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Abstract

What does the drone want? What does the drone need? Such questions, posed explicitly and implicitly by anthropomorphized drones in contemporary popular culture, may seem like distractions from more pressing political and empirical projects addressing the Global War on Terror (GWOT). But the artifacts posing these questions offer a different way of viewing contemporary surveillance and violence that helps decouple the work of drones from justifications for drone warfare, and reveals the broader technological and political network of which drones are the most immediate manifestation. This article explores ‘drone vision’ a globally distributed apparatus for finding, researching, fixing and killing targets of the GWOT, and situates dramatizations of it within recent new materialist theoretical debates in surveillance and security studies. I model the tactic of ‘seeing like a drone’ in order to map the networks that support it. This tactic reveals a disconnect between the materials and discourses of drone vision, a disconnect I historicize within a new, imperial visual culture of war distinct from its modernist, disciplinary predecessor. I then explore two specific attempts to see like a drone: the drone art of London designer James Bridle and the Tumblr satire *Texts from Drone*. I conclude by returning to drone anthropomorphism as a technique for mapping the apparatus of drone vision, arguing that drone meme arises precisely in response to these new subjects of war, as a method to call their diverse, often hidden, materials to a public accounting.

Introduction

The US is conducting a global, targeted-killing campaign using unmanned aerial vehicles (UAVs), popularly called ‘drones.’ The Obama administration uses two main justifications for drone warfare: the 2001 Authorization of Military Force’s (AUMF) global mandate to pursue terrorist threats to the US and the situational constraints of pursuing specific targets in isolated regions beyond the control of a state government and beyond the reach of manned missions. President Obama (2013), in his first major public defense of drone warfare, called them a “precise” tactic “smartly and proportionally” applied, with a lower risk of civilian casualties or blowback compared to conventional airstrikes or manned missions. Within these new historical conditions, the drone itself has become a pop cultural figure, part of what Brighenti (2010) calls the ‘ideoscape’ produced by surveillance systems. The pop cultural figure of the drone, especially the explicit anthropomorphization of it, registers the disconnect between the materials of drone warfare and the ‘smart war’ discourse justifying it. From the point of view of the drone, rather than the view from Washington, it is clear that the materials—the surveillance networks, local allies, data analysis, and more—required to direct the drone’s gaze against an enemy of the state rarely come together in the precise manner described by the ‘smart war’ discourse—with errors measured in corpses.

This is not mere hypocrisy on the part of the humans involved, a messy reality counterposed to bloodless press releases. Drone anthropomorphism shows how the materials of what I call ‘drone vision,’ the techniques for visualizing and acting on the world specific to drone warfare, produce the ‘smart war’ discourse justifying them, and rely on it to excuse their violence. This anthropomorphism also helps us see the network of less-visible materials—cell phone signals, a global system of US military bases, blurred military, intelligence, and contractor roles—on which the drone relies. Starting from the drone and moving outward to ask what it needs to do its work and what it wants from that work, as I do below, can show how and why 185 soldiers, analysts, and contractors would co-operate across continents to, for example, bomb a Waziristani grandmother.

As Wall and Monahan note, the drone is “a prism for theorizing the technological politics of warfare and governance” (2011: 250). The drone sees human life through a calculus of targetability, and its trajectory shows GWOT (Global War on Terror) logics expanding into new battlefields (e.g., Somalia, Yemen) and zones of governance (e.g., domestic policing). Drone-centric cultural production is then a political provocation, a demand to see the world as drones do and ask how and why they do so. This might come in the form of the Drones reality show portrayed in Alex Rivera’s *Sleep Dealer* (2008), Afghani war rugs newly fitted with drone silhouettes (NPR 2015), the drone’s eye view in social media performance art like *Dronestagram*, or the internet satire of murder-via-text-message *Texts from Drone*. Humans can never really empathize with a drone, but with the right push we can approximate the work of drone vision and the networks that sustain it.

This pop cultural construct is a reaction to a new way of making war; a new matrix of violence that combines the seemingly global expansion of the battlefield with the power of an advanced military to narrow its focus to a single person in some of the most remote, impoverished areas of the globe. Some critics argue that the pop cultural figure of the drone, and especially the tendency to anthropomorphize the drone as a character in a military drama, is in fact a distraction from these new matrices of violence. Gregory (2014) writes that, “the critical response to drones is unduly preoccupied with the technical (or techno-cultural) object—the drone—and virtually ignores these wider dispositions and propensities” (2014: 07). And even some of the artists Gregory critiques agree! James Bridle wants his work, reviewed below, to provoke a collective debate about surveillance culture. He hopes that “we can expand this conversation to those other areas and not just make it about weird sexy planes” (Bucher 2013). This article counters these arguments, showing how seemingly naïve questions about what those weird sexy planes want and need expand our political imaginary to grasp the work of these new networks of violence and surveillance.

In what follows, I first define drone vision and situate dramatizations of it within recent new materialist theoretical debates in Surveillance Studies and security studies. Then I model the tactic of ‘seeing like a drone’ in order to map the networks that support it. This tactic reveals a disconnect between the materials and discourses of drone vision, a disconnect I historicize within a new, imperial visual culture of war distinct from its modernist, disciplinary predecessor. I then explore two specific attempts to see like a drone: the work of London designer James Bridle and the Tumblr satire *Texts from Drone*. The latter lacks Bridle’s polish, but better anthropomorphizes drone vision in order to show the drone’s wants and needs, including its reliance on the smart war discourse to produce the target-rich environment in which it thrives. I conclude by arguing that drone meme arises precisely in response to these new subjects of war, the apparatus of drone vision, as a method to call their diverse, often hidden, materials to a public accounting.

Political and Theoretical Context

The AUMF was passed by the US Congress three days after the September 11th (9/11) attacks with only a single dissenting vote. It empowers the US military to pursue Al-Qaeda, the Taliban, and ‘associated

forces' wherever they might be in order to defend against future attacks. This is a new development in war-making, where the declared enemy is not a bounded nation-state, or even a certain community, but a concept: Islamic fundamentalist terrorism (Currier 2013b). This campaign has produced not only a new mixing, both culturally and technologically, of military and intelligence roles but a new legal doctrine justifying the targeted killing of those suspected of planning a future attack on the US or collaborating with such suspects (Krasmann 2012).

Prior to 9/11, drones were largely employed for surveillance and then only sparingly, so as to not risk publicly violating national sovereignty. Early on in the Afghanistan campaign, targeted killings were largely still carried out by US black-ops soldiers or local intermediaries. The Bush administration gradually ramped up the use of drones in surveillance and, to a lesser degree, attacks on high-value targets (Scahill 2013). Especially after the election of President Barack Obama, this workload was shifted to the drone. One of the primary appeals of these technologies is their ability to shift from Intelligence, Surveillance, and Reconnaissance (ISR) roles to hunter-killer roles as the operation calls for it. This flexibility meant that the Obama administration could use the drone to bypass the legal battles and international political blowback of the Bush-era black-site interrogation network, focusing anti-terror operations on the 'kill' portion of the 'kill, capture, or detain' tactical playbook (Bromwich 2015). The campaign was increasingly viewed through drone vision.

Drone vision is a globally distributed apparatus for finding, researching, fixing and killing targets of the GWOT. It is a technique of control, rather than discipline. Where disciplinary regimes were based on enforcing spatial boundaries and managing life within them, control travels with its object, speeding or blocking its progress, changing the access codes to pain and pleasure based on the needs of network architects (Deleuze 1992). Drone vision, as a particular technique of control, monitors subjects' movements and habits, calculating the probability of their becoming a 'threat' and tailoring the solution based on that probability. Gregory describes this as the "individuation of killing," where war-making and intelligence-gathering become indistinguishable; killing becomes an act of security that requires judging each target individually; a specific data-profile is produced of each potential target, even anonymous ones; and which "impels the war to go wherever the individual-as-target goes" (2014). It is a probabilistic assessment of a given threat and the appropriate response, reliant on a wildly contingent assemblage of material actors and a discourse of global policing.

