchers sought to identify who were the influential voices on the network in amplifying and spreading news of the protests across the world. Of particular interest was the symbiotic relationship between mainstream media and actors outside of the formal structures of journalism. They found that journalists and activists served as primary sources of information. Activists were more likely to retweet content, as were bloggers, serving as clearing houses (2011, p. 1390). Lotan et al. concluded that bloggers, activists, and journalists co-constructed the news on Twitter, fashioning “a particular kind of online press” (2011, p. 1400).
Twitter provides a newsroom for this “online press” that is open, distributed, and collective, in contrast to traditional models of the newsrooms as enclosed, concentrated, and exclusive spaces. The networked nature of the newsroom affects what becomes newsworthy. Papacharissi and de Fatima Oliveira (2012) examined the news values and forms of news displayed in tweets sent during the Egyptian uprising and subsequent fall of President Hosni Mubarak over January and February 2011, finding that the types of events reported and the tone of coverage on Twitter mirrored the news values of traditional media. But they also argued that there was evidence of values specific to an ambient news network that collide with journalistic conventions.

On Twitter, the news was characterised by values of instantaneity, solidarity, and ambience (Papacharissi & de Fatima Oliveira, 2012, p. 273). Events became news, because details of what was happening were disseminated instantly and were repeatedly shared across the network. Papacharissi and de Fatima Oliveira (2012) suggested that “as individuals constantly tweeted and retweeted observations, events instantly turned into stories” (p. 274). The constant flow of messages broke with journalistic conventions by blending fact, opinion, and emotion to the extent that the researchers found it hard to separate one from the other. The authors concluded that the pace, frequency, and tone of messages created an ambient, always-on system where users gain an emotive, immediate sense of the drama unfolding, but without the fact-checking and arms-length reporting associated with traditional news. They posited the concept of “affective news streams” to explain “how news is collaboratively constructed out of subjective experience, opinion, and emotion within an ambient news environment” (p. 274).

Moreover, collaborative co-construction of the news affects the frames applied to events. By selecting specific facts or sources, journalists frame the news “in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (Entman, 1993, p. 52). However, Meraz and Papacharissi’s (2013) research on the Arab Spring suggested that framing on Twitter is negotiated on the network through interactions between journalists, activists, and citizens in an “organic, ad hoc manner” (p. 159).

**JOURNALISM IN AN AMBIENT NEWS NETWORK**

Emerging research points to new forms of journalism that move away from journalism as a framework to provide reports and analyses of events through linear narratives composed after an event. An increasingly popular format is
the “live blog” or “live update” page. Live blogs weave together reports from professional journalists and information gleaned from social networks such as Twitter, together with commentary and analysis in near real time, generating a multidimensional, temporal, and fast-moving news experience. They have been rapidly adopted by leading news organisations, including the BBC, *The Guardian*, *The New York Times*, and CNN. Thurman and Walters (2012) suggested that the format is “increasingly the default form for covering major breaking news stories, sports events, and scheduled entertainment news” (p. 1).

The live blog differs from conventional reporting in both its technical and cultural aspects. A live blog is made up of timestamped entries in reverse chronological order, with multiple forms of media, numerous links to material elsewhere on the Internet, and signposted content from third parties (Thurman & Walters, 2012). Through the lens of new literacies, live blogs are more collaborative, open, fluid, and less author-centric than other forms of journalism. The conventional newspaper story strives to convey a definitive and authoritative account of an event. Live blogs present an iterative and incremental account. The editor of the BBC News website, Steve Herrmann, has talked about live blogs as a way to reflect “the unfolding truth in all its guises” (as quoted in Newman, 2009, p. 9), while for *Guardian* reporter Matthew Weaver the format offers “a more fluid sense of what’s happening” (as quoted in Bruno, 2011, p. 44). The imperative to provide constantly updated information is not without its consequences. Thurman and Walters (2012) suggested that it may be hard for journalists to adapt existing fact-checking practices to live blogging.

The live-blog format creates a locus for journalists to bring in material curated from the real-time flow of information on Twitter and other social media services, and integrate it within the confines of a news organisation’s website. The imperative to harvest Twitter is at its peak in the hours after breaking news events where there is a news vacuum due to the lack of professional journalists on the scene. In the immediate aftermath of the earthquake in Haiti in January 2010, major news organisations relied heavily on messages, photos, and video streaming on social media until their own reporters arrived on the scene, hours or even days later (Bruno, 2011). The “Twitter effect”, as Bruno called it, allows newsrooms “to provide live coverage without any reporters on the ground, by simply newsgathering user-generated content available online” (Bruno, 2011, p. 8).

