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RESEARCH

Drones and Surveillance Cultures in a Global World

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Digital technologies are essential to establishing new forms of dominance through drones and surveillance systems; these forms have significant effects on individuality, privacy, democracy, and American foreign policy; and popular culture registers how the uses of drone technologies for aesthetic, educational, and governmental purposes raise questions about the exercise of individual, governmental, and social power. By extending computational methodologies in the digital humanities like macroanalysis and distant reading in the context of drones and surveillance, this article demonstrates how drone technologies alter established notions of war and peace, guilt and innocence, privacy and the common good; in doing so, the paper connects postcolonial studies to the digital humanities.

Keywords: Drones; Surveillance; Digital Humanities; Postcolonial studies; Globalisation; Digital cultures

Les technologies numériques sont essentielles pour établir de nouvelles formes de domination par le biais des drones et des systèmes de surveillance. Ces formes ont des effets importants sur l'individualité, la vie privée, la démocratie et la politique étrangère américaine. La culture populaire dénombre un éventail de ces effets employant des technologies de drones pour des objectifs esthétiques, éducatifs et gouvernementaux d'une manière qui soulève des questions sur la mise en pratique du pouvoir individuel, gouvernemental et social. En étendant des méthodologies statistiques des Humanités numériques, tels que la macroanalyse et la lecture globale, dans le contexte des drones et de la surveillance, cet article démontre la façon dont les technologies numériques modifient fondamentalement les notions déjà établies de la guerre et de la paix, de la culpabilité et de l'innocence, de la vie privée et du bien commun. De ce fait, cet article lie les études post-coloniales aux Humanités numériques.

Mots-clés: Drones; Surveillance; Humanités numériques; études post-coloniales; Mondialisation; Cultures numériques

Za Kaom Pa Stargo Stargo Drone Hamla (my gaze is as fatal as a drone attack). Song performed by Sitara Younas, Pashto singer

"How the digital humanities advances, channels, or resists today's great postindustrial, neoliberal, corporate, and global flows of information-cum-capital is thus a question rarely heard in the digital humanities…"

—Alan Liu, "Where is Cultural Criticism in the Digital Humanities?"

I make three central arguments in this paper: the use of digital technologies is essential to establishing new forms of dominance through drones (unmanned automated vehicles, UAVs) and surveillance systems; these forms have significant effects on individuality, privacy, democracy, and American foreign policy; and popular culture registers how the use of drone technologies for aesthetic, educational, and governmental purposes raises complex questions about the exercise of individual, governmental, and social power. In what follows, I first highlight the cultural turn in the digital humanities in order to open up a critical terrain to study the militarized and civilian uses of drones and the surveillance cultures they engender; second, I focus on drones as disruptive technologies that thrive on surveillance regimes; and third, I study the creative appropriations of drone technologies by artists and singers seeking to counter the global reach of digital networks that enable some nation-states to wield power over largely post-colonial societies, and control the social, legal, and political meanings of innocence and guilt, privacy and freedom. Taken together, these approaches help us infuse cultural criticism in the digital humanities and connect postcolonial studies with the digital humanities.

Digital Humanities and the cultural turn

Over the last two decades, digital humanities emerged as a promising field of inquiry in which interdisciplinary collaboration in the sciences and the humanities lead to new digital tools, multimodal interfaces, and hybrid methodologies. Early initiatives are often traced back to the electronic concordance of Saint Thomas Aquinas' works, first created by Jesuit priest Father Roberto Busa in the 1950s, by partnering with International Business Machines (IBM). The use of computing in the humanities became the key topic for literary scholars and scientists in seminars offered by IBM,

and in 1966, they published *Computers and the Humanities* (Hindley 2013). In the decades that followed, digital technologies grew so rapidly that they spawned a dizzying array of communication and information tools and systems.