The artistic responses to this new mode of violence, reviewed below, appear alongside a renaissance of new materialist philosophies that, in different ways, argue for the agency of nonhuman materials, their effects on human action and thinking, and their distinct ontological statuses. Such theoretical currents include Latour's sociological actor-network theory (1993), the object-oriented ontology school associated with figures like Harman (2002) and Bogost (2012), and the process-oriented feminist materialisms of Bennett (2009) and Barad (2007). My approach here is largely based on the latter. Bennett's specific method of 'strategic anthropomorphism' directly applies to the pop cultural artifacts at hand and her general approach of outlining the emergent results of different materials arranged in assemblage allows us to see the drone not as an isolated technological marvel but the tip of Empire's spear, the point at which the dispersed materials of the war machine can be seen coming together.

Much new materialist theorizing argues that materials are not just blank slates for human discourse. Rather, discourse is actively bounded and shaped by the very objects it addresses. Aradau (2010) for example, draws on Barad to argue that the 'critical infrastructure' designation today delimits the space of state intervention to those infrastructures circulating international capital, where in earlier regimes the designation delimited the built environment of the 'good society.' Importantly, these historical shifts are partly produced by the changing capacities and locations of the infrastructure in question: an electrical network stretching across the EU becomes 'critical,' an aging sewer or bridge network does not. In a similar vein, I explore how the 'drone lobby's' attempt to produce a discourse of drone vision distinct

from the GWOT is constantly stymied by the stubborn materiality of drone vision. Anthropomorphic drone art reveals that the technology is native to a particular form of violence.

This method of seeing like a drone shows that the GWOT is exactly what a drone *wants*—they are made for each other. But seeing like a drone also shows what the drone *needs* in order to see and act on the world, the wider technological and political network on which it relies. In this way, drones, Walters (2014) argues, manifest a specific *dingpolitik*: their technological affordances call to account not only the people affected by them, but the different people, stories, and materials which make a particular drone strike possible. This is a public, a space for political debate, assembled by the work of the drone. Walters uses Israeli drone strikes in Gaza, and the Human Rights Watch report on their civilian casualties, mainly as an example of how security studies might address *dingpolitik*—especially in settings beyond the Latourian laboratory. But his point that the Gazan strikes show the need for a more thorough accounting for absent presences in *dingpolitik* seems especially pertinent to the human and nonhuman participants that drone art might call into a public accounting: “[Q]uite often an object will shape public understanding and the dynamic of a controversy not by virtue of its immediate presence within the assembly, but through its trace, shadow, rumor or phantom” (2014: 112). With this in mind, the anthropomorphic art reviewed below would appear not to be, as Gregory argues, a distraction from the broader technological and political shifts of individuated war. Rather, they are dispersed attempts to register those shifts and call the massive, hidden apparatus powering them to account by means of their most visible representative, the clearest signal that something has changed: The drone. How can we see this apparatus at work?

Mapping Empire

You can load a washed-out Instagram image of Tappi Village from above via the Dronestagram app (Bridle 2012a). No official military rationale has been released for why Momina Bibi, a 67-year-old grandmother in North Waziristan, was killed in a field by a US drone missile strike on the eve of Eid al-Adha. But by tracing the materials of her death outward, we can begin to see the general orientation of the apparatus targeting her.

The US National Security Agency’s Counter-Terrorism Mission-Aligned Cell regularly intercepts emails and cell phone metadata as they are sent, through a combination of remote signal monitoring and direct access to telecommunications infrastructure. The disposition of this global surveillance network is visualized through the BOUNDLESSINFORMANT ‘heat map’—with the Federally Administrated Tribal Areas of Pakistan a priority target (Greenwald and MacAskill 2013). This cloud-based analysis software, and other NSA surveillance programs, requires massive amounts of processing power and storage capacity, and so enormous server farms are built in rural Utah, with a demand for electricity equivalent to that of 65,000 homes (Berkes 2013). This global apparatus perhaps tracked a target’s cell phone into Bibi’s house, where she might have prepared a meal for some young men who lived in the area, or into her garden, where someone took a call before driving away. But a threat was identified in the pattern of contacts and a team of at least 59 operators cooperate to launch a pair of drones—either from a military base installed in Afghanistan after the 2001 invasion, or a CIA base in Pakistan taken up once Al Qaeda fled from Afghanistan into Waziristan (Scahill and Greenwald 2014; Gregory 2011b). A Ku-band satellite link connects the drone to receivers in Rammstein Air Force base in Germany, and from there underwater fiber optics branch out to other points in the network.

The drones are likely gray MQ-1 Predators; 27-feet-long with 47-foot wingspans, weighing a little over two tons, propellers powered by an Austrian-built Rotax engine, allowing them to reach a cruising altitude of 15,000 feet for up to 14 hours. It takes about 23 weeks for General Atomics to fabricate a Predator in San Diego. They are piloted remotely, by a team of 43 joystick navigators and support staff in Nevada who may have been watching the area for days, getting to know the village by video feed. After the mission the pilots will leave the base and perhaps go to the grocery store or their daughter’s soccer

practice. They report levels of stress disorders as high as those flying over warzones in the flesh (Dao 2013). Another group of 83, distributed between a CENTCOM base at Al Udeied Air Base in Qatar and an analysis center in the US, pore over the video feeds, satellite imagery and other surveillance data assembled around the target and advise the pilots as they move (Gregory 2011a).

Bibi's grandson Zubair had noticed drones in the sky days prior (Devereaux 2013), perhaps recognizing their silhouette or the low buzz that leads anxious locals to call them *machar*—mosquitos (Hussain 2013). When one of the three onboard cameras streaming video reaches the target area, a judge advocate general validates the target and the commander on duty issues the order to fire. Calipers release one of two 100-pound AGM-114 'fire and forget' Hellfire missiles from beneath a wing. The solid-fuel missile engine kicks in with a burst of flame. One 18-pound metal-core warhead strikes Bibi's body directly and explodes. Two more follow. Shrapnel flies outward, striking Zubair and his sister Nabeela. Some cows and goats intended for an Eid sacrifice are also killed. The drones circle above and return home. The blast area is scrutinized in Qatar and the US and a strike report filed in Nevada. Over the next week, anonymous Pakistani military officials will be quoted in the press saying four militants were killed (Devereaux 2013).

And so an assemblage built of satellites, cables, newspapers, secrets, servers, deserts, spies, cell phones, lawyers, and missiles comes together just-so at the point of the drone, leaving a dead grandmother in its wake. At present, 116 people have pressed the Javascript-enabled heart icon on Instagram to 'like' the image—fewer than the global team required to carry out the strike.

Rules for Drones

Former presidential counter-terrorism advisor, and current Director of the CIA, John Brennan was one of the first US officials to publicly defend the use of drones for targeted killings. His defense rested not just on international law, or the ethics of 'just war' reasoning, but the 'wise' choice of employing the drone. The weapon itself is not only a symbol of a smart approach to war, but something making war smarter: "It's this surgical precision, the ability, with laser-like focus, to eliminate the cancerous tumor called an al-Qaida terrorist while limiting damage to the tissue around it, that makes this counterterrorism tool so essential" (2012). In reality, this apparatus relies on a series of contingent material relations that must come together just-so in order for a strike to occur. Even then, strikes regularly fail to hit any target or strike the 'wrong' target—like Momina Bibi. By looking at the carnage from the perspective of the drone, we can begin to tease out the relations between the 'smart war' discourse and actual materialization of drone vision above Bibi's garden. The disconnect is excused and maintained by a GWOT discourse that is both universal in its mandate and precise in its application.

