

Chapter 3.1

Open Source Journalism, Misinformation and the War for Truth in Syria

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Abstract

Open source research has reinvigorated investigative journalism, enabling it to exploit the increased visibility brought to world events by new technologies, and creating robust methodologies to collect and analyze data about them. This chapter details these developments and shows how they are addressing the challenges facing contemporary journalism, including reduced access to conflict regions, cut-backs in funding and an increasingly contested information landscape marked by misinformation and organized disinformation campaigns. Demonstrating that digital open source research is rigorous, collaborative and ethical, this chapter shows that it is helping investigative journalism rebuild credibility and trust, answer its critics and enhance global transparency and accountability.

Introduction: A Digital Panopticon

On 4 April 2017, a suspected chemical weapons attack on the Syrian town of Khan Shaykhun killed 92 people. The country's ruling regime claimed that the deaths were staged while its ally Russia blamed rebels for the atrocity. On 7 April, the US military launched 59 Tomahawk missiles on the airbase from which the attack reportedly originated. The US action was symbolic and had little effect on the Assad regime's military capability.¹ But it quickly

¹ Ahmad M. I. The Trump Administration Responds to Syria's Assad with Missiles. *The Progressive*. 7 April 2017. Available from: <https://progressive.org/latest/the-trump-administration-responds-to-syria%E2%80%99s-assad-with-miss/> [Accessed 22 June 2023].

mobilized elements of the western left and right into protesting the airstrikes and suggesting that the chemical attack was staged to create a rationale for ‘regime change’. These voices included the noted linguist Noam Chomsky, who in a speech at the University of Massachusetts Amherst cast doubt on the regime’s responsibility, stating that ‘actually we don’t [know what happened]’.² They also included the celebrated journalist Seymour Hersh, who in an article for the German daily *Die Welt* claimed that the deaths in Khan Shaykhun had resulted from a conventional attack on a jihadi facility, rather than from chemical weapons.³

Both Chomsky and Hersh have a reputation for defying orthodoxies in the pursuit of truth and are revered by millions. They have a record of exposing the corruptions of power, and appeared – once again – to be demolishing official narratives with support from what they claimed were unimpeachable sources. Their interventions raised doubts, making the US claims appear no more valid than the Syrian or Russian ones. Was the US too hasty in retaliating? Could we know anything at all about the incident in the fog of war?

As it happened, within days of the attack – and before Chomsky and Hersh ever spoke – enough evidence had accumulated from multiple independent sources to leave little doubt about the nature of the attack and its perpetrator. Virtually every significant detail of the incident had been captured digitally, in social media postings, images, videos, sounds, maps and witness testimonies. Contrary to Chomsky’s claims, we did know what had happened.

On 4 April, 6:26 am local time, as General Mohammed Hasouri of Syria’s Air Force Brigade 50 took off from the Shayrat airbase in his Sukhoi Su-22, call-sign ‘Quds-1’, his communications had been intercepted by Syria Sentry – a network of spotters who monitor air traffic and warn Syrian citizens of incoming airstrikes.⁴ The jet’s flight path on its bombing run over

²Chomsky N. The Prospects for Survival [recorded speech]. *YouTube*. 13 April 2017. Available from: <https://www.youtube.com/watch?v=1uSwEqyJhGI> [Accessed 22 June 2023].

³Hersh S. Syria: Trump’s Red Line. *Die Welt*. 25 June 2017. Available from: <https://www.welt.de/politik/ausland/article165905578/Trump-s-Red-Line.html> [Accessed 7 January 2023].

⁴Smith H. L. Pilot of sarin gas jet flew in previous chemical attack. *The Times*. 10 April 2017. Available from: <https://www.thetimes.co.uk/article/pilot-of-sarin-gas-jet-flew-in-previous-chemical-attack-3pn62d3xw> [Accessed 22 June 2023].

Idlib had been recorded by the US Central Command and posted online. Twelve minutes later, when Hasouri delivered his lethal payload on the town of Khan Shaykhun, multiple witnesses had reported the strike on social media, some capturing it on cellphone videos, which they posted online. The videos had been verified and geolocated by journalists.⁵ Doctors Without Borders (MSF) medics who treated the survivors and the World Health Organization (WHO) had found the symptoms – dilated pupils, muscle spasms, foaming mouths, breathing difficulties, violent convulsions and involuntary defecation – ‘consistent with exposure to neurotoxic agents such as sarin’ (see footnote 1).