Using computational approaches to the humanities, the digital humanities has generally concerned itself with text encoding, text mining, machine learning, database creations, archiving, curating, data visualization, algorithmic criticism, and distant reading. Organizations like the *Office of Digital Humanities of the National Endowment for the Humanities, Alliance of Digital Humanities Organizations, Humanities, Arts, Science, and Technology Alliance and Collaboratory, Association for Computers and Humanities, Canadian Society for Digital Humanities, Australian Association for Digital Humanities, Japanese Association for Digital Humanities, European Association for Digital Humanities*, and the panels of DH at the *Modern Language Association Conference*, THAT CAMP, and other conferences, including several journals, blogs, anthologies, university press series, undergraduate and graduate courses and programs, and regional and national grants and fellowships all show the discipline's growing institutionalization in higher education in America and other parts of the world.

A central debate in the digital humanities concerns computing: one side argues that the digital humanities mark the computational turn in the humanities, whereas the other side acknowledges the turn but broadens its focus to include the social and cultural impact of digital technologies (Berry 2012, 5). Scholars identify three waves or phases in digital humanities. The first phase focused on digitization, codes, software, and archiving; the second phase emphasized interactivity, making the data malleable, developing multimodal environments, and visualization; the third phase uses "digital toolkits in the service of the Humanities' core methodological strengths: attention to complexity, medium specificity, historical context, analytical depth, critique and interpretation" (Presner, Schnapp, and Lunenfeld 2009). Perhaps (Muthyala 2016), it's the nature of an emerging field to develop concepts and meta-critical acumen about its assumptions and practices, which are themselves emerging (new or realigned developments) and emergent (coming into being in relation to the urgency or need of scholarly or creative occasion). There is also a hackers vs

yackers divide: the hackers do the splendid inventions, creations, and euphoric discoveries that bring in millions of dollars and make life worth living, while the yackers ask uncomfortable questions about meaning, context, nuance, policy, purpose, pedagogy, social, political, and economic implications, ethics, the good life, and make the examined life miserable (Pannapacker 2013). Stressing coding as essential to DH, Stephen Ramsay contends, "Personally, I think digital humanities is about building things [...] If you are not making anything, you are not [...] a digital humanist" (Gold, 2012a). DH registers a transformation that is about "moving from reading and critiquing to building and making" (Gold, 2012a). Write David M. Berry and Anders Fagerjord (2017): "As digital technology has swept over the world, the humanities too have undergone a rapid change in relation to the use and application of digital technologies in scholarship [...] Humanities research has been irrevocably transformed, as indeed have everyday life, our societies, economies, cultures and politics" (1). There is no going back to a pre-digital world; we are in a post-digital era, because "the tendrils of digital technology have in some way touched everyone" (Cascone 2000, 12). The digital is here to stay. What we do with it is what matters.

Tongue-in-cheek yet with insight, Marjorie Burghart (2013) suggests three orders reminiscent of the three Medieval Orders, loosely defined, operating in digital humanities: "Oratores, bellatores, laboratores: those who pray, those who fight, those who work." There are those who work and do things and produce new codes, software, systems, and tools used for scholarship and creativity; there are those who work hard to legitimize this work to non-specialists, the general public, and scholars in other disciplines; they fight the rhetorical battles to gain institutional prestige and academic credibility; and then there are those "non-practicing believers," who are "interested by the DH phenomenon and enthusiastic, but not involved themselves in any practical aspect" (Burghart 2013). Since the aim here is not to rehearse the task of defining and explaining digital humanities, suffice it to say that these definitions are extended in several works: Susan Schreibman, Ray Siemens, and John Unsworth's (2004) *A Companion to Digital Humanities*; Columbia University's Round Table on DH (Center for Digital Research and Scholarship 2011) at the Center for Research and Scholarship, "Research Without Borders: Defining the Digital Humanities";