In 2008, Barack Obama campaigned against the imperial excesses of the Bush administration (Welch and Mooney 2008). Once in power, this pragmatism manifested not as a retreat from the GWOT but a shift in tactics. The previous administration's secretive kill-or-capture campaign, reliant on black site prisons and torture tactics decried by human rights activists, was largely replaced by a targeted killing campaign in which drones were the chief weapon.¹ In Pakistan alone, the CIA under the Bush administration launched 51 drone strikes between 2004 and 2009 (Bureau of Investigative Journalism 2011), while the CIA under the Obama administration launched 339 such strikes between 2009 and 2014 (Bureau of Investigative Journalism 2014). Part of the appeal of drone warfare is the degree to which the decision to kill is made by the president or his senior advisors in the CIA and JSOC. This centralization was one of the chief legacies of Brennan's tenure as counter-terrorism advisor. In 2012, frightened by the prospect of a Romney presidency which might not exercise the same degree of control—control which, it should be noted, has

¹ Currier (2013a) writes, "Administration officials have said in speeches that militants are targeted for killing when they pose an imminent threat to the U.S. and capture isn't feasible. But killing appears to be far more common than capture, and accounts of strikes don't generally shed light on 'imminent' or 'feasible.' Cases involving secret, overseas captures under Obama show the political and diplomatic quandaries in deciding how and where a suspect could be picked up."

led to the death of between 168 and 200 children in Pakistan alone—the administration codified its targeted killing policy into a ‘disposition matrix,’ a database dictating who could be killed, where, when, by what, and by whose authority (Miller 2012).

While the discourse supporting the targeted killing campaign relies on a universal justice system precisely targeting clear threats, its material practice looks much like the ‘disposition matrix’ guiding it: contingent on local political agreements, the availability of different weapons and the capacity to launch and recover them, and degrees of guilt that vary from an identified operational leader to a target assumed to be involved in a terrorist network based on their social network, emails, and schedule (Miller 2012). Individuated and adaptive in operation.

That contingency is justified by an administrative logic that assures guilt after the fact—all military-age male casualties are classified in military documents as terrorist collaborators even if they weren’t intended targets (Elliot 2012). These deaths are viewed through the irreproachable logic of drone vision: guilty criminals, cleansed by precision fire. Even while the materials of this logic are radically contingent and notoriously faulty, as the child casualties suggest.

Maps for Empire

Hardt and Negri’s theory of Empire, the global form of power which succeeds the disciplinary state through networks of technological control, has been criticized for its Euro-centric focus on knowledge workers and Western legal forms (e.g., Ong 2006: 1-30). Even if imperial rule is not as global or consistent as Hardt and Negri argue, drone warfare would still appear to be a clear concretization of actually-existing Empire. But importantly, theory here does not match practice: a discourse of seamless global policing only ever functions through hasty political negotiations, overzealous surveillance networks, and glitchy weapons.

Drone vision succeeds previous modes of state vision which forced complex local customs or landscapes to fit a standard grid that supported centralized industrial planning. In *Seeing Like a State* (1998), Scott groups these diverse forms of state planning under the label of “authoritarian high modernism”: forcing the complex reality of the territory into a shape that fit the gridded map. It generally failed; the paradigmatic example being neat rows of mono-cropped trees optimized for timber production dying after a generation, bereft of the ecological diversity that helps a forest thrive.

This state vision strives for fixity and inevitably fails, because it cannot account for what Scott calls *metis*, the practical, local knowledge that grows from experience and exceeds the rigid social experiments of authoritarian high modernism. The practice of imperial sovereignty, of which drone vision could be considered one concrete manifestation, is different. Rather than administering, say, a colonial outpost as a dysfunctional social unit whose different people, streets, and crops must be fitted to a grid, imperial sovereignty manages difference, modulating its approach in response to changing conditions ‘on the ground’ (Hardt and Negri 2009: 199-200). The drone, for example, plays a variety of roles within its ISR charge, shifting from surveillance to ‘kinetic’ operations in minutes depending on the intelligence gathered on the ground and analyzed a continent or two away.

Errors inevitably arise from such quick, pragmatic shifts, errors measured in bodies like Bibi’s. Obama expresses regret that these errors have occurred but holds that everything is done to prevent them, that a rigorous set of checks and balances are in place in a campaign where “doing nothing is not an option.” Such checks and balances—the network of analysis and judicial review explored earlier—are framed not as a limit on imperial power, but the justification for its global mandate. “America does not take strikes to punish individuals; we act against terrorists who pose a continuing and imminent threat to the American people, and when there are no other governments capable of effectively addressing the threat,” Obama

says (2013). The precision practice of drone vision, at least according to the discourse justifying it, is exactly what allows it to operate anywhere, anytime. A global network of individuated violence is the only thing that can practically determine the difference between ‘individual’ and ‘terrorist,’ a difference that is not static but continually changing in response to new data and new strategic demands.

The drone itself is the tip of Empire’s spear. And it can be made to tell a story about what it wants from the world and what it needs to get that, different from what Obama or Brennan or its manufacturers say they want and need, and, I would argue, a truer representation of Empire’s means and ends. This is what the naïve, pop-cultural anthropomorphization of the drone strives for as a political tactic. But it does not always succeed.

Seeing Like a Drone

James Bridle is a London-based designer and a leading figure in the New Aesthetic movement, whose artists focus on contemporary disjunctures between human and machine vision. His traveling exhibit, ‘A Quiet Disposition,’ displayed several pieces dramatizing drone vision.

Dronestagram: The Drone’s Eye View is Bridle’s best-known work. It collects satellite imagery of drone-strike locations and labels them with information from The Bureau of Investigative Journalism about the killing, inserting austere images of desert landscapes and body count figures into the smooth flow of Instagram’s photo-sharing social media feed. Bridle’s sees drone vision as a product of “the technology that was supposed to bring us closer together [now] used to obscure and obfuscate” and wants to take “the names of places most of us will never see” and make them “a little bit more visible, a little closer. A little more real” (Bridle 2012b).



Figure 1

Figure 1 is a good example: an explanation for an otherwise unremarkable aerial view, and a visualization of North Waziristan for Western audiences who are assumed to imagine the GWOT occurring in a vague

‘over there.’ It is a detached image, bloodless and schematic, that performs imperial surveillance in order to make visible imperial violence.

The bare details beg to be filled in by a narrative-minded viewer: why Mosaki? What relation does that place have with the previous image from a Waziri bazaar or the next image from the Yemeni mountains? Writers such as Maly (2013) have tried to answer these questions, assembling the stories of families, tribes, kill orders, bases, and treaties into a narrative converging at the site of the strike. The carefully selected and cropped images often center on strong lines—roads, airstrips, fields—that lead into and out of the frame, giving the sense of a wandering eye caught in transit, just as drone targets so often are.

Bridle aims for empathy with those targeted by drone strikes but *Dronestagram* is too sterile to humanize. It pictures violence not at the level of bloody aftermath but from the view of the drone itself, tracking a target-rich landscape before missiles are loosed. If any empathy is produced it is with the work of drone vision.

Demonstrating the perspective of the watcher to the watched is a fairly common trope in anti-surveillance art. Raul Gshrey’s (2010) work is emblematic in this regard. His composite mask of the ‘typical Frankfurter’ allows people to see and wear the results of facial-recognition software and to refuse identification by the same, while his “(re)action spaces” mark out the views and blindspots of local CCTV cameras. Bridle’s attempts at awareness-raising are similar, and they mark the goals of his project as being specifically anti-surveillance, rather than anti-war.