One of the more noteworthy aspects of Twitter, though, is how journalists can operate on the platform itself, bypassing the need for a home on a news website. At the Online News Association Conference in San Francisco
in September 2012, company CEO Dick Costolo was asked, “so, how does it feel to be the voice of the press in the 21st century?” (Silverman, 2012). The question was somewhat in jest, but it underscored how Twitter has matured as a networked newsroom where news is filtered, discussed, contested, and verified. At the time of writing, the best-known example of a media professional operating in this ambient news network was Andy Carvin.

CONCLUSION: TWITTER AS THE NEWSROOM

A social media strategist with National Public Radio (NPR) in Washington, DC, Carvin rose to prominence during the uprisings in the Middle East at the end of 2010 and start of 2011—the “Arab Spring”. Over the course of the Arab Spring, he emerged as a key hub on Twitter for news from the region, amassing tens of thousands of followers, including other journalists and news outlets. Carvin shared images and video, exchanged messages, mediated discussions, and turned to his followers to help him translate, verify, and put into context the endless amount of data flowing across the network. He tweeted up to 16 hours a day, seven days a week (Farhi, 2011, para 3). Over one weekend in August 2011, when the rebels in Libya pushed into the capital Tripoli, he sent out 1,200 messages (Sonderman, 2011). Through Twitter, Carvin fashioned a rich and dynamic tapestry of the dramatic upheavals in the region.

In their analysis of Carvin’s sourcing practices on Twitter, Hermida, Lewis, and Zamith (forthcoming) advance that his coverage of the Arab Spring hints at a new journalistic paradigm at play. They suggest that the Carvin case study points to a shift away from the traditional, journalistic gatekeeping function (Shoemaker, 1991) towards gatewatching (Bruns, 2005), where the journalist evaluates, highlights, and publicises relevant information plucked from social awareness streams on Twitter.

For Carvin, Twitter was effectively his workplace. He has described his network of followers as “my editors, researchers & fact-checkers. You’re my news room” (Carvin, 2012). Carvin described his work as “another flavour of journalism” (as quoted in Farhi, 2011, para 15). His approach was in line with a new literacies framework, demonstrating not just technical competency, but an understanding of the emerging norms and practices of Twitter. Carvin was not simply broadcasting, but was immersed in the culture of a media environment that privileges relationship over information delivery, interacting and conversing with others to co-construct the news. This approach can have positive professional results: emerging research suggests that journalists who adopt
more discursive strategies, conversing with the public, tend to receive the most retweets and mentions (Meraz & Papacharissi, 2013).

Twitter as a newsroom exposes the tentative process through which the news is constructed, as information, rumour, and speculation are authenticated or denied in a recurrent cycle. Journalism shifts from being a finite story with the fixed endpoint of publication to being an iterative process through which information is dissected, discarded, or disseminated in near real time. In an ambient news network, then, the journalist serves as a pivotal node which is “trusted to authenticate, interpret, and contextualize information flows on social awareness streams, drawing on a distributed and networked newsroom where knowledge and expertise are fluid, dynamic, and hybrid” (Hermida, Lewis, & Zamith, forthcoming, n.p.). This and the other examples discussed in this chapter show how the new literacies of networked media are shaping, and are being shaped by, journalism in this current phase of its co-evolution with technological and societal change.

REFERENCES


Notes on Contributors

**Fabian Abel (@fabianabel)** is working as Postdoctoral Researcher in the Web Information Systems group at Delft University of Technology, The Netherlands, and is performing research activities in the line of user modelling and personalisation on the Social Web. Fabian completed his PhD at L3S Research Center and was concerned with (distributed) user modelling on the Social Semantic Web, covering topics such as linking, integrating and enriching user models as well as personalised retrieval of social media content. In his young career, he has published more than 50 scientific articles in the field of Semantic Web, User Modelling and Personalisation.

**Julian Ausserhofer (@boomblitz)** is a Digital Media Researcher at the Institute for Journalism and PR at Graz University of Applied Sciences (FH JOANNEUM), Austria. He is also a PhD candidate at the University of Vienna, Department of Communication. Ausserhofer co-founded the Web Literacy Lab in Graz and acts as a member of the Board of the Open Knowledge Foundation in Austria. His research interests include the political use of social media, open (government) data, online publishing practices and data driven journalism. He blogs at http://ausserhofer.net/
NANCY BAYM (@nancybaym) is a Principal Researcher at Microsoft Research in Cambridge, MA, USA. She is the author of Personal Connections in the Digital Age (Polity), Internet Inquiry (co-edited with Annette Markham, Sage) and Tune In, Log On: Soaps, Fandom and Online Community (Sage). Her website is http://www.nancybaym.com/