Todd Presner, Jeffrey Schnapp, and Peter Lunenfeld's (2009) *Digital Humanities Manifesto 2.0*; David M. Berry's (2012) *Understanding the Digital Humanities*; Anne Burdick et al's (2012) *Digital_Humanities*; Matthew K. Gold's (2012b) *Debates in the Digital Humanities* and Melissa Terras, Julianne Nyhan, and Edward Vanhoutte's (2013) *Defining Digital Humanities: A Reader*. A pointed criticism about the digital humanities comes from Alan Liu (2012), who argues that cultural criticism is notably absent in the digital turn in the humanities:

> *While digital humanists develop tools, data, and metadata critically, therefore (e.g., debating the "ordered hierarchy of content objects" principle; disputing whether computation is best used for truth finding or, as Lisa Samuels and Jerome McGann put it, "deformance"; and so on), rarely do they extend their critique to the full register of society, economics, politics, or culture. How the digital humanities advances, channels, or resists today's great postindustrial, neoliberal, corporate, and global flows of information-cum-capital is thus a question rarely heard in the digital humanities associations, conferences, journals, and projects with which I am familiar.*

Liu's call for cultural criticism in the digital humanities is noteworthy, because the tendency to define the field primarily as an extension of computational humanities continues to gain purchase in public discourse; to critics like Stanley Fish (2018), digital humanities are deeply suspect: "administrators who pour funds and resources into the digital humanities are complicit in the killing of the humanities." Recently, in criticizing the institutional cachet of digital humanities and what he views as hasty, misguided approaches to use statistical methods for literary analysis, Fish (2019) notes, "At bottom CLS [computational literary studies] or Digital Humanities is a project dedicated to irresponsibility masked by diagrams and massive data mining." Timothy Brennan (2017) asks, "After a decade of investment and hype, what has the field accomplished?" His answer is sharp: "Not much" (Brennan 2017). Adam Kirsch (2014) sounds the alarm, proclaiming that "technology is taking over English departments," which is a "false promise of the digital humanities." Oddly enough, to

these critics, the digital humanities begins and ends with computational humanities, a view demonstrating a lack of awareness of the extensive discussions about the field, including whether it can even be called a field or discipline. Fish's blaming administrators who support the digital humanities as being "complicit" in their devaluation is the kind of myopic, hyperbolic rhetoric we often find in political campaigns where, despite evidence to the contrary, candidates blame each other for all the ills of the world—the real, the imagined, the fanciful, the grotesque—and then some. Liu's call to move beyond the computational towards the cultural turn in the digital humanities is, therefore, more urgent than before; his warning to think institutionally and socio-politically about the digital humanities by examining vast systems and networks that facilitate the flow of money, power, and influence by individuals, groups, and nation-states finds resonance in Daniel Allington, Sarah Brouillette, and David Golumbia's (2016) indictment of higher education's growing dependency on neoliberal values and business models. Arguing that digital humanities "discourse sees technological innovation as an end in itself and equates the development of business models with political progress," they contend, "the unparalleled level of material support that Digital Humanities has received suggests that its most significant contribution to academic politics may lie in its (perhaps unintentional) facilitation of the neoliberal takeover of the university" (Allington, Brouillette, and Golumbia 2016). Likewise, Anne Cong-Huyen (2013) observes that the field has tended to remain insular by focusing heavily on technological expertise, as if without it one cannot become part of the discipline or really understand it:

> *These digital and electronic technologies are of particular importance because they are often perceived as being neutral, without any intrinsic ethics of their own, when they are the result of material inequalities that play out along racial, gendered, national, and hemispheric lines. Not only are these technologies the result of such inequity, but they also reproduce and reinscribe that inequity through their very proliferation and use, which is dependent upon the perpetuation of global networks of economic and social disparity and exploitation.*