Where *Dronestagram* dramatizes a drone’s-eye-view in order to build the narrative that makes that view possible, Bridle’s *Watching the Watchers* (2013) turns drone vision back on its own apparatus. *Watching the Watchers* (fig. 2) features satellite imagery of drone bases, including drones taking off, landing, and, rarely, being cared for by actual humans. Again, the images are well-composed with strong through-lines, in neutral grays and browns. Like atomic microscope imagery of dust or microchips, these pictures can pass as inoffensive coffee-shop art if passers-by don’t pause to ask what exactly is being pictured and why.



Figure 2

This bloodlessness contrasts with traditional exposés of the war machine in action used to shock and appall, such as the Haeberle photos of the My Lai massacre. There is not even a hint of the destructive power the drones might wield. Instead we see drones at home. Viewed from the same visual scale as the drone’s-eye-view in *Dronestagram*, the images become a family photo album of imperial infrastructure, with pictures of relatives in Nevada, Djibouti, and Afghanistan. Sometimes bigger, older siblings—bombers and jets—share the space.

Like any family album, the details of *Watching the Watchers*—where the drones are going, what goes on in each building—are only known to a select few and, bereft of those details, the images remain strikingly banal. On the other hand, the title hints at the global victory of imperial networks: no one is outside the

view of Empire, even its weapons. The same GPS and satellite imaging technologies developed for imperial wars can also be their mirror. The clean composition and strong through-lines shows that the images are carefully selected and cropped, but the scale and scope promises a vision more powerful and penetrating than any one human could offer—this becomes especially clear in the images which stare through pixellated clouds or down on to military bases in Yemen to which few civilians could hope to gain entry.

Dronestagram and *Watching the Watchers* are both promises that drone vision cannot outpace the practices which enable it in the first place. They take the discourse of drone vision—its world-spanning capacity to track and fix threats—at its word and turn that discourse against itself: only a drone's eye view can police the drones, the watchers must be watched by the watchdogs they built. That discourse is not challenged, only hacked for a brief moment and turned against itself. Reassurances over the infallibility of drone vision are the reassurances of Empire—to find and strike with unerring precision. Indeed, when US Ambassador Anne Patterson first began to protest the US military's strikes into sovereign Pakistan, Special Ops "commandos brought her a Predator console so she could witness a raid in real time" (Priest and Arkin 2011). Empathy with that console, not its targets, is what *Dronestagram* and *Watching the Watchers* produces in the hopes of subversion.

Bridle's stated goal is to make visible the otherwise invisible. The (presumably Western, gallery-going) public's complicity in or inurement to the world-spanning surveillance is the major point of critique—not the death visited on the ground. His "weird sexy planes" comment marks the drone as secondary to 'the issues.' But those "weird sexy planes" are already very real for those who live under threat of a missile strike depending on the company they keep. Drones are 'absent,' 'invisible,' 'unmanned' only within the press release announcing the attack, not in the carrying-out of the attack and certainly not for its targets. It is clear that Bridle is focused more on the idea of technology than the work of technology. He says this work is important because "Stuff that would have been entirely secret previously, now exists as objects in the world" (Bucher 2013). Secret for whom?

Bridle mistakes the discourse of drone vision, the story of seamless, imperial visual supremacy, for its operation. The violence remains 'over there,' the GWOT remains a 'smart war.' But the pervasion and precision of drone vision's discourse does not match its material practice: all the many things which must fit together in a just-so assemblage in order for a strike to happen, let alone for it to succeed. Beyond the treaties, surveillance, and commands which must come together in order for a drone to operate in a given country, the machines themselves are spectacularly fallible. Drones crash, often: more than any other aircraft in the US military's arsenal and at triple the rate of the fleet-wide average (McGarry 2012). Over 400 US drones have crashed since 2001, with operators behind two crashes telling "investigators that their respective planes had been 'possessed' and plagued by 'demons'" (Whitlock 2014). Iranian military engineers reported reconfiguring a US drone's GPS coordinates so that it landed in Iran when it thought it was in Afghanistan (Peterson and Faramarzi 2011). A drone flying in Somalia can have its flight disrupted by a cat rustling through the servers of Creech Air Force Base in Nevada (Weinberger 2010).

So-called 'signature strikes,' which may make up the majority of drone strikes, identify targets based on patterns of behavior and do not require intelligence on the target's identity or whether they are connected with Al Qaeda affiliates (Miller 2013). Signatures include being a military-aged male who has had contact with suspected terrorists, or attended large gatherings in surveilled areas. Attempts to make up for a botched first strike have ended up killing emergency medical personnel and other rescuers in so-called 'double taps' (Currier 2013a: "Everything We Know").

A former JSOC planner speaking to reporter Jeremy Scahill about a strike that failed to kill Anwar al-Awlaki with ten or eleven missiles said that with this "top down imagery...You can't see shit. You're looking down at ants moving. All they saw were vehicles and the people in the vehicles were smart"

(Scahill 2013: 455). The Bureau of Investigative Journalism, using both US and local sources, estimates that between 446 and 1,049 civilians have been killed in drone strikes in Yemen, Pakistan, and Somalia—countries with which the US is not in a declared war.

‘Drone vision’ is of course more than just the view seen from one Reaper’s cameras, it is the entire apparatus supporting that viewpoint and acting through it. That apparatus fails regularly, but these failures in practice are justified by the global policing discourse of the AUMF. This is why lawyers are present at every stage of the process: if discourse and action were perfectly symmetrical, then the justice of any specific killing would be guaranteed in advance. Instead, as Krasmann (2012) notes, a new legal discourse must be produced to justify the process.

If the drone is the spearhead of Empire, it is important to separate the ideal vision of that design from its contingent materiality. The practice of drone vision bears little resemblance to how US special forces describe the drone apparatus: “Kill TV” (Flynn et al. 2008), “The Unblinking Eye,” “persistent stare capability” (Newsweek 2008). That practice is ridden with glitches, errors, and twitchy pilots; the consequences for which are measured in corpses. Bridle’s art makes a spectacle of “The Unblinking Eye” in a promise that machine vision can match machine vision and master it, but glosses over the frequent failure of the assemblage to come together in the desired fashion: the drone’s on-board cameras, the GPS network, surveillance of the target area, military treaties, different targeting rationales for different military and intelligence forces, and all the vagaries of weather which might aid or disrupt a strike.

God Tricks and Vision Metaphors

Despite *Dronestagram*’s, and the US military’s, promise to the contrary, there is no way to occupy the drone’s eye view. To try to do so is to embrace the discourse of drone vision, rather than the work of it. Science fiction author and critic Bruce Sterling argues that the New Aesthetic avoids this work, hunting for provocative examples of an encroaching machine-readable reality instead of grappling with the experience of living in one. Sterling says of the New Aesthetic’s repeated interest in algorithmically-generated camouflage:

Dazzle camouflage has nothing to do with “machine vision.” Machines are incapable of a state of mind like “dazzle.” Camou is all about human vision. Glitches and corruption artifacts aren’t “machine vision,” either. Those are the failures of machine processing, and failures of machine displays built for human vision.

(2012)

The New Aesthetic, he argues, hunts for mythic nonhuman others to display as evidence of an invasion that isn’t actually happening. It does not actually generate an aesthetic, but poses digital artifacts as producing one.