Subsequent reports provided additional evidence. By 19 April 2017, the Organisation for the Prohibition of Chemical Weapons (OPCW) had collected bio-medical samples and four separate labs had analyzed them, concluding that the evidence of sarin exposure was ‘incontrovertible’.⁶ On 30 June, OPCW’s Fact Finding Mission (FFM) published a comprehensive report confirming that the nerve agent used was sarin.⁷ These findings were corroborated by the UN-OPCW Joint Investigative Mechanism after interviews with 17 witnesses and analysis of other evidence, as detailed in its 26 October 2017 report.⁸ The conclusion was unequivocal: The sarin had been delivered by a Syrian Air Force jet. In a separate investigation in

⁵Triebert C. The Khan Sheikhou Chemical Attack – Who Bombed What and When? *Bellingcat*. 10 April 2017. Available from: <https://www.bellingcat.com/news/mena/2017/04/10/khan-sheikhoun-chemical-attack-bombed/> [Accessed 22 June 2023]. Browne M., Reneau N., and Scheffler M. How Syria Spun a Chemical Strike [video online]. *New York Times*. 26 April 2017. Available from: <https://www.nytimes.com/video/world/middleeast/10000005063944/syria-chemical-attack-russia.html>; https://www.youtube.com/watch?v=MYOMEDK_uVs [Accessed 22 June 2023].

⁶OPCW. OPCW Director-General Shares Incontrovertible Laboratory Results Concluding Exposure to Sarin. *OPCW*. 19 April 2017. Available from: <https://www.opcw.org/media-centre/news/2017/04/opcw-director-general-shares-incontrovertible-laboratory-results> [Accessed 3 July 2023].

⁷OPCW. OPCW Fact-Finding Mission Confirms Use of Chemical Weapons in Khan Shaykhun on 4 April 2017. *OPCW*. 30 June 2017. Available from: <https://www.opcw.org/media-centre/news/2017/06/opcw-fact-finding-mission-confirms-use-chemical-weapons-khan-shaykhun-4> [Accessed 22 June 2023].

⁸Seventh report of the Organisation for the Prohibition of Chemical Weapons-United Nations Joint Investigative Mechanism. 26 October 2017. Available from: <https://reliefweb.int/report/syrian-arab-republic/seventh-report-organisation-prohibition-chemical-weapons-united-nations> [Accessed 22 June 2023].

May, Human Rights Watch had reached the same conclusion.⁹ The doubts that Chomsky and Hersh had raised were refuted by multiple independent analyses.

The episode is instructive in showing that new communications technologies have changed the practice of journalism, creating new investigative possibilities when traditional methods aren't viable. It demonstrates that in conflicts, where the motivation to lie or mislead is high, one needn't rely on the self-serving claims of belligerents or the obfuscations of poorly informed commentators and ideologues, since audio-visual data produced by victims, witnesses or perpetrators can now be used for independent scrutiny. The ubiquity of smartphones and the advent of social media have ensured that wherever there is access to the internet or mobile data, most human activities are caught in a panopticon, potentially in sight of an active or passive digital witness.¹⁰

This chapter reviews developments in digital open source research¹¹ and their significance for journalism. It starts by outlining how user-generated content (UGC) from digital technologies has made global activities visible, and shows how this addresses challenges facing contemporary journalism, as underscored by reporting on the war in Syria. It then goes on to show how citizen journalists pioneered new approaches that use publicly accessible digital data for a robust new form of journalism, notable for its transparency and replicability. While some journalists have tried to disparage open source journalism as an inadequate substitute for traditional reporting, such arguments are disingenuous, since open source journalism supplements rather than replaces boots-on-the-ground reportage. The chapter demonstrates that open source research often relies on and complements traditional journalism; it is inherently collaborative and its practitioners are acutely conscious of their ethical obligations.

⁹Human Rights Watch. Death by Chemicals: The Syrian Government's Widespread and Systematic Use of Chemical Weapons. *Human Rights Watch*. 1 May 2017. Available from: <https://www.hrw.org/report/2017/05/01/death-chemicals/syrian-governments-widespread-and-systematic-use-chemical-weapons> [Accessed 22 June 2023].

¹⁰English philosopher Jeremy Bentham used the word 'panopticon' in the late 1700s to describe a theoretical prison in which inmates were constantly observed. In the 1970s, Michel Foucault expanded the idea to explain how citizens internalize social controls through considering states' capacities to observe their actions.

¹¹This chapter defines open source research as research that uses publicly available tools and information.

Investigative Journalism: Crises and New Hopes

Journalism has always relied on human and documentary sources for information. But the combination of smartphones and social media has dramatically increased the speed, access, and reach of this reliance. It has become common practice for news organizations to solicit photos or videos from witnesses to major incidents as stories develop. During the 7 July 2005, terrorist attack on the London underground, for example, much of the initial reporting was based on UGC. Likewise, UGC has been invaluable in situations which were previously beyond the reach of journalistic scrutiny, whether it is cell phone videos of police brutality in the US, Israeli repression of protests in Gaza, China's mass incarceration of the Uyghurs, the execution of civilians by Cameroonian soldiers,¹² accidents, natural disasters or terrorist attacks.

While human sources were often seen as a helpful aid to traditional reporting, several developments have increased journalism's dependency on UGC. Financial constraints have led many news organizations to downsize, and the burden of cost-cutting has fallen mainly on foreign coverage and investigative reporting. Both are notoriously expensive to produce and have uncertain rewards, since investigative journalism carries the risk of legal retaliation while a costly foreign bureau can be scooped by a Twitter user who isn't bound by professional journalists' commitment to verification and accuracy. The pace and volume of news have convinced some editors that sending journalists abroad isn't worth the cost. At the same time, challenges from new media and reductions in resources and reach have contributed towards a loss of authority for the entire sector.