MICHAEL BEURSKENS (@mbeurskens) is a Lecturer and Researcher in the field of Internet and Intellectual Property Law. His research covers general issues pertaining to the ownership of information, privacy law, and network neutrality. He teaches copyright law at the specialised LL.M.-program on information law. Beurskens holds both a Master’s degree in intellectual property law received from Heinrich-Heine University and a general LL.M. from the University of Chicago. He passed both German state exams with honours, and is admitted to the New York State bar. He received his doctoral degree (Dr.iur., s.j.d.-equivalent) based on a thesis on capital market information. He is an active member of the German law blogging community and also supervises the faculty-run blogs at HHU. Beurskens is currently involved in the development of Web 2.0-based eLearning-technologies, including collaborative game design.

THOMAS BOESCHOTEN (@boeschoten) is a Master’s student at the New Media and Digital Culture programme at Utrecht University, the Netherlands. He specialises in Twitter and other new media that use big data. After focusing on the use of Twitter by politicians and the Occupy movements, he is now a member of the ‘Project X’ Research Committee that is investigating the 2012 ‘Facebook’ riots in the small northern village of Haren in the Netherlands. His website is at http://www.boeschoten.eu/

AXEL BRUNS (@snurb_dot_info) is an Associate Professor in the Creative Industries Faculty at Queensland University of Technology in Brisbane, Australia, and a Chief Investigator in the ARC Centre of Excellence for Creative Industries and Innovation (http://cci.edu.au/). He is the author of Blogs, Wikipedia, Second Life and Beyond: From Production to Produsage (2008), and Gatewatching: Collaborative Online News Production (2005), and a co-editor of A Companion to New Media Dynamics (2013, with John Hartley and Jean Burgess), and Uses of Blogs (2006, with Joanne Jacobs). His research blog is at http://snurb.info/; see http://mappingonlinepublics.net/ for more details on his current social media research.
Notes on Contributors

Jean Burgess (@jeanburgess) is Deputy Director of the ARC Centre of Excellence for Creative Industries & Innovation (CCI) and an Associate Professor in the Creative Industries Faculty at Queensland University of Technology, Australia. She has published widely on social media, user-created content, and community-based co-creative media such as digital storytelling. Her books include YouTube: Online Video and Participatory Culture (Polity Press, 2009), which has been translated into Polish, Portuguese, and Italian; Studying Mobile Media (Routledge, 2012); and A Companion to New Media Dynamics (Wiley-Blackwell, 2013). Her current research focusses on methodological innovation in the context of the changing media ecology, and in particular on the development of computational methods for media and communication studies.

Mark Dang-Anh (@mdanganh) received his Magister Artium degree from the RWTH Aachen. He is a Research Assistant in the Department of Media Studies at the Institute of Linguistics, Media and Sound Studies, University of Bonn, Germany. He currently works on the project “Political Deliberation on the Internet: Forms and Functions of Digital Discourse Based on the Microblogging System Twitter”, which is part of the Priority Program 1505 “Mediatized Worlds” funded by the German Research Foundation (DFG). His research interests lie at the intersection of linguistics and media studies, primarily focussing on political communication in online media.

Martin Ebner (@mebner) is Head of the Department for Social Learning at Graz University of Technology, Austria, and therefore responsible for all university-wide e-learning activities. He is an Associate Professor of Media Informatics and also works at the Institute for Information System Computer Media as Senior Researcher. His research focusses strongly on e-learning, mobile learning, learning analytics, social media, and the usage of Web 2.0 technologies for teaching and learning. Martin gives a number of lectures in this area as well as workshops and talks at international conferences. For publications as well as further research activities, please visit http://martinebner.at/

Jessica Einspanner (@jeinspaenner) studied media & communications at Bonn University (Germany) and the National University of Singapore. She is currently working as a Research Fellow at Bonn University within the project "Political Deliberation on the Internet: Forms and Functions of Digital Discourse Based on the Microblogging Platform Twitter", which is part of
the DFG priority program “Mediatized Worlds”. She is also writing her doctoral thesis on “User Generated Privacy: Mechanisms of Constructing Privacy Online”. Her main teaching and research areas are social media communication, political communication, and online journalism.

Lisa Evans (@objectgroup) was a Writer, Data Researcher, and Programmer for The Guardian, with interests including statistics, public spending, data journalism, and accounting. Much of this work was published on The Guardian’s Datablog. She is now investigating where money flows around the world with the Open Knowledge Foundation’s (England) Open Spending project, and completing her degree in mathematics from the Open University. In the near future, she will be producing training materials and tools for the open spending community to help journalists and non-government organisations use open financial data in more meaningful ways.