Sterling is skeptical of any attempt to identify with the perspective of machines, labeling the New Aesthetic an act of wishful projection. But this critique, an aesthetic parallel to Derek Gregory’s political one above, forecloses the sort of playful art which might wear the mask of the machine, wink knowingly from beneath it, and act out a role in order to reveal a perspective or a set of actions that might otherwise go unnoticed—a nonhuman melodrama. Anthropomorphism need not be an illusion that makes machines speak on human terms and obscures how things actually work. It can be, in Bennett’s framing, a deliberately naïve methodology of ‘strategic anthropomorphism’ that might “render manifest” the swirl of nonhuman activity which we might otherwise miss—trash that is ‘out of sight out of mind,’ a war that is at once over here and ‘over there’ (Bennett 2009: 17).

We strategically anthropomorphize all the time. ‘If these walls could talk’ gestures not towards a potential conversation with paint but towards the value gained from understanding human life on a different time scale, or towards the sort of intimate violence enabled by an architectural and legal assemblage called ‘privacy.’ Dramatizing the life of a drone, or any nonhuman, need not be a power fantasy echoing the discourse of visual supremacy that justifies Empire. Bennett writes, “Maybe it is worth running the risks associated with anthropomorphizing (superstition, the divination of nature, romanticism) because it, oddly enough, works against anthropocentrism: a chord is struck between person and thing, and I am no longer above or outside a nonhuman ‘environment’” (Bennett 2009: 120). Taking this risk allows us to ask what the drone wants from the world and what it needs to get it, and thus trace the shape of the war machine which moves the drone into place and distinguish that movement from official narratives of it.

Sterling is right to critique *Bridle and The New Aesthetic* more broadly for approaching the machine as myth instead of as a machine; but there is great aesthetic and political potential in anthropomorphizing the drone to expose it not as a tool or as a sentient threat but as an actor in the assemblage called *The Global War on Terror*. By lending the drone personality, by playing up its contingent drone-ness, we can see that just as the drone serves Empire, so does Empire serve the drone—producing it by the hundreds, giving it a reason to be and space to roam.

DONTSAYDRONES

As Western media increasingly focused on the civilian casualties from US drone strikes, science fiction writer Adam Rothstein wrote “There is no such thing as drones. They’re a meme” (2013). He argued that while *Predators*, *Reapers*, *Global Hawks*, *Dragon Eyes*, and other UAVs with specific equipment, tasks, and routines circulate throughout the US military, the generic ‘drone’ is a mythic figure of autonomous death robots floating somewhere overhead. The goal of drone fiction is to force the science fictional into the actual by joining the drone meme to the specific work of UAVs, to make the drone war visceral for those who haven’t seen the bodies or touched the consoles. He cites a drone-centric portion of Teju Cole’s ‘small fates’ Twitter poetry as an example: “Call me Ishmael. I was a young man of military age. I was immolated at my wedding. My parents are inconsolable” (2013).

Drone fiction keeps drones strange, against attempts by Obama and others to normalize them, while bringing that strangeness down to Earth. This is not work that the drone lobby wants done. The word ‘drone’ appears nowhere in the *Mission & Main Goals of the US Congress’ “Unmanned Systems Caucus”* (2014). At the industry’s 2013 trade show, Michael Toscano, president and CEO of the Association of Unmanned Vehicle Systems International (AUVSI), told a reporter:

We don’t call them drones...When most people hear the word ‘drone,’ you think military, you think hostile, you think large and you think autonomous. There’s a total misconception. And every time the media uses it, you’re not portraying good information.

Even the trade show’s Wi-Fi password was “DONTSAYDRONES” (Stangler 2013). The drone lobby’s rationale for killing the meme is first that an unmanned system is an entire apparatus, not just the machine in the air; second, that ‘drone’ connotes an unthinking insect lacking the precision offered by their products;² and third that there is an enormous civilian market for unarmed unmanned systems. Despite this, aviation industry analysts at The Teal Group (2013) and IBIS (McBee 2012) estimate that national armed forces will still be the industry’s primary customers over the next ten years, owing largely to the prohibitive cost of manufacture and the industry’s reliance on defense contracts, and that the US military will continue to control the vast majority of the world’s drones. The drone meme persists alongside the

² Many thanks to my second anonymous reviewer for this valuable point.

technology's persistent militarization. The drone lobby resists 'drone' while working to provide exactly what the drone needs to continue its work—not just manufacture and lobbying, but training pilots and analysts, as well as directly staffing missions. As Air Force vice chief of staff General Phillip Breedlove notes, "Our No. 1 manning problem in the Air Force is manning our unmanned platforms." This practice rose to public view after the killing of 15 Afghan civilians in a 2010 drone strike, partly due to an SAIC contractor misidentifying them as hostile insurgents (Cloud 2011).

The fiction that best captures these machines as actors in the assemblage of Empire, as drones and not UAVs, is the *Texts from Drone* tumblog (Bucci and Aheram 2012). Begun as an anti-imperialist satire of the viral meme *Texts From Hillary*, which had Secretary of State Hillary Clinton running global diplomacy through no-nonsense text messages, most *Texts From Drone* posts (fig. 3) feature a quick, facetious text message from a human (usually Obama or Clinton) to 'D-Ron,' who responds in a juvenile combination of Web slang, hip-hop lyrics, and violent glee. Others (fig. 4) feature drone strike targets, including teenage drone victim Abdulrahman Al-Awlaki asking "Why'd you kill my dad?," texting in fear or frustration and receiving tone-deaf responses like "Lol you betta hide son ur next." Hosting on Tumblr allows readers to submit their own versions of the meme, a democratizing practice in line with other anti-surveillance art which asks its audience to help trace the contours of an apparatus which no human can map alone (e.g., Brighenti 2010). As a satire of *Texts from Hillary*, the message is clear: both the welcoming face of US liberalism and the sterner side of its realpolitik rely on a targeted killing regime with global reach and few restrictions. But this basic point could be made by any political cartoon. The real power of *Texts From Drone* is the degree to which D-Ron himself is made an actor in the work of Empire, rather than a mute instrument of its policy. He celebrates, without any pretense of military gravitas or regret over mistaken targets, his role as global police.



Figure 3 (left) and Figure 4 (right)

Texts From Drone emphasizes the independence of the drone from those picking its targets. When Obama texts D-Ron, "yo i gotta be the smiley face for empire can u handle this," D-Ron responds "HYFR" (Hell Yeah Fuckin' Right). Here the drone is an ally, not an instrument. D-Ron has his own goals, his own motivations, his own language distinct from that of Obama. They are not reducible to each other. The

visual repetition of target or politician texting the same Reaper on the runway³ stresses at once the consistent cooperation between heads of state and weapons of state and their different ways of seeing the world and acting in it. *Texts from Drone*'s strategic anthropomorphism both extends the realm of what we might consider to be the politics of the executive branch (i.e., managing war every day, instead of only in moments of crisis) and highlights the special role of the drone in it.

By emphasizing how these different actors relate in the GWOT assemblage, these blunt visuals recognize that the 'smart war' doctrine through which Obama justifies targeted killings is distinct from but related to the very material way drone makers, and D-Ron himself, insert themselves into the conflict. Where the former is sanitized, as far as Western diplomats and media accounts are concerned, and unerringly accurate in their precise, global pursuit of the 'bad guys,' the latter is messy, local, and often somewhat autonomous from the stated goals of anti-Al Qaeda operations.⁴ Toscano's industry would not be booming *unless* much of the world presented a target-rich environment for their products. His sector's success relies on a mismatch between the materials of war and the discourse justifying it. If the work of the GWOT perfectly matched the discourse of drone vision—the infallible precision of the 'Unblinking Eye'—then its slate of targets posing an immediate threat, and thus the need for drones to find and kill them, would be much more limited.