Meanwhile, there has been a decrease in safe access to places of interest. State and non-state actors that used to court foreign correspondents in the hopes of favourable coverage have harnessed the power of social media and digital video to control their own narratives. Journalists – who are often deemed a nuisance or a threat – are now seen as dispensable. They no longer enjoy the qualified immunity they once had when combatants tolerated journalists in attempts to generate positive press (though reporting

¹²See the chapter by Strick in this volume (Chapter 2.1) for details of the BBC Africa Eye research into the murder of women and young children in Cameroon, and BBC Africa Eye. *Anatomy of a Killing* [video online]. 24 September 2018. Available from: <https://www.youtube.com/watch?v=4G9S-eoLgX4> [Accessed 14 May 2023].

was never risk-free). Increasingly, however, state and non-state actors are making it more dangerous for journalists to report from warzones without explicit authorization and the watchful presence of minders.

In Syria, the Assad regime, the Islamic State and Al Qaeda affiliates have all targeted reporters with threatened or actual violence. The Assad regime impeded reporting by controlling access to locations and targeting those that tried to report without its authorization. After the killing of *Sunday Times* correspondent Marie Colvin and the death of *New York Times*' Anthony Shadid in Syria, both papers faced criticism and, in the case of the latter, a lawsuit from Shadid's family.¹³ This made news organizations doubly reluctant to send journalists to Syria without the regime's consent. But while such authorization gives journalists access and some protection, it limits their mobility and independence.

Even without these constraints, however, journalism faces a crisis of credibility. Distrust in the profession is not a new phenomenon; according to the Ipsos MORI Veracity Index, journalists remain among the five least trusted professions in the UK.¹⁴ It doesn't help that serious reporters have to share the label of 'journalist' with tabloid hacks and social media figures who have no commitment to fairness or accuracy. The integrity of even reputable journalism was greatly damaged in the prelude to the 2003 Iraq war and the 2007–2008 financial crisis, where much mainstream media published inaccurate reports. Added to this, many newspapers often blur the distinction between fact and opinion. The British daily *The Independent* for example publishes some reportages under the 'Voices' section; and journalists and editors at the *Wall Street Journal* were so troubled by similar trends at their own paper that in July 2020, 280 of them signed a letter demanding that the publisher enforce clearer boundaries between news and opinion.¹⁵ Similarly, people have started ignoring the division between professional and amateur journalists as the former have often shown themselves

¹³Abramson J. *Merchants of Truth: The Business of News and the Fight for Facts*. London: Simon & Schuster. 2019.

¹⁴Ipsos MORI Veracity Index 2021 – Trust in Professions Survey. Available from: https://www.ipsos.com/sites/default/files/ct/news/documents/2021-12/Veracity%20index%202021_v2_PUBLIC.pdf [Accessed 22 June 2023].

¹⁵Trachtenberg J. A. WSJ Journalists Ask Publisher for Clearer Distinction Between News and Opinion Content. *Wall Street Journal*. 12 July 2020.

willing to bend truth in service of ideology in ways usually associated with the latter. With public trust in facts receding, news coverage has devolved into a contest of narratives where audiences pick and choose according to their predilections. The sources of this epistemic crisis are institutional,¹⁶ but it has been exacerbated by the weaponization of disinformation by malicious – often state-backed – actors. Information warfare is nothing new and many states engage in it – western and non-western – but the nature and scale of recent campaigns are unprecedented,¹⁷ even if their impact is often overstated.¹⁸

Open source journalism is providing the means to address several of these crises by restoring the primacy of facts and emphasizing the importance of verifiability. The catalyst for many of these innovations was the war in Syria. Thanks to the wide availability of smartphones and the rise of social media, this became one of the best documented conflicts in history (that is, until the war in Ukraine started). Indeed, former war crime prosecutor Stephen Rapp claims that the evidence massed against the Syrian Assad regime is more extensive than that used to convict Nazis at Nuremberg.¹⁹

But the war also occasioned an unprecedented disinformation campaign. As noted above, the Assad regime initially tried to control the narrative by denying visas to journalists it deemed unsympathetic to its aims and threatening those that entered the country without authorization, making independent newsgathering dangerous. Consequently, more news organizations came to rely on UGC. Such material is useful, but it carries the risk of manipulation. With help from Russia, the Syrian regime has exploited this by mobilizing armies of trolls to create digital noise that diminishes trust in UGC. Individuals affiliated with the opposition, too, have manipulated or exaggerated data at times, though this is not comparable to the Assad regime's efforts which are organized and systematic. Given the balance of

¹⁶Roberts H., Faris R., and Benkler Y. *Network Propaganda: Manipulation, Disinformation, and Radicalization in American Politics*. Oxford: Oxford University Press. 2018.