Simon Faulkner (@simonfaulkner2) is a Senior Lecturer in Art History and Visual Culture at Manchester Metropolitan University, England. He has published on the subject of British art in the mid-twentieth century, and is the editor (with Anandi Ramamurthy) of Visual Culture and Decolonisation in Britain (2006). His current research is on relationships between visual culture and the Israeli–Palestinian conflict. This work includes the development of an artist/writer’s book, Between States, with the Israeli artist David Reeb.

Devin Gaffney (@dgaff) is a Research Assistant at the Oxford Internet Institute, England, and recent graduate of its Master’s Program in the Social Science of the Internet. Since 2009, he has concentrated on research surrounding Twitter’s various legal, ethical, methodological, and practical aspects, and has most recently focussed on the measurable role of geographic distance in interactions between users. Beyond this work, he has also worked on assessing the impact of Twitter on the 2009 Iran Election and 2011’s Arab Spring, and is most recently working on assessing the merits of social media influence metrics, and the various issues surrounding projections of quantifiable methods on online users and activity.

Alexander Halavais (@halavais) is Associate Professor of Social and Behavioral Sciences at Arizona State University, where he researches the role of social media in social learning. He is also the president of the Association of Internet Researchers, and technical director of the Digital Media and Learning Hub at the University of California. His work investigates the use
of social media by activists and others hoping to create social change. His most recent book is *Search Engine Society*, and his upcoming book examines new forms of participatory surveillance.

**Stephen Harrington** (@StephenH) is a Senior Lecturer in Journalism, Media and Communication at the Queensland University of Technology (QUT), Australia. His research has focussed mainly on the changing relationships between television, journalism, politics, and popular culture, and, in particular, understanding the qualitative impact of these changes in terms of public knowledge and engagement. His book *Australian TV News: New Forms, Functions and Futures* (Intellect, 2013) focusses on emergent news formats, and their potential to generate public knowledge and deeper levels of audience engagement. He is currently studying how Twitter and other online communication platforms affect or shape the audience experience for traditional media forms and events (e.g., TV, sport), and how to use social media data capture, analysis, and mapping methods as an audience research technique.

**Claudia Hauff** (@charlottehase) is a Postdoctoral Researcher in the Web Information Systems group at Delft University of Technology, The Netherlands, working in the areas of Information Retrieval and User Modelling & Personalisation. Claudia received her PhD from the University of Twente, where her research focussed on system-oriented Information Retrieval, in particular query performance prediction and retrieval system evaluation.

**Alfred Hermida** (@hermida) is an award-winning online news pioneer, digital media scholar, and journalism educator. He is an Associate Professor at the Graduate School of Journalism at the University of British Columbia, Canada. His research focusses on changes in journalistic practices, social media, and emerging genres of journalism, with his work appearing in *Journalism Practice* and *Journalism Studies*. He co-authored *Participatory Journalism: Guarding Open Gates at Online Newspapers* (Wiley-Blackwell, 2011). Hermida was a BBC journalist for 16 years, including four as a correspondent in the Middle East, and was a founding member of the BBC News website in 1997. A regular media commentator, his work has appeared in *The Globe and Mail, PBS, BBCNews.com* and the Nieman Journalism Lab.

**Tim Highfield** (@timhighfield) is a Research Fellow with the ARC Centre of Excellence in Creative Industries and Innovation, and a Sessional Academic
at Curtin University, Perth, Australia. He was awarded his PhD in 2011 from Queensland University of Technology, Australia. His PhD thesis studied political blogging in Australia and France, while his current research interests include examining the uses of social media, such as Twitter, within discussions and commentary around political debates and popular culture. His recent publications include co-authored journal articles in *Media International Australia* and *Social Science Computer Review*.

**Geert-Jan Houben (@gjhouben)** is Professor of Web Information Systems at the Software Technology department at Delft University of Technology, The Netherlands. His main research interests are in Web Engineering, in particular the engineering of Web information systems that involve Web and Semantic, Web technology, and User Modelling, Adaptation and Personalisation. He is Managing Editor of the *Journal of Web Engineering*; Chair of the Steering Committee for ICWE, the International Conference on Web Engineering; and member of the Editorial Board of ACM TWEB, ACM Transactions on the Web.

**Nina Krüger (@NinaKrger)** is a Research Assistant in the research group of communication and collaboration management at the Institute of Information Systems at the University of Münster, Germany. She studied communication science, ethnology, and psychology, and completed her Magister in 2011. As grounding for her studies, she underwent job training in an IT enterprise, where she gained practical experience in dealing with social media and their use for collaborative purposes in business. Nina's research focusses on the internal and external use of social media for corporate communication in all its facets.