Texts From Drone is at once absurd in its anthropomorphism and deadly serious in its concern for drone targets. Its point is not that humans have gone astray in delegating surveillance and warfare to conscienceless automatons. Indeed, one of the surprising results of drone vision is that pilots and analysts feel an immediate, visceral contact with ground troops and so end up seeing threats where there were none (Gregory 2011a). The Reaper itself cannot feel, nor can it choose targets on its own or pull the trigger on its own. No one believes that drones send emoticon-filled text messages. Rather, by momentarily lending the drone this juvenile humanity, we see that it has been designed and deployed to thrive in a particular set of political conditions where boots on the ground are more of a diplomatic risk than bombs in the sky, where intelligence gathering is a military action and vice versa, and where armaments need to be flexible enough to track lone targets for days.

Toscano and the AUVSI frame their industry's activity as responding to subjective consumer demand and elide their role in creating the political conditions which D-Ron and his friends need to thrive. This includes lobbying for more military appropriations, for a wider share of domestic airspace, and for an increased role in policing the US-Mexico border (Barry 2013). This is exactly what D-Ron wants and so something like D-Ron is the last thing the drone industry wants to see: not an instrument that can be slotted into any potential use but an autonomous weapon produced from and producing in turn the GWOT. D-Ron frequently eyes new spaces to work: whether bombing Iran, or policing American protestors. These posts lack the gruesome images others include, but their proximity to them anticipates Finn and Wright's (2012) argument that expanding the scope of drone vision into border security or domestic policing is not a neutral transfer of technology between domains. The weight of drones' attention overwhelmingly falls on 'the usual suspects' (e.g., racial minorities, poor migrants, anti-state protestors), no matter where they find themselves. Technology transfer is always also cultural transfer. The visual habits of individuated targeting and judgment carry over even when drones are re-tasked to humanitarian efforts; another market where the drone lobby sees strong growth potential (Sandvik and Lohne 2014).

³ Originally taken by photographer Brian William Jones at Creech Air Force Base in Nevada, February 2008 <http://prometheus.med.utah.edu/~bwjones/2008/02/creech-afb-uav-operations/>.

⁴ In Somalia for example, the drone campaign began only after a series of violent, failed US alliances with local militias and the Ethiopian army in an attempt to dislodge the Islamic Courts Union from power. That patchwork alliance of conservative religious groups had restored some measure of order to the capital Mogadishu after years of sectarian combat, and even re-opened the international airport. The fundamentalist terrorist group al-Shabaab, now linked with al-Qaeda, formed during the Ethiopian invasion as moderates fled the country. See Scahill (2013) and also Wa Ngugi (2013).

The tumblog's news images and drone portraits do precisely what Rothstein asked drone fiction to do and what Bridle's work cannot: make visceral the science fictional, show that there is really blood on the drone and not just the hands of the pilot. Despite the news articles and body counts tagged to *Dronestagram* images, the distance between its visual supremacy and life on the ground is too great to bridge, repeating Obama's 'smart war' discourse. By leaving the discourse in place and refusing to play with the drone itself, its very droneness, Bridle cannot make the drone anything but, as Rothstein writes, "an archetype of uncanny and deadly technology" (2013). D-Ron, however, is not an archetype, no "weird, sexy plane." His fiction is deliberately disingenuous, a tactical exaggeration of something very real.

The AUVSI and the Congressional Unmanned Systems Caucus—which D-Ron calls his "big fat caucus"—are now the clearest examples of the drone being made to speak in public, as a precision system friendly to multiple territories and uses. D-Ron offers an antagonistic alternative, revealing his ongoing role as Empire's spear, the point at which Presidents, lobbyists, surveillance networks, and pilot come together to strike at weddings, road trips, and gardens.

Conclusion: New Subjects of War

A horizontal perspective on agency, where humans are not permanently, ontologically prior to or above nonhumans, does not name drones or Presidents as independent agents. *Texts from Drone* strategically anthropomorphizes; it deliberately dramatizes and overstates the case against smart war cleanly managed and justified by the war-makers. By showing what the drone wants and needs, it calls to account the less-visible pieces of the imperial apparatus supporting it: arms manufacturers, pork-barrel politics, extradition treaties, disposition matrices, etc. Technical and political mediation no longer precedes anonymously but in visible alliances borne of the historical moment. Given Toscano's hard-line stance against the word 'drone,' it would seem the AUVSI already sees this sort of strategic anthropomorphism as a threat. Human rights activists such as Code Pink have already begun emphasizing these networks that cohere at the point of the drone. As part of the 2013 National Anti-Drone Day of Action, they flew a toy drone over the home of General Atomics' CEO Neal Blue. The police confiscated it, calling it a threat to public safety (Ungerleider 2013).

But while industry lobbyists overstate the role unmanned aerial vehicles may play in near-future non-military settings, they do have a point in arguing that the meme 'drone' is a specific political-technological assemblage bigger than any single Predator or Reaper. A strategically anthropomorphized critique of drone vision, like *Texts from Drone*, focuses not on the drone or the person making the kill list, but the new subject, that assemblage of drone vision, that emerges at their intersection. This is the approach Latour takes in deconstructing the contradictory slogans of 'guns kill people' and 'people kill people, not guns':

You are different with a gun in hand; the gun is different with you holding it. You are another subject because you hold the gun; the gun is another object because it has entered into a relationship with you. The gun is no longer the gun-in-the-armory or the gun-in-the-drawer or the gun-in-the-pocket, but the gun-in-your-hand, aimed at someone who is screaming. What is true of the subject, of the gunman, is as true of the object, of the gun that is held. A good citizen becomes a criminal, a bad guy becomes a worse guy; a silent gun becomes a fired gun, a new gun becomes a used gun, a sporting gun becomes a weapon.

(Latour 1994)

Texts from Drone's critique, then, is less 'people don't kill people, drones kill people' than 'this is the drone we get in the world we have and this is the work it does.' The drone base, positioned in states weak

enough for the United States to claim independent land but not so weak that they don't mind drones falling out of the sky,⁵ may look like, or build on, Cold War proxy garrisons but have a different set of capacities and a directives—exemplified by the drone itself. The drone president fighting Terror may look and sound like the atomic president fighting Communism, with a series of shifting alliances dedicated to one Manichean goal, but would Obama's micromanagement of the drone 'playbook,' of who lives and who dies at the other end of a Hellfire missile in Waziristan, have been possible in the Reagan era? This particular materialist approach changes the political tactics and ethical concerns addressed to surveillance systems, the parties and tools called to public account. It pushes, for example, a normative theory of surveillance modeled on the just war tradition (Macnish 2014), to ask how technologies of surveillance affect who is surveilling whom, why, and where; and what unintended consequences resulting from new materials introduced into the process.

The drone vision dramatized in *Dronestagram* or *Texts From Drone* is a new development from the 'authoritarian high modernism' which ordered its territories into neat rows. This imperial lens is built of control technologies—flexible, variegated, and responsive. Mapping this apparatus means identifying the many actors cooperating and competing in it. It means understanding the drone as drone, and not just a tool armed and aimed by Empire. This does not absolve humans to place responsibility on some sentient, independent machine. As Bennett (2009: 101) notes, a focus on distributed agency has as its goal not "identifying objects to blame" or their competing intentions, but, rather, "responding to harms" and drawing wider maps of consequences. Focusing on the work of the drone itself allows us to separate the materials of the GWOT from its stated intentions. Asking, naïvely, what the drone wants from that work and what it needs to do that work, reveals the broader apparatus that exercises drone vision, with broader consequences for civil liberties, national sovereignty, and human rights that expand outwards from the specific violence of the drone strike. The proliferation of anthropomorphic drone art registers this epochal shift in surveillance and violence through its most visible representative. Like other surveillance art, work like Bridle's and *Texts From Drone* "provide[s] new vocabulary or even symbols...which inspire people to rethink positions and to come up with their own strategy" (Gürses et al. 2010: 172). Naïve attempts to see like a drone can, of course, never fully succeed, but they can and should provoke new empirical and political habits of thought that redraw our maps of contemporary violence and surveillance.