¹⁷Online open source research can help uncover influence campaigns (see Strick's chapter in this volume, Chapter 2.1). Thomas Rid documents Russia's ongoing disinformation campaigns and how these build on the Soviet Union's activities. Rid T. *Active Measures: The Secret History of Disinformation and Political Warfare*. London: Profile. 2020.

¹⁸Roberts H., Faris R., and Benkler Y. 2018. *op. cit.*

¹⁹CBS News. Former prosecutor: More evidence of war crimes against Syrian President Assad than there was against Nazis [online video]. *CBS 60 Minutes*. 18 February 2021. Available from: <https://www.cbsnews.com/news/bashar-al-assad-syria-60-minutes-2021-02-18/> [Accessed 22 June 2023].

responsibility for atrocities, the regime has greater motivation for distortion. Open source research has proved essential, generating tools that can establish the authenticity of audio-visual material and weed out disinformation.

Without citizen journalists and UGC, Syria would be a black hole from where the state could control the narrative. For all the Assad regime's efforts to limit journalists' movements and deter them from reporting freely, there has been no dearth of material coming out of the country. From Aleppo to Douma, millions of tweets, images and videos have documented the regime's war crimes, providing rich material for open source investigations. And open source analysis of this material has accumulated a record of such consistent accuracy that more and more human rights organizations and war crimes investigators are incorporating it into their research.²⁰

These innovations have helped the international community bypass the obstructions to justice that most perpetrators inevitably create. Indeed, in 2017, the International Criminal Court issued its first indictment based primarily on open source evidence against the Libyan warlord Mahmoud al-Werfalli for a series of extra-judicial killings.²¹ There is also a salutary effect on the journalism profession. The transparency and robustness of open source methods are encouraging greater rigour and resourcefulness even among traditional journalists. Moreover, they have exposed the limitations of traditional human sources, who are not without agenda and biases, and can sometimes turn journalists into inadvertent vessels of disinformation.

OSINT and Investigative Journalism

Along with HUMINT (human intelligence), SIGINT (signal intelligence) and IMINT (image intelligence), OSINT (Open Source Intelligence) has long been a part of national intelligence and law enforcement toolkits.²² In the US in 2004, the 9/11 Commission recommended the creation of a

²⁰For more information about open source investigations, the war in Syria and the international justice system, see the chapter by Freeman & Koenig in this volume (Chapter 2.5).

²¹Irving E. And So It Begins... Social Media Evidence In An ICC Arrest Warrant. *OpinioJuris*. 2017. Available from: <http://opiniojuris.org/2017/08/17/and-so-it-begins-social-media-evidence-in-an-icc-arrest-warrant/> [Accessed 15 December 2021].

²²See the chapter by Vogel in this volume (Chapter 3.4) for more information about the use of open source intelligence within the US intelligence community.

dedicated OSINT unit, a proposal that was reinforced a year later by the Iraq Intelligence Commission. The potential efficacy of OSINT, however, is limited by the secretiveness and hierarchy of national security organizations. It was in the hands of citizen journalists, who combined community with distributed expertise, that open source research found its most dynamic and effective use.

Though open source research has a longer history, digital open source investigations really took off in the first decade of the 21st century. Perhaps the earliest triumph of this form of journalism was when networks of plane spotters around the world were able to unravel the mystery of the US Central Intelligence Agency's (CIA's) 'extraordinary rendition' programme by observing flight patterns of planes that were ferrying suspected terrorists for torture to places like Syria, Egypt, Libya and Jordan.²³ Beginning in 2010, the open newsroom tool Storyful became a platform for collaborative investigation, laying the ground for this new branch of journalism. One resourceful member of the Storyful collective was Leicester-based blogger Eliot Higgins, who started using creative new methods to crack intractable cases, such as a suspected August 2013 chemical weapons attack in Syria (described below). In 2014, Higgins built on his successes to found Bellingcat, an international collective that conducts research using techniques he pioneered and introducing many new ones. For much of its existence, Bellingcat operated on a shoe-string budget, relying on the commitment and motivation of volunteers. Initially, its main source of income was the training sessions it organized for journalists and researchers (I attended one of these in December 2017). Major grants from the Dutch Postcode Lottery in 2019 and 2021 gave Bellingcat more financial stability, allowing it to hire full-time staff. Since its founding, the organization has chalked up an impressive record of breakthroughs, and its alums lead, participate in or support every notable open source enterprise currently in operation.

Many of the most ingenious open source investigators have diverse backgrounds. Some emerge from gaming subcultures, while others are experts from various fields (including architecture, medicine, chemistry, finance and

²³Johnson C. *Otherwise Dealt With*. *London Review of Books*. 8 February 2007. Available from: <https://www.lrb.co.uk/the-paper/v29/n03/chalmers-johnson/otherwise-dealt-with> [Accessed 22 June 2023].

law) and have found new uses for their specialist knowledge. For example, British-Israeli architect Eyal Weizman has pioneered the field of forensic architecture, using open source data for spatial investigations into human rights violations; chemical weapons expert Dan Kaszeta has contributed to several Bellingcat investigations; and UC Berkeley's Human Rights Investigations Lab recruits from over a dozen disciplines.

