DRONES AND JOURNALISM

How the Media is Making Use of Unmanned Aerial Vehicles

Phil Chamberlain

Drones and Journalism

How the Media is Making Use
of Unmanned Aerial Vehicles

Phil Chamberlain

Drones and Journalism

Drones and Journalism explores the increased use of unmanned aerial vehicles, or drones, by the global media for researching and newsgathering purposes. Phil Chamberlain examines the technological development and capabilities of contemporary drone hardware and the future of drone journalism. He also considers the complex place of the media's drone use in relation to international laws, as well as the ethical challenges and issues raised by the practice.

Chapters cover topics including the use of drones in investigative reporting, in reporting of humanitarian crises, and the use of this new technology in more mainstream media, such as film and TV. The book also presents exclusive interviews with drone experts and practitioners and draws on a wide range of disciplines to put the practice into a historical, political and social context.

Professionals and students of Journalism and Media Studies will find this an important critical contribution to these fields, as Phil Chamberlain astutely charts the rise of the reliance on drones by the media worldwide.

Phil Chamberlain is Associate Head of the Department for Broadcast & Journalism at the University of the West of England, UK. He has 20 years' experience as a journalist, and has worked for UK national newspapers on investigative projects. He is the co-author of *Blacklisted: The Secret War between Big Business and Union Activists* (2015).

Contents

Introduction

There were no regular inhabitants of the village, but often people visited it to practice fighting. The village sits on Salisbury Plain, a huge swathe of England used by the British Army since Napoleonic times to train its troops. In 1990 the village had been modelled to look German but as threats changed so had its look.[1] In 2008 when I visited, it was a melange of Iraq and Afghanistan and was hosting a competition.[2]

The object of the competition was to come up with a system to help ground troops enter just such a village and deal with various hostile forces from snipers to improvised explosive devices (IEDS). There were half a dozen teams and each was made up of small companies and a university. They were demonstrating to various men from the ministry how their systems worked in the hope of securing a contract. It was deliberate that universities and small companies had been paired, as the ministry was looking to increase the range of organizations that might bid for contracts. Having studied the problem most of the teams had come up with some kind of drone as a focal point for their efforts.

In a small van packed with equipment and discarded coffee cups, staff from one of the teams were checking on the progress of their various appliances several hundred yards away. One of the university engineers, unshaven, having spent two days living in an army tent and clearly enjoying every minute, talked through what I could see on a monitor. What I could see were some very fuzzy pictures looking over the village. He pointed to a crumpled giant fly on the mud next to the truck. "The weather has been difficult so we've had some losses but it is one of these that is sending these images back," he said. He picked it up and added as an afterthought: "In ten years Sky News will have a fleet of these."

I looked dubiously at the fragile structure and then went back to the monitor. A truck with an anti-aircraft gun on the back was hiding behind a 'mosque'. On the monitor it had been framed by white bars as its outline had triggered

an alert from an algorithm which looked to match shapes seen by the drone's camera to a visual dictionary of threats. The engineer had been ambitious in his prediction about the use of drones by the media, but not by much.

Take these headlines from the summer of 2016. An earthquake in Italy kills nearly 300 people and within 24 hours footage shot by drone of the devastation is aired on international news channels (*Guardian* 2016). In Virginia a 65-year-old woman shoots down a drone which has been flying over her house which borders that of film star Robert Duvall (Farivar 2016) while Utah becomes the latest state to give the authorities the power to disable drones in specific circumstances (AP 2016).[3] There is a report of a near miss at Exeter airport between a drone and a passenger aircraft (Oldfield 2016). According to the UK union representing airline pilots, the number of reported incidents involving drone near-misses with planes has increased from 29 in 2015 to 42 by September 2016 (BALPA 2016). An air ambulance warns that the fictional plot in a soap opera about a drone bringing down a plane could come true (Bieber 2016). At a carnival in the English seaside resort of Swanage, the brochure has a map showing the parade route and details for when the Punch and Judy is on. There is also a notice that a drone will be flying overhead to gather publicity footage and who to contact if anyone is concerned.