Acknowledgments

Many thanks to Paul Jaeger for his guidance with early research, and to Jason Farman and Daniel Joseph for their feedback on later drafts.

References

- Aradau, Claudia. 2010. "Security That Matters: Critical Infrastructure and Objects of Protection." *Security Dialogue* 41 (5): 491-514.
- Barad, Karen. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham, NC: Duke University Press.
- Barry, Tom. 2013. "The Political Economy of Drones: Drone Boosterism Trumps Oversight in Congress." *Counterpunch*, May 01. Accessed February 10, 2015: http://www.counterpunch.org/2013/05/01/the-political-economy-of-drones/?utm_source=rss&utm_medium=rss&utm_campaign=the-political-economy-of-drones
- Bennett, Jane. 2009. *Vibrant Matter: A Political Ecology of Things*. Durham, NC: Duke University Press.
- Berkes, Howard. 2013. "Amid Data Controversy, NSA Builds Its Biggest Data Farm." *National Public Radio*, March 10. Accessed August 5, 2014 <http://www.npr.org/2013/06/10/190160772/amid-data-controversy-nsa-builds-its-biggest-data-farm>
- Bogost, Ian. 2012. *Alien Phenomenology, or, What It's Like to be a Thing*. Minneapolis, MN: University of Minnesota Press.
- Brennan, John O. 2012. "The Efficacy and Ethics of US Counterterrorism Strategy." Remarks delivered at the Wilson Center, April 30. Accessed February 10: <http://www.wilsoncenter.org/event/the-efficacy-and-ethics-us-counterterrorism-strategy>
- Bridle, James. 2012a. *Dronestagram*: Tappi Village, Pakistan. <http://instagram.com/p/RLXTZIrB6s/>.

⁵ Lemmonier Air Force Base in Djibouti, for example, is a staging area for much of the Air Force's air strikes in East Africa and the Arabian Peninsula but the takeoff area is also a commercial airstrip. The US was recently forced to move its drone fleet "to a makeshift airstrip in a more remote part of the country" after a string of recent crashes (Whitlock and Miller 2013).

- Bridle, James. 2012b. "Dronestagram: The Drone's Eye View." *BookTwo*, November 8. Accessed on January 14, 2014: <http://booktwo.org/notebook/dronestagram-drones-eye-view/>.
- Bridle, James. 2013. "Watching the Watchers." *Short Term Memory Loss*. Accessed January 14, 2014: <http://shorttermmemoryloss.com/portfolio/project/watching-the-watchers/>.
- Brighenti, Andrea Mubi. 2010. "Artveillance: At the Crossroads of Art and Surveillance." *Surveillance & Society* 7(2): 175-186.
- Bromwich, David. 2015. "Working the Dark Side." *London Review of Books* 31(1): 15-16.
- Bucci, Anthony and Jayel Aheram. 2012. "Texts from Drone." Accessed January 14, 2013: <http://textsfrompredatordrone.tumblr.com/>.
- Bucher, Taina. 2013. "Machine Vision: James Bridle on Drones, Bots, and the New Aesthetic." *Furtherfield*, October 16. Accessed January 14, 2014: <http://www.furtherfield.org/features/interviews/machine-visions-james-bridle-drones-bots-and-new-aesthetic>.
- The Bureau of Investigative Journalism. 2011. "The Bush Years: Pakistan Strikes 2004-2009", *Get the Data: Drone Wars*, August 10. Accessed March 14, 2014: <http://www.thebureauinvestigates.com/2011/08/10/the-bush-years-2004-2009/>.
- The Bureau of Investigative Journalism. 2014. "Casualty Estimates," *Get the Data: Drone Wars*, <http://www.thebureauinvestigates.com/category/projects/drones/drones-graphs/> Accessed August 6, 2014: <http://www.thebureauinvestigates.com/2011/08/10/the-bush-years-2004-2009/>.
- Cloud, David S. 2011. "Civilian Contractors Playing Key Roles in US Drone Operations." *Los Angeles Times*, December 29. Accessed February 10, 2014: <http://articles.latimes.com/2011/dec/29/world/la-fg-drones-civilians-20111230>.
- Cole, Teju. 2013. "Seven Short Stories About Drones," *The New Inquiry*, January 14. Accessed January 30, 2013: <http://thenewinquiry.com/blogs/dtake/seven-short-stories-about-drones/>.
- Congressional Unmanned Systems Caucus. 2014. "Mission and Main Goals." Accessed January 14, 2014: <http://unmannedsystemscaucus.mckee.house.gov/about/purpose-mission-goals.shtml>.
- Currier, Cora. 2013a. "Everything We Know So Far About Drone Strikes." *ProPublica*, February 5. accessed August 20, 2014: <http://www.propublica.org/article/everything-we-know-so-far-about-drone-strikes>.
- Currier, Cora. 2013b. "Who Are We At War With? That's Classified" *ProPublica*, July 26. Accessed July 1 2014 <http://www.propublica.org/article/who-are-we-at-war-with-thats-classified>.
- Dao, James. 2013. "Drone Pilots are Found To Get Stress Disorders Much As Those in Combat Do." *The New York Times*, February 22. Accessed August 1 2014 http://www.nytimes.com/2013/02/23/us/drone-pilots-found-to-get-stress-disorders-much-as-those-in-combat-do.html?_r=0.
- Deleuze, Gilles. 1992. "Postscript on the Societies of Control." *October*: 3-7.
- Devereaux, Ryan. 2013. "Family of Grandmother Killed in US Drone Strike Arrive For Congress Visit." *The Guardian*, October 27. Accessed May 20, 2015: <http://www.theguardian.com/world/2013/oct/27/drones-attack-pakistan-family-rehman-congress>.
- Elliot, Justin. 2012. "Dissecting Obama's Standards on Drone Deaths." *ProPublica*, June 5. Accessed August 1, 2014: <http://www.propublica.org/article/dissecting-obamas-standard-on-drone-strike-deaths>.
- Finn, Rachel L. and David Wright. 2012. "Unmanned Aircraft Systems: Surveillance, Ethics, and Privacy in Civil Applications." *Computer Law & Security Review* 28 (2): 184-194
- Flynn, Michael, Rich Juergens, and Thomas Cantrell. 2008. "Employing ISR SOF Best Practices." *Joint Forces Quarterly* 50: 56-61.
- Gürses, Seda, Manu Luksch and Michelle Teran. 2010. "Dialogue on Interventions in Surveillance Space: Seda Gürses in conversation with Michelle Teran and Manu Luksch." *Surveillance & Society* 7(2): 165-174.
- Greenwald, Glenn and Ewen MacAskill. 2013. "Boundless Informant: the NSA's secret tool to track global surveillance data." *The Guardian*, June 11. Accessed August 1 2014: <http://www.theguardian.com/world/2013/jun/08/nsa-boundless-informant-global-datamining>.
- Gregory, Derek. 2011a. "From a View to Kill: Drones and Late Modern War." *Theory, Culture & Society* 28 (7-8): 188-215.
- Gregory, Derek. 2011b. "The Everywhere War." *The Geographical Journal* 177 (3): 238-250.
- Gregory, Derek. 2014. "Drone Geographies." *Radical Philosophy* 183: 7-19.
- Gshrey, Raul. 2010. "Contemporary Closed Circuits – Subversive Dialogues: Artistic Strategies against Surveillance." *Surveillance & Society* 7(2): 144-164.
- Harman, Graham. 2002. *Tool-being: Heidegger and the Metaphysics of Objects*. Peru, IL: Open Court Publishing.
- Hardt, Michael and Antonio Negri. 2009. *Empire*. Cambridge, MA: Harvard University Press.
- Hussain, Nasser. 2013. "The Sound of Terror: Phenomenology of a Drone Strike." *The Boston Review*, October 16. Accessed July 30, 2014: <http://www.bostonreview.net/world/hussain-drone-phenomenology>.
- Krasmann, Susanne. 2012. "Targeted Killing and Its Law: On a Mutually Constitutive Relationship." *Leiden Journal of International Law* 25: 665-682.
- Latour, Bruno. 1993. *We Have Never Been Modern*. Translated by Catherine Porter. Cambridge, MA: Harvard University Press.
- Latour, Bruno. 1994. "On Technical Mediation." *Common Knowledge* 3(2): 29-64.
- Macnish, Kevin. 2014. "Just Surveillance: Towards a Normative Theory of Surveillance." *Surveillance & Society* 12(1): 142-153.
- Maly, Tim. 2013. "OB298: A Preliminary Atlas of a Drone Strike Landscapes." *Quiet Babylon*. Accessed July 30, 2014: <http://quietbabylon.com/2013/ob298-a-preliminary-atlas-of-drone-strike-landscapes-2/>.
- McBee, Josh. 2012. "IBISWorld Industry Report OD4424: Unmanned Aerial Vehicle (UAV) Manufacturing in the US." IBISWorld.