Similarly, Tara McPherson (2012) says that "the difficulties we encounter in knitting together our discussions of race (or other modes of difference) with our technological productions within the digital humanities (or in our studies of code) are actually an *effect* of the very designs of our technological systems, designs that emerged in post-World War II computational culture." The impulse to move beyond race by advocating colour-blindness worked closely like the modular systems that protected the coding logic intact by making it functionally invisible in order to enhance other uses and expectations. Likewise, in "Cultural Politics, Critique, and the Digital Humanities," Tanner Higgin (2010) argues that unless we critique the broader institutional and systemic conditions that have allowed the digital humanities to emerge as they have now, the discipline will replicate inequality, because there are "far more subtle ways technologies reproduce oppressive social relations in everyday life within and without academia." Higgin sees a "potentially techno fetishistic obsession in DH with technological transformation via the creation and use of various digital tools/platforms/networks, etc. as agents of social change. These efforts are often performed under the guiding ethos of collaboration which often becomes an uncritical stand-in for an empty politics of access and equity" (Higgin 2010).

Adding yet another critical angle to the debate, Alex Reid (2014) argues that the scientific worldview can also be unexaminedly appropriated by the humanities, including the very distinction between them that the humanities seek to dismantle. The risk is that the human in the humanities loses its central role as a subject and agent of experience, knowledge, and consciousness. In "Critical Theory and the Mangle of Digital Humanities," Todd Presner (2015) seeks to connect critical theory to digital humanities by not flattening out the differences between doing or building something with digital technologies and the appreciative, interpretive, and contextually analytical impulses of the humanities; he suggests that "the first challenge for digital humanities is to develop both critical and genealogical principles for exposing its own discursive structures and knowledge formations at every level of practice, from the materiality of platforms, the textuality of the code, and the development of content objects to the systems of inclusion and exclusion, truth and falsehood governing its disciplinary rituals, doctrines, and social systems"

(60). It is what concerns Adeline Koh (2014), who argues that the discourse of civility, the social contract for participating in liberal society, in digital humanities has two requirements: 1) "the practice of *civility*, or niceness; and 2) *possession of technical knowledge*, defined as knowledge of coding or computer programming" (94; italics from original) These two stipulations function as "rules" for "entry to the scholarly field" (Koh 2014, 94). Like Koh, Gary Hall cautions against drawing heavily on science to re-orient the humanities, as if the latter were more in need of re-assessment than the former, which implicitly privileges the one over the other; instead, Hall asks, "Along with a computational turn in the humanities, might we not also benefit from more of a humanities turn in our understanding of the computational and the digital?" (2011, 2).

In cautioning practitioners and scholars in digital humanities to avoid relying excessively on the sciences or assuming that scientific methodology in its quantitative modality is fundamentally unlike the unstable interpretive knowledge the humanities offers, Liu, Cong-Huyen, McPherson, Ramsay, Higgin, Allington, Brouillette, Golumbia, Reid, Presner, Koh, and Hall emphasize the need to rethink, not just reposition, the digital humanities in relation to institutional operations, governmental policies, demographics shifts, and cultural orientations that support and legitimize the sciences; in other words, the cultural turn in the digital humanities is necessary and urgent.

Drone warfare and empire in the 21st century

One way to extend these critics' ideas is to examine the rise of two recent phenomena: drones and surveillance. With their bulbous front-ends, the Predator, Reaper, and Global Hawk are the iconic symbols of drones. 27 ft in length and with a wingspan of 55 ft, the Predator can fly for 24 hours at 25,000 ft, and the system costs $20 million. 36 ft in length and with a wingspan of 66 ft, the Reaper can fly for 24 hours at 50,000 ft, and the system costs $26.8 million. 48 ft in length and with a wingspan of 131 ft, the Global Hawk can fly for 28 hours at 60,000 ft and costs $140.9 million (Gertler 2012, 31) (**Figures 1** and **2**). Other models and platforms, with varied operational histories, include Firescout, Grey Eagle, Hawk, Hunter, Hummingbird, Nano, Prowler

Figure 1: Global Hawk.