From the serious to the banal and with a constant murmur of anxiety, the use of civilian drones, and in particular their use for newsgathering, has become increasingly prevalent. At the end of August 2016, the Federal Aviation Authority finally published its rules on the commercial use of small drones (FAA 2016). Matt Waite, from the Drone Journalism Lab at the University of Nebraska, said that as a result:

> It's likely that many hundreds of the eventual thousands of licensed drone pilots will be journalists. Many of them are climbing that first hill this week and taking the test. The second big hill to climb is professionalizing operations in newsrooms.
>
> (Waite 2016)

A week before the new regulations came into effect, CNN unveiled its drone division featuring a dozen craft and two full-time operators (Poynter 2016). We are at a crucial juncture where technology, regulation, corporate interests and personal opportunity make it only a question of how ubiquitous drone use by the media becomes – we're beyond the stage of whether it will happen.

This book will look at the development of the media use of drones – how they are being used to tell stories and who is designing and operating them. It runs from investigative journalists to war photographers, television drama departments and advertising agencies; NGOs to hobbyists. It will

also consider the changing regulatory framework which covers such issues as privacy and public interest. We'll look at the technological opportunities and limitations. We'll investigate how those teaching journalism are introducing drones into the classroom. And we'll do this within a critical framework which considers what kind of insight this god-like view from above gives us. This isn't a manual on how to fly a drone and it won't look in detail at their current military use – though that is part of the story. It is about what it means for journalism and society when major media organizations, freelance photographers and citizen reporters have their own eye in the sky.

Some will already have strong feelings just by the use of the word 'drone'. It is a noun that is loaded with meaning. There are, or course, other ways of describing the system, including Unmanned Aerial Vehicle (UAV) or System (UAS) or Remotely Piloted Aircraft (RPA). To varying degrees these are all more accurate descriptions. They acknowledge that there is not just the flying unit but a control unit and human involvement. The debate about terminology is explored later and helps illuminate the developing narrative of drones. For the purposes of this book, the term most commonly used and recognized by those in the media, and this book is focussed on the media in the widest sense, is 'drone' and for ease of understanding that is what will be used in this book.

But first; how did we get from a World War One naval technology to celebrities being buzzed over their homes?

Notes

1 Copehill Down is one of several such villages built for troops to practice urban warfare. One of the officers involved in running such training sessions talks about it here: https://insidedio.blog.gov.uk/2015/07/14/enhancing-urban-ops-training-at-copehill-down/
2 The Ministry of Defence Grand Challenge, which appears to no longer run. Government publicity brochure on the 2008 entrants available here: http://webarchive.nationalarchives.gov.uk/20140410091116/http:/www.science.mod.uk/codex/documents/codex_issue2_gc_supplement.pdf
3 A common reason for introducing such laws is the flying of drones over bushfires, which means that planes carrying water cannot carry out any operations. The laws are not designed for the police to interfere to protect the privacy of residents.

References

AP. (2016) Utah will let authorities disable drones near wildfires. *CBC News*. 13 July 2016. http://www.cbsnews.com/news/utah-will-let-authorities-disable-drones-near-wildfires/
BALPA. (2016) Pilots call for greater safety in the skies at TUC. *BALPA web site*. 14 September 2016. https://www.balpa.org/Media-Centre/Press-Releases/Pilots-call-for-greater-safety-in-the-skies-at-TUC

Bieber, N. (2016) Northants air ambulance issues message to public amid helicopter crash on BBC One's Casualty. *Northants Herald & Post.* 27 August 2016. http://www.northampton-news-hp.co.uk/northants-air-ambulance-issues-message-to-public-amid-helicopter-crash-on-bbc-one-s-casualty/story-29660303-detail/story.html