- McGarry, Brendan. 2012. "Drones Most Accident-Prone U.S. Air Force Craft: BGOV Barometer." *Bloomberg News*, June 18. Accessed January 14, 2014: <http://www.businessweek.com/news/2012-06-18/drones-most-accident-prone-u-dot-s-dot-air-force-craft-bgov-barometer>.
- Miller, Greg. 2012. "Plan For Hunting Terrorists Signals U.S. Intends to Keep Adding Names to Kill Lists," *The Washington Post*, October 23. Accessed May 20, 2015: http://www.washingtonpost.com/world/national-security/plan-for-hunting-terrorists-signals-us-intends-to-keep-adding-names-to-kill-lists/2012/10/23/4789b2ae-18b3-11e2-a55c-39408f6e6a4b_story.html.
- Miller, Greg. 2013. "Lawmakers Propose Giving Federal Judges Role in Drone Strikes, But Hurdles Await." *The Washington Post*, February 8. Accessed May 20, 2015: http://www.washingtonpost.com/world/national-security/proposal-to-give-federal-judges-a-role-in-drone-strikes-faces-hurdles/2013/02/08/66f53508-721a-11e2-8b8d-e0b59a1b8e2a_story.html.
- Newsweek Staff. 2008. "Military UAVs: Up in the Sky, An Unblinking Eye." *Newsweek*. May 31. Accessed August 1, 2013: <http://www.newsweek.com/military-uavs-sky-unblinking-eye-89463>.
- NPR Staff. 2015. "'War Rugs' Reflect Afghanistan's Long History with Conflict," *All Things Considered* February 07. Accessed February 10: <http://www.npr.org/2015/02/07/384576113/war-rugs-reflect-afghanistans-long-history-with-conflict>.
- Obama, Barack. 2013. Remarks by the President at the National Defense University. *White House Office of the Press Secretary*, May 23.
- Ong, Aihwa. 2006. *Neoliberalism as Exception: Mutations in Citizenship and Sovereignty*. Durham, NC: Duke University Press.
- Peterson, Scott and Payam Faramarzi. 2011. "Exclusive: Iran hijacked US drone, says Iranian engineer." *The Christian Science Monitor*, December 15. Accessed September 9, 2013: <http://www.csmonitor.com/World/Middle-East/2011/1215/Exclusive-Iran-hijacked-US-drone-says-Iranian-engineer-Video>
- Priest, Dana and William Arkin. 2011. "'Top Secret America': A Look At The Military's Joint Special Operations Command." *The Washington Post*, September 2. Accessed May 20, 2015: http://www.washingtonpost.com/world/national-security/top-secret-america-a-look-at-the-militarys-joint-special-operations-command/2011/08/30/gIQAyYuAxJ_story.html.
- Rothstein, Adam. 2013. "How to Write Drone Fiction." *The State*, January 20. Accessed January 30, 2013: <http://www.thestate.ae/how-to-write-drone-fiction/>.
- Sandvik, Kristin Bergtora and Kjersti Lohne. 2014. "The Rise of the Humanitarian Drone: Giving Content to an Emerging Concept." *Millenium* 43 (1): 145-164.
- Scahill, Jeremy. 2013. *Dirty Wars: The World is a Battlefield*. New York: Nation Books.
- Scahill, Jeremy and Glenn Greenwald. 2014. "The NSA's Secret Role in the US Assassination Program." *The Intercept*, February 10. Accessed August 1, 2014: <https://firstlook.org/theintercept/article/2014/02/10/the-nsas-secret-role/>.
- Scott, James C. 1998. *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT: Yale University Press.
- Stangler, Cole. 2013. "The Drone Boom." *In These Times*, August 16. Accessed August 17 2013: http://inthesetimes.com/article/15476/the_drone_boom/.
- Sterling, Bruce. 2012. "An Essay on the New Aesthetic." *Wired*, April 2. Accessed May 7 2012: http://www.wired.com/beyond_the_beyond/2012/04/an-essay-on-the-new-aesthetic/.
- The Teal Group. 2013. "The Teal Group Predicts Worldwide UAV Market Will Total \$89 Billion in Its 2013 UAV Market Profile and Forecast." Press Release, June 17. Accessed August 17, 2013: <http://tealgroup.com/index.php/about-teal-group-corporation/press-releases/94-2013-uav-press-release>.
- Ungerleider, Neal. 2013. "CODEPINK To Fly Drone Over Predator Manufacturer's Mansion." *Fast Company*, April 5. Accessed January 14, 2014: <http://www.fastcompany.com/3007952/fast-feed/codepink-fly-drone-over-predator-manufacturers-mansion>.
- Wall, Tyler and Torin Monahan. 2011. "Surveillance and Violence from Afar: The politics of Drones and Liminal Security-Scapes." *Theoretical Criminology* 15 (3): 239-254.
- Walters, Williams. 2014. "Drone Strikes, *Dingpolitik*, and Beyond: Furthering the Debate on Materiality and Security." *Security Dialogue* 45 (2): 101-118.
- Wa Ngugi, Mukoma. 2013. "How Al-Shabaab was Born." *The Guardian*, October 4. Accessed May 20, 2015: <http://www.theguardian.com/world/2013/oct/04/kenya-westgate-mall-attacks>.
- Weinberger, Sharon. 2010. "In Cat Vs. Drone, Cat Wins." *AOL News*. Accessed September 7 2013: <http://www.aolnews.com/world/article/in-cat-vs-drone-cat-wins/19450090>.
- Welch, Alex and Chris Mooney. 2008. "McCain, Obama in Heated Exchange Over Iraq." *CNN*, February 28. Accessed March 14, 2014: <http://www.cnn.com/2008/POLITICS/02/27/mccain.obama.iraq/>.
- Whitlock, Craig. 2014. "When Drones Fall From the Sky." *The Washington Post*, June 20. <http://www.aolnews.com/world/article/in-cat-vs-drone-cat-wins/19450090>.
- Whitlock, Craig and Greg Miller. 2013. "U.S. Moves Drone Fleet From Camp Lemonnier to Ease Djibouti's Safety Concerns." *The Washington Post*, September 24. Accessed May 20, 2015: http://www.washingtonpost.com/world/national-security/drone-safety-concerns-force-us-to-move-large-fleet-from-camp-lemonnier-in-djibouti/2013/09/24/955518c4-213c-11e3-a03d-abbdc3a047c_story.html.

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