Figure 2: Reaper Drone.

II, Puma, Raven, ScanEagle, Sentinel, Shadow, Switchblade, T-Hawk, Warrior, Wasp III, (Gertler 2012, 8; AeroVironment 2019). Companies producing drones or drone technology include General Atomics, AeroVironment, Raytheon, Boeing, Northrop Grumman, and Lockheed Martin (Benjamin 2013, 34–54). Drones like Switchblade can fire missiles and also plunge towards a target in a suicide mission to kill it. Research is being conducted to produce technology that will enable drones to be

almost fully automatic, requiring little pilot control (Benjamin 2013, 37). On May 14, 2013, a drone, X-47B, took off from an aircraft carrier, setting a precedent for drone warfare, because it makes mobile the infrastructural needs of maintaining, protecting, and launching drones from areas over which the military can establish control. This development sets "the way for the US to launch unmanned aircraft from just about any place in the world" (Vergakis 2013).

The efficacy of drone warfare, from a military perspective, is predicated on the range and quality of the military, technological, and political infrastructure necessary to share intelligence, coordinate missions, and execute them successfully. The "military's secret military," (Turse 2012, 12) referred to as US Special Operations Command (SOCOM), set up in 1987, today includes the Green Berets, Rangers, Navy Seals, Air Force Air Commandos, and Marine Corp Special Operations Teams. This unit "carries out the United States' most specialized and secret missions. These include assassinations, counter-terrorist raids, long-range reconnaissance, intelligence analysis, foreign troop training, and weapons of mass destruction counter-proliferation operations" (Turse 2012, 12). Its core cell, SOCOM, acts under the President's direct supervision. Countries where SOCOM is or was active include Afghanistan, Bahrain, Belize, Brazil, Bulgaria, Burkina Faso, Dominican Republic, Egypt, Germany, Indonesia, Iran, Iraq, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Mali, Norway, Oman, Pakistan, Panama, Poland, Qatar, Romania, Saudi Arabia, Senegal, South Korea, Syria, Tajikistan, Thailand, Turkmenistan, United Arab Emirates, Uzbekistan, and Yemen (Turse 2012, 15–16). To maintain, manage, and deploy drones, command and control centres with varying degrees of sophisticated infrastructure and technological capabilities have been sent up in 60 bases all over the world, including in Arizona, Florida, Missouri, New Mexico, New York, North Dakota, Ohio, South Dakota, and Texas. The drones, Special Operations Command, and control centres "are the backbone of the new American robotic way of war. They are also the latest development in a long-evolving saga of America power projection abroad; in this case, remote-controlled strikes anywhere on the planet with a minimal foreign 'footprint' and little accountability" gain normalcy (Turse 2012, 22), as "bayonet, telegram, and cannon have been replaced by data mining, satellite reconnaissance,

and long distance strikes by weaponized drones" (Hensley 2018, 228). In short, "drones are power tools with the ability to transform the political and social landscape forever" (Yehya 2015, 3). And when we map the landscape of drone wars, "we jibe against the limits of cartographic and so of geopolitical reason," which transforms drone wars into "the everywhere war," observes Derek Gregory (2011, 239). This war "transforms the concept the battlefield into a multidimensional 'battlespace' where the enemy is fluid and indeterminate," writes Christine Agius, further adding, "this vertical form of control re-asserts a type of neo-colonial surveillance and ordering that renders contingent any claims to sovereignty, constantly routinizing insecurity in certain spaces" (2017, 372; 380).

Drone wars can take place anytime and anywhere; they re-define notions of normalcy and exception, as they generate constant insecurity by waging perpetual war. In drone warfare, it is difficult to ascertain when a country is at war, and when it is not, when conditions of peace prevail, and when they don't, because the anytime-everywhere matrix enables powerful states to create and manage conditions of emergency on a scale that is trans-territorial and biopolitical. In *A Theory of the Drone*, Grégorie Chamayou (2015) highlights principles that give institutional character and social power to drones: "persistent surveillance or permanent watch; totalization of perspective or synoptic viewing; creating an archive or film of everyone's life; data fusion; schematization of forms of life; detection of anomalies and pre-emptive anticipation" (38–42).