FAA (2016) The FAA's new drone rules are effective today. *FAA web site.* 29 August 2016. http://www.faa.gov/news/updates/?newsId=86305

Farivar, C. (2016) Woman shoots drone: 'It hovered for a second and I blasted it to smithereens.' *Ars Technica.* 29 August 2016. http://arstechnica.com/tech-policy/2016/08/65-year-old-woman-takes-out-drone-over-her-virginia-property-with-one-shot/?utm_content=buffer88740&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

Guardian. (2016) Drone footage shows extent of earthquake damage to Amatrice. *The Guardian.* 24 August 2016. https://www.theguardian.com/world/video/2016/aug/24/drone-footage-shows-extent-earthquake-damage-amatrice-italy-aerial-video?CMP=share_btn_tw

Mullin, B. (2016) CNN just launched a new drone division. Here's what they plan to do with it. *Poynter.* 19 August 2016. http://www.poynter.org/2016/cnn-just-launched-a-new-drone-division-heres-what-they-plan-to-do-with-it/427027/

Oldfield, E. (2016) Passenger plane in near-miss with drone close to Westcountry airport. *Express & Echo.* 11 August 2016. http://www.exeterexpressandecho.co.uk/passenger-plane-in-near-miss-with-drone-over-the-westcountry/story-29609775-detail/story.html#qbuMjEMmOmWffheY.99

Waite, M. (2016) Announcing: The drone journalism lab operations manual. *Drone Journalism Lab.* 1 September 2016. http://www.dronejournalismlab.org/

1 The origins of unmanned aerial vehicles

When one of the organizers of the London 2012 Olympics was asked what the opening event would look like, they responded: "It's a media event, so it will look great from the air." As Mark Dorrian observed: "Much valued for its spectacular and entrancing effects, the aerial view is firmly established as a recurrent feature of popular visual culture, media forms and touristic installations" (Dorrian and Pousin 2013: 295). And increasingly supplying that footage are drones. As well as being deployed for films, adverts, dramas, documentaries and news stories, the flying eye is now embedded in our culture. They have Twitter and Tumblr accounts,[1] they are raced with prizes in the tens of thousands of dollars and airing on ESPN (Zaleski 2016), they inspire art festivals[2] and no first-person shooter game is complete without one.[3] Films are made about them[4] and TV comedies use them as plot devices. That silhouette of either the dome-headed elongated Predator or the spider-like quadrocopter is instantly recognizable. Yet the drone occupies an uneasy space. When the American comedy *The Big Bang Theory* had its geeks take ownership of one, they were put in peril when the drone took on a life of its own.[5] Visit a scenic sight in America such as Lake Tahoe and drone iconography is deployed to warn you against flying them. As Rothstein writes:

> Drones have become a singular inflection point of fear, of paranoia, of wonder, of technological wizardy, and of future possibility. No other word would suffice, at this point in history, to refer to this web of concepts, meanings, and esthetics so easily.
>
> (Rothstein 2015: 135–136)

The visual spectacular, the promise of technology and the influence of the military have influenced our reaction to, and use of, the drone.

During World War One, combatants first experimented with radio-controlled aircraft and bombs. Once the conflict ended, research continued in a more haphazard fashion. The American Navy's N-9 seaplane was remotely piloted on 15 September 1924 – unfortunately sinking after a heavy landing. Funding was curtailed but it demonstrated the possibility. The term 'drone' was applied to the development of remote-controlled targets developed in the 1930s. The British Navy had target planes for gunnery practice operating under the name Queen Bee, which made a buzzing noise. The US Navy decided to adopt a similar project and according to Callahan: "The name was likely suggested by NRL's Hoyt Taylor, who was confident that 'to those who know anything about honey bees, the significance of the term will be clear. The drone has one happy flight and dies'" (Callahan 2014: 112). The advent of World War Two gave the research a new impetus. Remotely piloted aircraft were used by America in the Pacific in 1944 and Germany's well-known V-1 and V-2 programmes were part of this trend towards automation. Rothstein identifies the first public announcement of a camera attached to a drone in a press release from the American company Ryan Aeronautics in 1955. He writes: "Training remained a useful end, but reconnaissance was to be the drone's talent, once technology made it possible" (Rothstein 2015: 28).