**Anders Olof Larsson (@a_larsson)** is a Postdoctoral Fellow at the Department of Media and Communication, University of Oslo, Norway. He is also associated with the Swedish Research School for Management and Information Technology. His work has been published in journals such as *New Media and Society, Convergence, The Information Society*, and *Journal of Information Technology and Politics*. Larsson’s Web site can be found at [http://andersoloflarsson.se/](http://andersoloflarsson.se/)

**Alex Leavitt (@alexleavitt)** is a PhD student and Researcher in the Annenberg School for Communication & Journalism at the University of Southern California, USA, where he is advised by Professor Henry Jenkins. Alex studies participation and online communication across networked tech-
nologies, particularly social media platforms, emergent online communities, and the information practices of media subcultures. More information about his research is available at http://alexleavitt.com/

MEJRA MAHRT is a media and communication scholar currently working at Heinrich Heine University, Düsseldorf, Germany. Her research focuses on the audience of media and the functions media fulfil for their users and society, from traditional mass media like television, newspapers, and magazines to Web 2.0 applications. She is the spokesperson of the interdisciplinary researchers group, Science and the Internet (http://www.nfg-win.uni-duesseldorf.de/en/). Within this project, her research is concerned with academic blogs, their readership, and the different uses bloggers and readers make of them.

AXEL MAIREDER (@axelmaireder) has been a Research Assistant and Doctoral Student at the Department of Communication, University of Vienna, Austria, since 2009. After graduating from this department in 2006, he has been working as Researcher for projects on the Internet use of teachers and students, funded by the Austrian Ministry of Education. His current research focusses on practices, networks, and dynamics of social media communication within public discourses, and particularly in political communication.

YANA MANYUKHINA has a BA in International Relations from Baku State University, Azerbaijan (2009), and an MA in Mass Communications from the University of Leicester, UK (2011), both with distinction. Her research interests include: research methods for the social sciences, especially applied to issues around health communication, nutrition, and public health; food advertising and food media; food policies; consumer research; brands and culture. She commenced a PhD in this area in 2012. She was a Researcher on the “Reading the Riots on Twitter” investigation, from which her interest for researching social media stems.

ALICE MARWICK (@alicetiara) is an Assistant Professor at Fordham University in the Department of Communication and Media Studies, and a Research Affiliate at the Berkman Center for Internet and Society. Her work looks at online identity and consumer culture through lenses of privacy, consumption, and celebrity. She is currently working on two ethnographic projects—one examining youth technology use, and the other looking at femininity and domesticity in social media such as fashion blogs, Tumblr, and Pinterest. Her book Status Update: Celebrity, Publicity and Self-Branding in Web 2.0
is under contract with Yale University Press. Alice has a PhD from New York University’s Department of Media, Culture, and Communication, and was previously a Postdoctoral Researcher in social media at Microsoft Research New England.

Diana Maynard (@dianamaynard) is a Research Fellow at the University of Sheffield, UK. She has a PhD in Automatic Term Recognition from Manchester Metropolitan University, and has been involved in research in NLP since 1994. Her main interests are in information extraction, opinion mining, terminology, and social media. Since 2000, she has led the development of USFD’s open-source multilingual IE tools, and has led research teams on a number of UK and EU projects. She is Chair of the annual GATE training courses, and leads the GATE consultancy on IE and opinion mining. She has published extensively, organised a number of national and international conferences, workshops, and tutorials, given invited talks and keynote speeches, and reviews project proposals for RNTL. She is currently joint Coordinator of the Semantic Web Challenge.

Hallvard Moe (@halmoe) is Associate Professor of Media Studies at the University of Bergen, Norway. In 2011, he was a visiting scholar at the ARC Centre of Excellence for Creative Industries and Innovation at Queensland University of Technology. Moe’s research interests include media policy, democratic theory, and the use of new media platforms in the public sphere. His recent work on Twitter, published in journals such as *New Media & Society*, *International Journal of Communication*, and *Nordicom Review*, focusses on their uses in public debate in the Scandinavian countries.


Christoph Neuberger is a full Professor at the Department of Communication Science and Media Research (IfKW) at the Ludwig-
Maximilians-University Munich, Germany. His research interests include media change, online journalism, activities of press and broadcasting on the Internet, social media, journalism theory, and media quality. Recent book publications include: Christoph Neuberger, Hanna Jo vom Hofe, and Christian Nuernbergk, *Twitter and Journalism: The Influence of the Social Web on News* (3rd edition, Düsseldorf, Germany: Landesanstalt für Medien Nordrhein-Westfalen (LfM), 2010); and Klaus Meier and Christoph Neuberger (eds.), *Journalismusforschung [Journalism Research]* (Baden-Baden: Nomos, 2012).