The central pursuit in open source investigations is finding publicly accessible data on an incident, verifying the authenticity of the data, establishing the temporal and spatial dimensions of the incident, and cross-referencing details with other digital records and witness testimonies. Open source analysts are acutely aware of the risk of data manipulation and thus take a foundationalist approach, authenticating audio-visual data *before* drawing any conclusions from them. This is the closest that journalism has to a scientific method: gathering data systematically, establishing their validity and corroborating them, while being transparent about the process so anyone can replicate their research, examine the underlying data and test the conclusions.

Recent achievements – such as Bellingcat's investigations into the Skripal and Navalny poisonings; the *New York Times*' investigations into the killing of Gaza medic Rouzan al-Najjar²⁴ and the murder of Saudi dissident Jamal Khashoggi;²⁵ BBC Africa Eye's award-winning work exposing the killers of women and children in Cameroon;²⁶ Digital Forensic Research Lab's work on Twitter trolls; and UC Berkeley Human Rights Center's contribution to Reuters's Pulitzer Prize-winning investigation in Myanmar²⁷ – are compelling not just for their multi-disciplinary approach and findings,

²⁴Al-Hloou Y., Browne M., Woo J., and Halbfinger D. M. An Israeli Soldier Killed a Medic in Gaza. We Investigated the Fatal Shot [video online]. *New York Times*. 2018. Available from: <https://www.nytimes.com/video/world/middleeast/10000005933727/israel-gaza-medic-kill-ed-rouzan-najjar.html> [Accessed 16 December 2021].

²⁵Botti D., Browne M., Jordan D., Singhvi A., Kirkpatrick D. D., Gail C., and Hubbard B. Killing Khashoggi: How a Brutal Saudi Hit Job Unfolded [video online]. *New York Times*. 2018. Available from: <https://www.nytimes.com/video/world/middleeast/10000006154117/khashoggi-istanbul-death-saudi-consulate.html> [Accessed 16 December 2021].

²⁶See the chapter by Strick in this volume (Chapter 2.1).

²⁷Stecklow S. Why Facebook is losing the war on hate speech in Myanmar. *Reuters Investigates*. 15 August 2018. Available from: <https://www.reuters.com/investigates/special-report/myanmar-facebook-hate/> [Accessed 16 December 2021].

but for their methodological transparency. Such successes have encouraged investment in open source research capability by mainstream media, human rights organizations, think-tanks and academic institutions. These are part of a larger effort focused on information integrity called for by emerging threats to democracy and public discourse from weaponized disinformation.

Traditional Reporting vs. New Methods

Most human rights organizations, journalists and news consumers have welcomed these developments. But some traditional journalists remain sceptical. Veteran investigative journalist Seymour Hersh, for example, has disparaged Eliot Higgins and open source investigations.²⁸ His criticism, however, inadvertently confirms the value of open source journalism.

In August 2013, two suburbs in Damascus were targeted with the nerve agent sarin, killing over 1,400 civilians.²⁹ On an obscure blog named Brown Moses, Eliot Higgins had quickly gathered data from YouTube videos, satellite imagery and UN reports to verify the dimensions of the rockets used in the attack, identify their make and establish their trajectory. The rockets matched a model in the Assad regime's arsenal and the trajectory could be traced back to territory held by the regime. Two months later, however, Seymour Hersh published a long essay in the *London Review of Books* (LRB)³⁰ claiming that the Obama administration had manipulated evidence and colluded in a false-flag operation to blame the Assad regime for the attack. Hersh based his case on testimony from an unnamed 'former senior intelligence official'. Though a wealth of evidence contradicted this story, and his claims soon fell apart, Hersh doubled down and published an even longer story with more elaborate claims from the unnamed former intelligence official. 'We now know it was a covert action planned by [Turkish

²⁸Is the Obama Admin Ignoring the Role of Turkey & Saudi Arabia in Syria's 2013 Sarin Gas Attacks? [video online and transcript]. *Democracy Now*. 25 April 2016. Available from: https://www.democracynow.org/2016/4/25/is_the_obama_admin_ignoring_the [Accessed 23 June 2023].

²⁹See also the chapter by Revill & Garzón Maceda in this volume (Chapter 4.3).

³⁰Hersh S. M. Whose sarin? *London Review of Books*. 19 December 2013, 35 (24). Available from: <https://www.lrb.co.uk/the-paper/v35/n24/seymour-m.-herish/whose-sarin> [Accessed 17 December 2021].

President Recep] Erdoğan's people to push Obama over the red line', the contact apparently told Hersh.³¹

Hersh was demanding the reader's trust based on a single anonymous source whose credibility he could not confirm, citing documents he hadn't seen and making allegations he could not substantiate. By contrast, Higgins's case relied on authenticated data, verifiable results and a robust method. Higgins's conclusions were corroborated by investigations from a range of other governmental and non-governmental groups. For Hersh's story to be true, these groups had to be not just wrong but also colluding with each other. Higgins's analysis, on the other hand, was based on accessible information and supported by physical evidence, witnesses on the ground and numerous international observers and institutions, including the UN, human rights groups, and the US, British, German and French governments, who had all independently reached the same conclusion about the attack.