Unlike traditional war in which the machinery of combat—troops, tanks, weapons, electronic gadgets, munitions, battleships, fighter jets—is assembled, managed, and deployed, and often visible to the eye, this new war is fought in secrecy. It's a cheap war. It's an invisible war. It's a war of stealth and silence. Consider what transpired over the last two decades: in Pakistan, under President George W. Bush, there were 48 drone strikes, 116–137 civilian deaths, and 218–326 militant casualties, and under President Obama, there were 353 strikes, 129–162 civilian deaths, and 1,659–2,683 militant casualties (New America 2019a). In Yemen, Bush authorized 1 strike resulting in zero civilian casualties, and six militants killed, while Obama authorized 184 strikes, leading to 89–101 civilians killed, and 973–1,240

militants killed (New America 2019b). In his first two years, President Donald Trump continued Obama's aggressive use of drones, by authorizing 112 strikes in Pakistan and Yemen combined; if this rate continues during his presidency, he will surpass Obama's drone strike record (Wolfgang 2018).

The efficacy of drone warfare rests on the quantity and quality of data collected through surveillance (Drew 2009). As they hover in the air, drones secretly surveil entire towns and villages or zero in on buildings and moving objects, while recording thousands of hours of data and feeding them in live or recorded formats, so that pilots, analysts, operators, generals, and others can engage in data mining, target identification, tracking, and elimination. Analysts working in the Algorithmic Warfare Cross-functional Team, a result of Project Maven to "accelerate DoD's integration of big data and machine learning," would then spend time "turning countless hours of aerial surveillance into actionable intelligence" (Weisgerber 2017). In other words, certain methodologies of computational digital humanities—macroanalysis and distant reading—are the sine qua non of drone warfare. In *Macroanalysis: Digital Methods and Literary History*, Matthew Jockers (2013) argues that working with big data can help literary scholars ask new questions about genre, history, gender, and stylometry. As a complement, not substitute, to close reading, he advances macroanalysis to "emphasize that massive digital corpora offer us unprecedented access to the literary record and invite, even demand, a new type of evidence gathering and meaning making" (Jockers 2013, 8). He adds, "[…] the literary researcher must embrace new, and largely computational, ways of gathering evidence […]. More interesting, more exciting, than panning for nuggets in digital archives is the ability to go beyond the pan and exploit the trommel of computation to process, condense, deform, and analyze the deeper strata from which these nuggets were born, to unearth, for the first time, what the corpora really contain" (Jockers 2013, 9–10). Instead of only emphasizing "an examination of seminal works," we can study the "aggregated ecosystem or 'economy' of texts" (Jockers 2013, 32).

Along similar lines, Franco Moretti (2013) in *Distant Reading* opines that we should not rely on single or small text samples to create a historical period or literary canon or detail genres and styles and plots, but engage with large data sets

of information and learn to mine and interpret them for their nodes, networks, proximities and distances from other nodes and networks. Distant reading, he contends, "allows you to focus on units that are much smaller or much larger than the text: devices, themes, tropes—or genres and systems. And if, between the very small and the very large the text itself disappears, well, it is one of those cases when one can justifiably say, Less is more. If we want to understand the system in its entirety, we must accept losing something" (Moretti 2013, 48–9). Moretti seeks to apprehend literature or history as textual systems and networks by examining or distantly reading, as it were, large corpora containing metadata of thousands of texts and analyzing them across time by visualizing datasets.