Tanya Nitins (@DrTNitins) is a Lecturer at Queensland University of Technology, Australia, in the area of Entertainment Industries. Her previous research has focussed on product placement, brand development, and new media. Her book *Selling James Bond: Product Placement in the James Bond Films* was published in 2011. Dr. Nitins has also been intrinsically involved in various research projects focussed on new media services and applications, locative media, and building online user communities.

Christian Nuernbergk (@nuernbergk) is a Postdoctoral Researcher and Lecturer at the Department of Communication Science and Media Research (IfKW) at the Ludwig-Maximilians-University Munich, Germany. His research interests include political communication, online journalism, networked public sphere, online social networks, the blogosphere / blogging and microblogging, and alternative journalism. Recent book publications include: Christoph Neuberger, Hanna Jo vom Hofe, and Christian Nuernbergk, *Twitter and Journalism: Der Einfluss des “Social Web” auf die Nachrichten* [Twitter and Journalism: The Influence of the Social Web on News] (3rd edition, Düsseldorf, Germany: Landesanstalt für Medien Nordrhein-Westfalen (LfM), 2010).

Katy Parry (@reticentk) is a Lecturer in Communication Studies at the Institute of Communication Studies at the University of Leeds, England. Her research interests include war and media; photojournalism and visual culture; and political communications and political culture across media genres. Prior to joining Leeds, she worked on an AHRC-funded project with Kay Richardson and John Corner at the University of Liverpool, exploring the ways in which media formats other than journalism portray politics; now published as *Political Culture and Media Genre* (Palgrave, 2012). In
addition to publishing articles from this project, she continues to write on media visualisation of conflict.

**Johannes Passmann** (@J_Passmann) is a PhD candidate at the DFG Locating Media Graduate School at the University of Siegen in Germany. His PhD thesis is an ethnography of the Favstar scene on German-speaking Twitter, which he conceptualises as a gift economy. From this perspective, the history of the social web is described as a history of the accountability of gifts. Johannes has worked as a Lecturer in the New Media and Digital Culture Master's programme at Utrecht University in the Netherlands. His most recent publication is “Beinahe Medien: Die medialen Grenzen der Geomedien”, with Tristan Thielmann, in R. Buschauer and K. S. Willis (eds.), *Locative Media: Multidisciplinary Perspectives on Media and Locality* (Bielefeld, 2012).

**Isabella Peters** (@isabella83) is a Researcher at Heinrich Heine University Düsseldorf, Germany, and holds a PhD in information science. Her book *Folksonomies: Knowledge Representation and Information Retrieval in Web 2.0* was published in 2009. Peters’s research priorities include folksonomies in knowledge representation, information retrieval, and knowledge management, as well as scholarly communication on the web and altmetrics.

**Wim Peters** (@wilhelms101) is a Senior Research Scientist in the Department of Computer Science at the University of Sheffield, UK. He has been active in the field of computational linguistics for 16 years, and has participated in various EU and national projects covering multilingual thesaurus creation, corpus building and annotation, lexical tuning, information extraction in various domains, semantic resource analysis, and ontology creation and evaluation. Some of the projects he has been involved with are EuroWordNet (multilingual resource creation), DotKom (adaptive information extraction), LOIS (legal wordnet building), DALOS (knowledge acquisition from legal texts), NeOn (life cycle of ontology networks), and CLARIN (the creation of a grid-based research infrastructure for the humanities and social sciences). For most of these projects, Wim coordinated the University of Sheffield’s efforts. Presently, Wim is Coordinator of the FP7 IP Arcomem (http://www.arcomem.eu/), which addresses the needs of memory institutions in the age of the Social Web by creating a social- and semantic-aware Web preservation system that transforms archives into meaningful collective memories.
Nicholas Proferes (@moduloone) is a PhD student at the University of Wisconsin-Milwaukee’s School of Information Studies (USA). He holds a BS in Information Technology from George Mason University and an MA in Communication, Culture and Technology from Georgetown University. His research interests include Internet research ethics, big data, privacy, and information policy.

Cornelius Puschmann (@coffee001) is a Postdoctoral Researcher at Humboldt Universität zu Berlin’s School of Library and Information Science (Germany) who studies computer-mediated communication and the Internet’s impact on society. His current project “Networking, Visibility, Information: A Study of Digital Genres of Scholarly Communication and the Motives of their Users” investigates the use of (micro)blogs in academia, combining qualitative social research with language analysis. His other interests include language-based approaches to CMC (stylistic analysis, pragmatics) and corpus linguistics. Cornelius holds a PhD in English Linguistics from Heinrich-Heine-Universität Düsseldorf, and is the author of The Corporate Blog as an Emerging Genre of Computer-Mediated Communication.

