A PRAIRIE DRONE COMPANION

Brad Bolman

[It is] as if the principle of the death penalty were less in question than the cruelty of its application, to the point that if one could find a means of attenuating or even of causing cruelty to disappear... then the death penalty... could be maintained... (Derrida, 2013: 48-49)

‘Drone’ designates not a specific device but a paradoxical pseudo-concept, a technological pharmakon united by the process of unmanning machinery. One thing we seem to know about drones is their violent capacities. Indeed, one could replace ‘death penalty’ with ‘drone’ in the quote that introduces this piece to produce a perfect description of contemporary, global anti-drone sentiments. ‘Get the right ones, just don’t be messy about it’ sums up much of the radical resistance to military UAV use over the last decade. Attendant discourses protesting ‘collateral damage’ often maintain the operative logic of drone warfare because they reduce politics to precision, forgetting that the drone strike always seems to arrive at its destination.

Here I will hone in on ‘precision’, unpacking its multiple valences and historical transmutations. I will offer two provocations about agricultural UAVs and precision with an eye toward the broader problematic of ‘the drone’. The gambit of this piece is as follows: if we want to understand the bad drones hovering above contemporary battlegrounds, we need to think very hard about the good drones surveying fields, forest fires, and film sets.

1. We Have Arrived At the Era of Precision

A peculiar parallel in the discourse over military and agricultural drones is the obsession with new forms of precision inaugurated by
the ‘actionable’ data produced by powerful optical technologies. ‘The drones collect huge amounts of data, and modern farming is a data-driven business’ (Henn, 2014). Part of the renaissance of ‘Precision Farming’, drones bring multi- or hyperspectral analysis to ‘traditional’ American farmers, allowing farmers to target ‘a single aphid’.1 Drone warfare leverages large-scale data analysis, employed since the beginning of the War on Terror to designate ‘targets’ (Amoore and De Goede, 2005: 150). The New York Times reports that drones ‘are producing so much video intelligence that analysts are finding it more and more difficult to keep up’ (Drew, 2010). Glenn Greenwald quotes a former operator’s suggestion that ‘the drone program amounts to little more than death by unreliable metadata’ (Scahill & Greenwald, 2014). On the other hand, countless op-eds and news stories confirm that ‘Big Data’ is a vital tool against that ambiguous hydra of ‘terror’.

Underlying both of these discourses is the perception of a quasi-Biblical ‘flood’ of data – created by new forms of prosthetic sight – that must be analyzed, parted, and operationalized. Farmers in Iowa and military planners in Britain are equally called to inaugurate themselves as data warriors – or at the very least, as data literate. A farmer is now like ‘a software programmer or Web developer’, and intelligence operatives become increasingly reliant on software programmers at Palantir and elsewhere (Vance and Stone, 2011). \textit{Homo dronomicus} joins his cousins, \textit{homo necans} and \textit{homo economicus}. In the fields and intelligence sites, individuals must remind each other: ‘This is data’.

2. And Yet:\textit{ Agricultural Drones Had to Be Invented Outside the United States}

One of the most puzzling elements of the last few years’ media obsession with agricultural drones is how old the concept and many of the devices actually are. In 1999, UAV expert Peter van Blyenbergh noted that Japanese farmers already operated more than 2000 domestically produced vertical takeoff UAVs for ‘crop spraying, fertilizing and seeding [sic] purposes’ (van Blyenbergh, 1999: 4). South Korea, he added, was its only near-peer competitor. The United States and Europe? Not in the picture. Rhetoric of a ‘drone transformation’ in agriculture, which has pummeled American media over the last few years, is largely \textit{absent} from Japanese media, in part because unmanned agriculture hit East Asia two decades before its big splash in the United States.2
Why? In 1983, Ichiro Kato, Dean of the Graduate School of Science and Engineering at Waseda University, laid out a social-economic case for the growing robotic workforce in Japan: ‘Japan’s current robot technology is not very different from that of the U.S.,’ but its historical experience with robots diverges substantially and explains its lead in the industry (Kato, 1983: 9). Machines arrived at the precise moment that preexisting class hierarchies were being demolished, allowing for a ‘democratic’ introduction of robots. The ‘West,’ in contrast, embraced machinery at a time when class stratification was dramatic – producing, at one extreme, the Luddite movement and, in general, a ‘deep-seated’ fear of machines ‘in the subconsciousness of Western society’ (9). This fear, Kato argues, has slowed American progress, creating anxieties about the tradeoff of human control. But a new robot ‘age’ is coming: ‘Future robots’, Kato proclaims, will ‘feedback information to the operators’ (10). An early warning about the flood.

In the same year, Japanese and American agricultural engineers met in Florida to discuss ‘intelligent machines’ in agriculture. The focus of Japanese attendees was automation – we might say ‘dronification’ – of agricultural vehicles. The Americans, however, responded with envy and incomprehension: W. F. McClure, a professor of agricultural engineering at North Carolina State University, notes that American farmers have ‘been rather short sighted’ and that ‘the economic incentives are not yet in place’ to trigger adoption of these high tech fixes. ‘Our overproduction is wrought not by efficiency but by brute force – big acreage, big machines, powerful chemicals, etc. – and in the process we waste more than any other nation’ (McClure, 1984: 76). In the ‘American’ style of agriculture, drones simply made no sense. Precision had not yet been invented or made desirable to the American farmer.

Conclusion: Notes for a Broader Study

In this limited retrieval of the agricultural drone’s origins, we see ‘precision’ and ‘unnaming’ as constructions in progress. In 1983 and 1999, neither was universally perceived as attractive and practical, as they seem today. Unmanned devices were unpredictable, finicky, and tremendously expensive. Where agricultural drones took off – small countries in East Asia with advanced robotics programs and agricultural paradigms centered on efficiency – they did not entirely succeed. While Yamaha, Japan’s largest agricultural drone producer, could claim by 2013 that one in
three cups of tea on a typical dining room table had been sprayed by their drones, only in 2003 did unmanned helicopters in Japan overcome their manned brethren for hegemony of pesticide dispersal. Drones have flown an uneven historical path, and here I have offered a supplemental story to the one commonly proffered by military analysts. I hope to provoke a renewed inquiry into the construction and dissemination of ‘precision’ across geographic and cultural domains as well as further specific research into the coevolution of subjectivity and drone technologies at different historical moments.

Endnotes

1. The ‘single aphid’ trope recurs throughout media reports on agricultural drones, emphasizing the extent to which the metaphorical economy of ‘precision strikes’ is as comfortable in farming as it is in counterterrorism. For an extended discussion of what agricultural drones are, see B. Bolman, ‘A Revolution in Agricultural Affairs’, cited below.

2. Drone agriculture is an established fact in most Japanese news articles. When authors discuss agricultural drones over the past few years, it is generally to indicate how slow America or Australia has been to adopt the practice or to discuss upgrades to preexisting technologies. See, for instance, NewSphere (2014). Growth in the American and European drone industry has propelled new innovation in Japan, however, including the first new Yamaha agricultural UAV in over a decade, the ‘Fazer’, see Nikkei (2014). Thanks to Moeko Fujii for research and translation assistance with the Japanese materials.

3. They had already made initial strides toward automating fruit picking and were beginning to experiment with unmanned combines and rudimentary flying devices.

References


https://firstlook.org/theintercept/2014/02/10/the-nsas-secret-role/.