Surveillance is a fundamental part of what makes a drone useful but it has always been problematic. Looking out of the window of his flat, Winston Smith, the hero of George Orwell's novel *1984*, observes "in the far distance a helicopter skimmed down between the roofs, hovered for an instant like a bluebottle, and darted away again with a curving flight. It was the police patrol, snooping into people's windows" (Orwell 1990: 4). It is reported that Pashtun tribespeople in Pakistan refer to drones as "wasps or mosquitoes due to their sound. This sound has a psychological effect on the people who hear it for days on end" (Rothstein 2015: 131–132). The animalistic imagery of Orwell's surveillance tool is deliberate but it is uncanny how the description also matches the flight of today's drones. Smith was not at work when this observation takes place, where he might expect to be monitored. Instead he was at home and the then shocking implication was that such snooping could not only invade the domestic but it could also come unannounced. Smith might have the pleasure at that moment of watching the watchers but the next time he could be the subject. In 2016, TV celebrity Richard Madeley, wearing little but his underpants, was reported to have chased people down the road after a drone had been flown over his home. The Daily Mail ran an interview with the 19-year-old who had flown the drone over the house (by mistake he said) as he was just testing out a present (Dunn 2016). Madeley had swiftly

gone on to Twitter to report the incident and post details of the vehicle which had carried the pilots so they could be apprehended. So in sixty years, the darting bluebottle outside the bedroom window has arrived, but its pilots are teenagers. The details are shared almost immediately with anyone who has access to Twitter rather than pondered alone. Rather than the total surveillance of Orwell, we have Thomas Mathiesen's synopticon: thousands of us observing the few.

Before considering the role of drones in the media currently, it is worth looking into how we got to this stage. Not just a few years back to when the technology broke through, but further back to when we were similarly challenged. We should not assume that we got here through a natural chain of events whose outcome was preordained. As Carolyn Marvin writes in her study on the nineteenth century fascination with electric light:

> We often see it as the process by which our ancestors looked for and gradually discovered us, rather than a succession of distinct social visions, each with its own integrity and concerns. Assuming that the story could only have concluded with ourselves, we have banished from collective memory the variety of options a previous age saw spread before it in the pursuit of its fondest dreams.
>
> (Giddings and Lister 2011: 40)

Not only might these other options help inform current debates, but why particular choices were made, or indeed if they were choices, can reveal the social and economic forces at play.

In 1889 the Eiffel Tower opened to the public and almost a million people rode the 324 metres to the top. As Robert Hughes points out, until then most people "lived entirely at ground level, or within forty feet of it, the height of an ordinary apartment house. Nobody except a few intrepid balloonists had ever risen a thousand feet from the earth." When they arrived at the summit, visitors

> saw what modern travellers take for granted every time they fly – the earth on which we live seen flat, as pattern, from above. As Paris turned its once invisible roofs and the now clear labyrinth of its alleys and streets towards the tourist's eye, becoming a map of itself, a new type of landscape began to seep into popular awareness. It was based on frontality and pattern, rather than on perspective, recession and depth.
>
> (Hughes 1991: 14)