The cycle repeated in 2017, after the chemical weapons attack on the town of Khan Shaykhun. While Bellingcat conducted rigorous and transparent open source analysis that demonstrated that the Assad regime was responsible for the attack, Hersh presented an alternative narrative that relied on an unnamed 'senior adviser to the US intelligence community'. On this occasion, the LRB declined to publish his story,³² and Hersh turned instead to the German conservative daily *Die Welt*. The story had errors and omissions. He got the time of the attack wrong, could not identify its location and ignored the fact that the impact site had been filmed and bore no resemblance to the scene he described. A subsequent comprehensive investigation by the Joint Investigative Mechanism (JIM) conducted by the UN and the OPCW corroborated Bellingcat's findings,³³ leaving Hersh and his publisher humiliated.

³¹Hersh S. M. The Red Line and the Rat Line. *London Review of Books*. 17 April 2014, 36 (8). Available from: <https://www.lrb.co.uk/the-paper/v36/n08/seymour-m.-hersh/the-red-line-and-the-rat-line> [Accessed 17 December 2021].

³²Ahmad M. I. Syria and the case for editorial accountability. *Aljazeera*. 12 July 2017. Available from: <https://www.aljazeera.com/opinions/2017/7/12/syria-and-the-case-for-editorial-accountability/> [Accessed 17 December 2021].

³³UN Security Council. Letter dated 26 October 2017 from the Secretary-General addressed to the President of the Security Council. S/2017/904. 2017. Available from: https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/s_2017_904.pdf [Accessed 17 June 2022].

Digital open source journalism shows that distance is not always a barrier to a robust investigation, just as for traditional journalism, proximity is no guarantee of accuracy. What matters in both cases is the reliability of sources and the verifiability of claims. The aim of this discussion is not to pit foreign correspondents against open source journalists, since they both fulfil irreplaceable functions. Instead, it is to address a common response from some traditional journalists who dismiss open source journalism as something deficient. Open source journalists are not vying for foreign correspondents' throne; they are merely adding new layers of scrutiny. Traditional reporters can forget that foreign correspondents have their own limitations – from the compromises of access, the presence of minders, to the reliance on self-interested sources. Their methods may be different, but they are complementary and both are bound by the same ethic – a commitment to accuracy, fairness and verifiability.

Traditional journalists have been hobbled in recent years by the emergence of social media, and the speed of its interactions. Before a reporter can file a report, or even reach a news event, images, videos and claims are often already on social media. Many reporters are adapting to this reality by changing their reporting habits. More and more, journalists have come to either integrate information from social media into their reporting, or at least use it to provide context to their work. In recent years, some journalists have got their best stories from communicating with sources in combat zones over encrypted apps like WhatsApp, Signal or Telegram rather than by interviewing them in the presence of minders. But they don't take such interactions on trust. Just as investigative journalists in the past had to corroborate interview data with documents, letters, financial records, etc., they can now do this by accessing online databases and public records.

Critics suggest that the distance between open source analysts and the places they investigate is a problem, but this misunderstands the nature of the work. Much of the data used in open source analysis come from people on the ground. The pervasiveness of smartphones with high-quality cameras means that many newsworthy incidents are documented by local witnesses,³⁴ and even people living under siege or authoritarian regimes

³⁴Some 5 billion people worldwide own mobile phones, half of which are equipped with cameras. Silver L. Smartphone Ownership is Growing Rapidly Around the World, but Not Always Equally. *Pew Research Center*. 5 February 2019. Available from: <https://www.pewresearch.org/global/2019/02/05/>

are electronically accessible. There are certainly risks involved in capturing and uploading on-the-ground digital records in many places,³⁵ but nevertheless citizen journalists in Syria were able to upload texts, images and videos not just from rebel areas but also from territory under the control of the Assad regime and ISIS. Though powerful states have tried to restrict electronic communications, information has so far generally found a way to escape.

In this new global panopticon, few significant events go unrecorded. Victims, witnesses and even perpetrators can all document crimes. Individual experiences are thus added to an objective world of factuality, available for any researcher to verify and analyze. All of this is particularly welcome for human rights and war crimes monitors, especially as the obsessive commitment of open source investigators means that they remain focused on a story long after it has dropped out of news headlines.

To be sure, open source analysis has its limitations. It works best when it confines itself to addressing factual questions, and can falter if it starts making judgements based on available data without taking account of information that is inaccessible. The New America Foundation, for example, produced widely cited statistics on drone strikes during the Obama era that were based on media reports. However, these estimates ignored the fact that the reporting on drone strikes was sporadic and casualty figures were drawn from official claims that had not been subject to any on-the-ground verification. Predictably, this led to undercounting civilian casualties.^{36,37} A similar issue was revealed in a different theatre when Azmat Khan and Anand Gopal conducted a year-long investigation for *The New York Times*

[smartphone-ownership-is-growing-rapidly-around-the-world-but-not-always-equally/](#) [Accessed 15 April 2022].