Thomas Risse is the Deputy Managing Director of the L3S Research Center in Hannover, Germany. He received a PhD in Computer Science from Darmstadt University of Technology, Germany, in 2006. Prior to joining the L3S Research Center in 2007, he led the intelligent information environments group at Fraunhofer IPSI, Darmstadt. He was the Technical Director of the European-funded project BRICKS, which explored decentralised digital library infrastructures, and Coordinator of FP7 Living Web Archive (LiWA) project. Currently, he is the Technical Director of the FP7 ARCOMEM project on Web archiving using social media information. Thomas Risse’s research interests are Semantic Evolution, Digital Libraries, Web Archiving, Data Management in Distributed Systems and Self-Organising Systems.

Richard Rogers is University Professor, and holds the Chair in New Media & Digital Culture at the University of Amsterdam, The Netherlands. He is Director of Govcom.org, the group responsible for the Issue Crawler and other info-political tools, and the Digital Methods Initiative, dedicated to developing methods and tools for online social research. Rogers is the author of Digital Methods (MIT Press, 2013).
MIRKO TOBIAS SCHÄFER (@mirkoschaefer) is Assistant Professor of New Media and Digital Culture at Utrecht University, the Netherlands, and Research Fellow at Vienna University of Applied Arts, Austria. Mirko studied theatre, film and media studies, and communication studies at Vienna University, and digital culture at Utrecht University. He obtained a Master’s degree in theatre, film, and media studies from the University of Vienna in 2002, and a PhD from Utrecht University in 2008. Mirko’s research interest revolves around the socio-political impact of media technology. His publications cover user participation in cultural production, hacking communities, the politics of software design, and communication in social media. He is co-editor and co-author of the volume Digital Material: Tracing New Media in Everyday Life and Technology (published by Amsterdam University in 2009), and author of Bastard Culture! How User Participation Transforms Cultural Production (published by Amsterdam University Press in 2011).

JAN-HINRIK SCHMIDT (@janschmidt) is Senior Researcher for Digital Interactive Media and Political Communication at the Hans-Bredow-Institute for Media Research in Hamburg, Germany. His research interests focus on the practices and consequences of the social Web, mainly the structural changes in identity management, social networks, the public sphere, and privacy. His most recent monograph Das neue Netz (The New Web) was published in an updated second edition in 2011. More detailed information on other publications, research projects, and activities can be found on his blog http://www.schmidtmitdete.de/

PIERRE SENEELLART (@pierresenellart) is an Associate Professor in the DBWeb team at Télécom ParisTech, France, the leading French engineering school specialising in information technology. An alumnus of the École normale supérieure, he obtained his PhD (2007) in computer science from Université Paris-Sud under the supervision of Serge Abiteboul, and his Habilitation à diriger les recherches (2012) from Université Pierre et Marie Curie. His research interests focus around theoretical aspects of database management systems and the World Wide Web, and more specifically on the intentional indexing of the deep Web, probabilistic XML databases, and graph mining.

STEFAN STIEGLITZ (@wikuk) is Assistant Professor of Communication and Collaboration Management at the Institute of Information Systems at the University of Münster, Germany. He is founder and Academic Director of the Competence Center Smarter Work at the European Research Center for
Information Systems (ERCIS). His research focusses on economic, social, and technological aspects of social media. Of particular interest in his work is to investigate the usage of social media in the context of enterprises as well as politics. Stieglitz studied business economics at the universities of Cologne, Paderborn, and Potsdam. He published more than 60 articles in reputable international journals and conferences. He is also a reviewer for international journals and conferences in the field of information systems.

**Ke Tao (@taubau)** is a PhD student working in the Web Information Systems Group, Delft University of Technology, The Netherlands. He holds Bachelor and Master degrees, majoring in Computer Science and Technology, from National University of Defense Technology in Changsha, China. His current research focusses on search in the Social Web, User Modelling, Personalisation, and Linked Data.

**Mike Thelwall (@mikethelwall)** is Professor of Information Science and leader of the Statistical Cybermetrics Research Group at the University of Wolverhampton, UK, and a Research Associate at the Oxford Internet Institute. Mike has developed a wide range of tools for gathering and analysing Web data, including hyperlink analysis, sentiment analysis, and content analysis for Twitter, YouTube, blogs, and the general Web. His publications include 152 refereed journal articles, including D. Wilkinson and M. Thelwall, “Trending Twitter Topics in English: An International Comparison”, *Journal of the American Society for Information Science and Technology, 63*(8) (2012), 1631–1646; as well as seven book chapters and two books, including *Introduction to Webometrics*. He is an Associate Editor of the *Journal of the American Society for Information Science and Technology*, and sits on four other editorial boards.