Mapmakers and painters had long imagined the view from above. The vision they had created tended to be contained; everything could be grasped in the one image with the boundaries of the city neatly set out. The perspective was often oblique, looking towards the horizon rather than directly down. In the latter half of the eighteenth century, the technology developed to get people up in balloons, but it had been complicated enough getting aloft without then recording what they saw. When Thomas Baldwin produced his *Airopaidia* in 1786, giving views of what he had seen cruising over Chester, he had carried with him a specially created set of pencils. People had the chance to imagine such a lofty perspective themselves with the rise in panoramas in the eighteenth century, which created huge scenes from above where perspective disappeared.[6] As photographic technology developed, it took until the end of the nineteenth century for it to work in balloons. Felix Tournachon, commonly known as Nadar, the French balloonist and photographer, made his first ascent in 1857 but failed to record anything because of problems with the film. He then perfected the ability to develop his plates while aloft. By the first decade of the twentieth century, the trade press were advertising equipment to film from above whether in planes or balloons and giving tips on how to do this effectively. Teresa Castro describes one such article by French balloonist Andre Prothin:

[He] was clearly more interested in the conventional panoramic possibilities of such vision, arguing that what distinguished them was their documentary powers, their visibility, their topographic qualities and their evident value for reconnaissance, which is to say their cognitive value. On the horizon of this concept lies a conception of aerial vision that is eminently instrumental and functional, an idea expressed here in relation to its extraordinary expansion of the point of view. In the first decades of the twentieth century, an almost blind and widespread belief in the objectivity of methods of mechanised reproduction – such as photography and cinema – only accentuated in the teleological tendency which saw indexical images obtained from the air as the natural replacement for cartographic images.

(Dorrian and Pousin 2013: 123)

As Barber and Wickstead point out: "Aerial views, we argue, are not always the same. . ... Numerous analyses demonstrate how ways of seeing are historically and culturally situated" (Barber and Wickstead 2010: 237). Yet, the exhilaration felt by Baldwin, Nadar and all those who ascended the Eiffel Tower at these new panorama mirrors the excitement that drone footage can inspire today. Suddenly the technology has closed a gap. There is a possibility of seeing something fresh. There is a belief in the power of this new

image to create change. Gynnild describes drones as a "disruptive innovation" that has

> emerged accidently, but disrupts existing conceptions of journalism and subsequently contributes to the creation of new markets and value networks in addition to reducing human risk taking when covering catastrophic and conflicting events. I also argue that the journalistic hunt for the visual conquering of formerly unwatched realties supports the ongoing transition from a norm-based mindset to a more innovative one among professional journalists.
>
> (Gynnild 2014: 336)

Adam Najberg was a journalist with the *Wall Street Journal* for more than 20 years before going to work with the Chinese drone manufacturer DJI. He said:

> Drones present a major opportunity to tell not just old stories from a new perspective, but a completely new way to tell a story. DJI's drones have flight controllers on board, which makes them stable, even when you take your hands off the controls. Even absent GPS signal, such as inside caves, you are able to go where humans cannot easily go, see things humans cannot easily see and tell stories you could not tell before. No drones, no cave video, no story.
>
> (author interview, February 2016)

According to Kellner, we should not be surprised at this immediate demand for the grand spectacle, as the internet-based economy "deploys spectacle as a means of promotion, reproduction and the circulation and selling of commodities" (Kellner 2003: 1). The final aspect to be considered in this chapter is how drones contribute towards our increased desire for the spectacle. In 2015 the BBC used a drone to film Auschwitz-Birkenau concentration camp.[7] Drones have been flown through firework displays and circled above climbers navigating awe-inspiring peaks. Writing in *Corporate Knights* (which bills itself as the magazine for clean capitalism), journalist Tyler Hamilton gave the BBC film as an example of "the good journalism" that drones can aid and described it offering "perspective and insight into a Nazi death camp 70 years after it was liberated" (Hamilton 2015). The 2 minute 31 second-long film has no narration, only sombre classical music and brief screen text to identify particular structures. It begins by mimicking the journey along the train tracks and then there are various shots along and over buildings and fences. It was filmed during winter, with a dusting of snow everywhere. There are few people

or anachronistic elements such as cars visible and the film has a slightly grainy texture. It is undoubtedly haunting, though sitting at the back of my mind was Spielberg's *Schindler's List* as an unwarranted quality comparison. I am not sure, though, that beyond its aesthetics, it gave me any new insight. There is a long-established specialism in the use of aerial imagery for archaeological purposes. Studying the changing contours and colours of the countryside can reveal buried remains from thousands of years ago. I am not sure that any historian of the genocide found new information as a result of this impressively mounted footage. Tyler then goes on to list what else drones might cover:

> How about aerial shots of the Fukushima disaster site, or images in the aftermath of natural disasters or areas battered by war? Traffic reports? Police chases? In terms of sustainability reporting organizations could use drones to capture industrial impacts on nature or companies try to evade environmental regulations.
>
> (Hamilton 2015)

It is instructive that the first reach is for the most spectacular and then at the end it is investigative journalism with the strongest public-interest justification attached. Such prioritizing is what many fear could happen as drones become more widely used. Of course, drones were actually used at Fukushima because they were a much safer way of monitoring damage than sending in emergency personnel. This is likely to be a growth area for commercial drone development. One imagines that in turn media companies will request access to such footage much as they sometimes get dash-cam footage from police cars or other emergency services.

The strategic advantage of being higher than others is made clear by the eponymous hero of Swift's *Gulliver's Travels* when he is transported by the flying island of Laputa. The application of magnets keeps this gigantic stone island cruising above the earth. Should the king in his flying fortress be threatened, he would turn his gaze upon the recalcitrant subjects. The hovering island would block the sun above any rebellion, thus causing crops to fail or rocks to be cast down on those below. "Against which they have due Defence but by creeping into Cellars or Caves, while the Roofs of their Houses are beaten to pieces" (Swift 2003: 159). The appearance of this authority then would be one to dread and submit to rather than be negotiated with. A view from above is about a strategic advantage and, in particular, the power of surveillance, which can be thought of in different ways. It can be the panoptic surveillance of Foucault where one discretely observes the many as a form of control. There is also synoptic surveillance which covers both the voyeuristic, where many people might observe a celebrity,

and where the tables are turned on the watched, such as monitoring the police. There is also sousveillance, observation from 'below' such as activists recording what happens at demonstrations. What is interesting about drones, now the technology has developed to allow them to break into the mainstream, is that all these versions of surveillance are being practiced. An analysis by Tremayne and Clark of eight instances of use of drones by the media found that most of them matched synoptic surveillance rather than Foucault's oppressive panoptic. Examples included paparazzi footage of Paris Hilton on a beach, activists flying one over their own demonstration and reporters using them to investigate a government detention centre. Certainly in the last case this seems to address all the possibilities of the technology – giving access to a story that otherwise might not be aired and with a strong public-interest justification. We'll be looking at such uses in more detail later; however Tremayne and Clark warned:

> It is not hard to imagine such cases as corporate media firms begin to use drones more frequently. Crime coverage, for example, is already an area where commercial outlets are likely to adopt a government point of view. Use of drones for media coverage of crime could also follow this pattern.
>
> (Tremayne and Clark 2014: 242)

This warning is echoed by Lyon in his general analysis on surveillance. Written before the advent of drones, it nonetheless provides some useful pointers about the way surveillance is deployed and developed – and by whom. Specifically Lyons highlights: "the asymmetrical relationship between corporate organisation and individual consumer" (Lyon 1994: 150). The drone industry is one marked, as many in the technology sector, by constant updates and refinements. The cycle of updated versions may not be as relentless as in the mobile phone sector, but competing companies and new entrants are continually fighting for market share. Improved cameras, longer flight time, cheaper units all increase the surveillance capabilities and attractiveness to journalists, without necessarily addressing fundamental questions about what the right limits are. As Lyon writes:

> If technological advancement produces a perceived problem then some technological fix – encryption, enhanced security – or legal remedy – data protection or privacy law – can be applied to overcome it. This kind of solution basically accepts the status quo while acknowledging that improvements are always desirable.
>
> (Lyon 1994: 162)