³⁵ See also the chapter by Duke in this volume (Chapter 2.2) for discussion of the difficulties and dangers local monitors can face.

³⁶ Ahmad M. I. The magical realism of body counts: How media credulity and flawed statistics sustain a controversial policy. *Journalism*. 4 August 2015, 17 (1). Available from: <https://doi.org/10.1177/1464884915593237>.

³⁷ Carboni & Raleigh (Chapter 3.4) document similar issues with official estimates of casualties in Yemen.

into the US-led coalition's anti-ISIS campaign in Iraq, revealing that civilian casualties occurred in 20% of airstrikes, a rate over 31 times higher than the Pentagon was reporting.³⁸

A more systematic method for monitoring airstrikes was eventually developed by the Bureau of Investigative Journalism's Chris Woods, who combined media reports with independent corroboration to produce more reliable casualty figures.³⁹ Woods now runs the independent Airwars.org, which gathers open source data to monitor the US-led coalition's airstrikes against ISIS operations in Iraq and Syria.

In years to come, responsible publishers will have to invest in greater capacity for fact-checking and digital verification. At the moment, only human rights organizations and media giants like the *New York Times* or the BBC have the resources to maintain fully staffed open source investigations units. Meanwhile, dedicated organizations like Bellingcat will continue to produce the bulk of such analyses. However, as *Bellingcat: Truth in a Post-Truth World* (2018), the Emmy-winning documentary by the Dutch broadcaster VPRO, reveals, this model of small organizations and independent researchers operating without large institutional backing can leave practitioners exposed when taking on the interests of state actors as ruthless as the Kremlin or the Saudi regime.

Community and Cognition

Along with its precision and transparency, open source research is notable for its collaborative nature. Open source investigations are inherently collective efforts, usually requiring teams of people working together to harvest, authenticate and analyze data. It is worth noting that many traditional

³⁸Khan A. and Gopal A. The Uncounted. *New York Times*. 16 November 2017. Available from: <https://www.nytimes.com/interactive/2017/11/16/magazine/uncounted-civilian-casualties-iraq-airstrikes.html> [Accessed 22 June 2023].

³⁹Woods C. Why White House civilian casualty figures on civilian are a wild underestimate. *The Bureau of Investigative Journalism*. 2016. Available from: <https://www.thebureauinvestigates.com/opinion/2016-07-01/comment-official-estimates-show-civilians-more-likely-to-be-killed-by-cia-drones-than-by-us-air-force-actions-the-reality-is-likely-far-worse> [Accessed 17 December 2021]. See also the chapter by Triebert in this volume (Chapter 2.4) for detailed analysis of investigating airstrikes through open source research.

journalists also rely on collaborations, working with others to facilitate their reportage, including fixers, stringers, witnesses and experts. Indeed, with the increasing risks and shrinking investment in foreign news, freelancers and stringers now carry much of the burden of foreign reporting. But unlike in the open source research community, such collaborations are rarely acknowledged. To the extent that they are, a hierarchy persists in which staff reporters get top billing, regardless of their actual contribution. It is common in the mainstream press for stories to be bylined by the paper's own correspondent even when the reporting and the actual risks have been taken by a stringer, who is only acknowledged in a footnote.

By contrast, open source researchers readily credit each other and their greatest asset is the goodwill of the community, which in turn rewards research efforts with cognitive surplus. Open source culture combines public spiritedness with the rigor of investigative journalism, bringing together professionals and non-professionals in collaborative projects which emphasize transparency and credibility. This hybrid environment also serves as a form of instant peer review to either confirm or invalidate a hypothesis.

Cognitive scientists Steven Sloman and Philip Fernbach explore the benefits of collaborative work, pointing out that, 'When multiple cognitive systems work together, group intelligence can emerge that goes beyond what each individual is capable of'.⁴⁰ They note the increasing tendency for scientists to work collaboratively, and cite the work of educational psychologist Ann Brown, who finds that cultivating teams which embody distributed expertise and interdependence encourages 'an atmosphere of joint responsibility, mutual respect, and a sense of personal and group identity'.⁴¹ In the open source research community, one finds a similar culture organically emerging, with people voluntarily offering their expertise and specializations to create deeper knowledge and sophisticated methods. This balance of expertise also serves as a useful check on the limitations of human cognition, including against 'groupthink'.

According to Yale psychologist Irving Janis, 'groupthink' happens when members in a group fail to scrutinize each other's positions and consider

⁴⁰Sloman S. and Fernbach P. *The Knowledge Illusion: Why We Never Think Alone*. London: Penguin. 2017.