**Caja Thimm (@CThimm)** is Professor for Media Studies and Intermediality at the University of Bonn, Germany. Her main research interests are online communication theory, social media, and organisational and political communication online.

**Tim van Treecck (@timovt)** is a Research Associate in the team for educational development at Cologne University of Applied Sciences, Germany. As a member of the interdisciplinary researchers group Science and the Internet, he analysed educational beliefs of teachers and decision-makers in universities, and organised media training and a seminar for doctoral students. He has worked in different projects relating to blended learn-
ing, especially in academic staff development and controlling. His current research and implementation activities focus on educational beliefs, e-portfolios, and diversity management in (online) teaching and learning. He is a member of the research commission of the German Association for Educational and Academic Staff Development in Higher Education (dghd).

Farida Vis (@flygirltwo) is a Research Fellow in the Social Sciences in the Information School at the University of Sheffield, England. Her work is centrally concerned with researching social media, crisis communication, and citizen engagement. She led the social media analysis on an academic team that examined 2.6 million riot tweets as part of The Guardian’s groundbreaking “Reading the Riots” project, which won a Data Journalism Award for showing the ways in which rumours spread on Twitter during the riots. Her textbook for Sage, Researching Social Media (2014), is written with computer scientist Mike Thelwall, highlighting the need for such interdisciplinary work in this area.

Hanna Jo vom Hofe works as a Communication Consultant at Media Authority of North Rhine-Westphalia (LfM) Nova in Düsseldorf, Germany. Prior to this, she was a Research Assistant at the Department of Communication Science and the Faculty of Educational and Social Sciences at the University of Münster, after graduating with a thesis on political communication on Twitter in 2010. Her research interests include political communication, online journalism, and social networks. Recent book publications include: Christoph Neuberger, Hanna Jo vom Hofe, and Christian Nuernbergk, Twitter und Journalismus: Der Einfluss des “Social Web” auf die Nachrichten [Twitter and Journalism: The Influence of the Social Web on News] (3rd edition, Düsseldorf, Germany: Landesanstalt für Medien Nordrhein-Westfalen (LfM), 2010).

Katrin Weller (@kwelle) is an Information Scientist working as a Post Doctoral Researcher at GESIS Leibniz Institute for the Social Sciences, Germany. Until December 2012, she worked at Heinrich Heine University Düsseldorf, Germany. She has been involved in different research projects on social media and their role in e-learning, knowledge sharing, and collaborative knowledge management. As a member of the interdisciplinary researchers group Science and the Internet, she has investigated how novel Internet technologies change scientists’ work environments, with a particular focus on informetric indicators for Twitter communication. She is
author of *Knowledge Representation in the Social Semantic Web* (De Gruyter Saur, 2010), and co-author of a monthly column on social media trends for *Password*, a German journal for information professionals.

**Rowan Wilken** (@endotician) holds an Australian Research Council-funded Discovery Early Career Researcher Award (DECRA) in the Swinburne Institute for Social Research, Swinburne University of Technology, Melbourne, Australia, to research the cultural economy of locative media. His present research interests include locative and mobile media, digital technologies and culture, domestic technology consumption, old and new media, and theories and practices of everyday life. He is the author of *Teletechnologies, Place, and Community* (Routledge, 2011), and co-editor (with Gerard Goggin) of *Mobile Technology and Place* (Routledge, 2012).

**Michael Zimmer** (@michaelzimmer) is an Assistant Professor in the School of Information Studies at the University of Wisconsin-Milwaukee (USA), and Director of the Center for Information Policy Research. With a background in new media and Internet studies, the philosophy of technology, and information policy & ethics, Zimmer’s research focusses on the ethical dimensions of new media and information technologies, with particular interest in privacy, social media, Internet research ethics, and values-in-design.
Digital Formations is the best source for critical, well-written books about digital technologies and modern life. Books in the series break new ground by emphasizing multiple methodological and theoretical approaches to deeply probe the formation and reformation of lived experience as it is refracted through digital interaction. Each volume in Digital Formations pushes forward our understanding of the intersections, and corresponding implications, between digital technologies and everyday life. The series examines broad issues in realms such as digital culture, electronic commerce, law, politics and governance, gender, the Internet, race, art, health and medicine, and education. The series emphasizes critical studies in the context of emergent and existing digital technologies.

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