⁴¹Brown A. L. Transforming schools into communities of thinking and learning about serious matters. *American Psychologist*. 1997, 52 (4), pp. 399-413.

alternatives, thus reinforcing their beliefs, and making the group more polarized, inflexible and prone to error.⁴² Collaboration does not guarantee accurate results. Sloman and Fernbach caution, ‘crowdsourcing works only when it provides access to expertise. Without expertise, it can be useless and even detrimental’. An example of crowdsourcing going wrong comes from the aftermath of the April 2013 Boston Marathon bombing when sleuths on a Reddit forum worked collaboratively to identify the culprits and ended up wrongly identifying an innocent man as one of the guilty parties.⁴³

Collectives like Bellingcat have avoided these problems by emphasizing the importance of verifiability in their work. Even when open source journalists benefit from ‘closed’ material such as tip-offs or confidential sources, like all good investigative journalists, they seek a verifiable way to corroborate their material and findings, as can be seen in Bellingcat’s investigation into the assassination attempt on Sergei and Yulia Skripal in Salisbury UK, or BBC Africa Eye work revealing the people responsible for murdering two women and two young children in Cameroon.⁴⁴

Standards and ethics

Ethical principles are at the heart of many open source investigators’ work. For example, Bellingcat has published a six-page ‘Editorial Standards and Practices’⁴⁵ document, which is in line with the Ethical Journalism Network’s five principles: truth and accuracy, independence, fairness and impartiality, humanity, and accountability.⁴⁶ These are also the principles of the Global Investigative Journalism Network, of which Bellingcat is a member.

In a separate document titled ‘Principles for Data Collection’,⁴⁷ Bellingcat lays out the ethical questions it considers when using online data, including that which is publicly available. These questions relate to the public interest value of investigation, potential for harm, availability of alternative

⁴² Janis I. L. Groupthink. *Psychology Today*. 1971, 5 (6), pp. 43–46, 74–76.

⁴³ See also the chapter by Toler in this volume (Chapter 3.2) for examples of crowdsourced research being carelessly conducted, leading to erroneous findings as well as unlawful and harmful actions.

⁴⁴ See the chapter by Strick in this volume (Chapter 2.1).

⁴⁵ Available from: <https://www.bellingcat.com/app/uploads/2020/09/Editorial-Standards-Practices.pdf> [Accessed 19 December 2021].

⁴⁶ Available from: <https://ethicaljournalismnetwork.org/who-we-are> [Accessed 19 December 2021].

⁴⁷ Available from: <https://www.bellingcat.com/app/uploads/2020/09/Principles-for-Data-Collection.pdf> [Accessed 19 December 2021].

means of investigation and verifiability of data. They form the basis of a set of working guidelines that include a commitment to protecting the identities of victims and sources, protecting children and removing them from images, and sharing investigation datasets externally only when doing so directly serves the interest of justice. Bellingcat is careful in managing its collaborations, and ensures that none of its datasets are used for commercial purposes or sold to third parties.

A case study illustrates how these principles guide Bellingcat's work. Bana al-Abed, then a seven-year-old girl, was live-tweeting from besieged Aleppo in 2016 with the help of her mother.⁴⁸ Her snapshots of the horrors of life under siege and bombardment drew attention to the plight of the people trapped in Aleppo. The Assad regime, the Russian media and their online supporters responded by threatening, trolling, mocking and harassing the child, alternately claiming that she didn't exist or that she was a fabricated avatar for a jihadist-friendly PR operation run out of Turkey. Nick Waters, a former British Army infantry officer working with Bellingcat, used images and videos Bana had posted online to establish who she was, where she lived and how she accessed the internet.⁴⁹ Knowing the threat Bana was under, though, Waters and Bellingcat withheld their findings until she and her family were safely evacuated by the Red Crescent. Instead of pursuing a scoop, Bellingcat recognized the obligation to protect the subject of its investigation.

Conclusion

Over the past decade, the business of newsgathering has been struggling to assert its legitimacy amid a broader epistemic crisis. By combining the goodwill of community with a commitment to accuracy and transparency, open source journalism has alleviated some of the distrust that has come

⁴⁸Specia M. Bana al-Abed on Twitter: Proof of Life in a War Zone. *New York Times*. 14 December 2016. Available from: <https://www.nytimes.com/2016/12/14/insider/bana-al-abed-on-twitter-proof-of-life-in-a-war-zone.html> [Accessed 19 December 2021].

⁴⁹Waters N. and Allen T. Finding Bana – Proving the Existence of a 7-Year-Old Girl in Eastern Aleppo. Bellingcat. 14 December 2016. Available from: <https://www.bellingcat.com/news/mena/2016/12/14/bana-alabed-verification-using-open-source-information/> [Accessed 19 December 2021].

to surround the profession. In contrast to the competitive ethos of traditional journalism, the open source approach is cooperative, which allows it to tap the cognitive surplus of the community and draw expertise from a host of relevant disciplines. Professional journalists have in turn adapted by introducing greater rigour into their own reporting, placing a premium on accuracy and verifiability. A symbiotic relationship has developed between some professional journalists and open source researchers, allowing both to complement and strengthen each other's work, providing journalism with a badly needed infusion of vitality and credibility.