Within digital humanities as computational literary studies (CLS), these approaches have come under scrutiny, the latest being Nan Z. Da's (2019) "The Computational Case Against Computational Literary Studies." In examining several case studies, Da (2019) argues that

> *Data sets with high dimensionality are decompressed using various forms of scalar reduction (typically through word vectorization) whose results are plotted in charts, graphs, and maps using statistical software. (605)*

She finds problems with how tagging and categorizing word frequencies and associations, pronoun uses and clusters, and finding patterns and inflections in large corpora are used to make arguments about gender, genre, literary history, themes, etc. In some cases, using the scientific model of replicating lab experiments in controlled settings, Da develops her own computational projects using similar or the same data sets, and arrives at different findings, especially when English texts are translated into other languages and non-English texts are used to read them distantly, as it were, or macroanalytically. Reviewing her study and other interventions in computational literary studies, like Ted Underwood's (2019) *Distant Horizons: Digital Evidence and Literary Change*, is not my aim here. It is to note that Da uses computational methodology to critique computational literary studies, in order to argue the following: "Quantitative visualization is intended to reduce complex

data outputs to its essential characteristics. CLS has no ability to capture literature's complexity" (Da 2019, 643; Critical Inquiry 2019).

A good case can be made for the value of CLS to advance systems thinking in literary studies, to generally, provisionally, and visually plot the wide range of datasets gleaned from literary production over time; there is value in moving beyond a small corpus of texts when claims to their representational status are taken for granted or inadequately interrogated. CLS enable us to raise different, new, or recalibrated questions about literary taste, reading habits, genre evolution, and sub-genre transformations, including predictive analytics. However, my aim here is to draw from these debates to make a case for the cultural turn in the digital humanities, so that we do not end up privileging computational literary studies or humanities computing as the primary field for disciplinary valorization and professional identity; moreover, my aim is to use humanities methods of textual analysis, contextual inquiry, historical understanding, and conceptual, theoretical argumentation to study multi-genre and multimodal cultural productions that thematize the digital and technologically embody the digital in the context of drone warfare and the transnational surveillance cultures they generate.

I am not saying there is a causal link between DH and drone warfare. What I am saying is that there are similarities in structure and method between them that need urgent scholarly examination. Like its analog precursor, the digital, to extend on Edward Said, is "in the world, and hence worldly," and is "always enmeshed in circumstance, time, place, and society" (Said 1983, 35). Whatever the vastness of digital corpora, the complexity of coding languages, and the sophistication of algorithmic, robotic logics that compress information in space and time to generate analytics with predictive power, the conception, production, dissemination, and use of the digital are worldly endeavours, a series of innumerable acts and motivations profoundly and inescapably shaped by human interests, local pressures, national trends, and global flows. To engage with the worldliness of the digital is to grasp technological innovation as a social and cultural phenomenon that can rewrite, erase, re-draw, or affirm the histories, cultures, and spaces of many peoples and living

things in the world; it is to grasp the digital as affording new ways of conceiving of the world and our being in the world. The worldliness of the digital links First World concerns with so-called Third World realities, by foregrounding the enduring legacies of colonialism and the struggle for post-colonial provenance. Put differently, whereas computational literary studies involve digitizing metadata about literary texts and creating algorithms to retrieve data sets and read them for patterns, repetitions, inflections, and shifts in textual systems, drones and surveillance technologies generate and use data about peoples, cities, villages, towns, and terrains to detect patterns, repetitions, inflections, and shifts in human and animal behaviour with one central aim: track, identify, kill. Some methodologies that have become part of the digital humanities, whose lineage extends into computational humanities, are also essential practices in drone warfare and global surveillance.

These technologies connect vast trans-regional communication networks, command and control centres, video and image feeds, intelligence analyses, military officials, and politicians working in real-time in locations strewn across the world to assess, interpret, and decide whom to kill, where to kill, when to kill. The network of cables, satellites, and screens, the jumble of joy sticks, keyboards, and computers, and the ensemble of bytes, pixels, and video feeds all coalesce to create a global theatre of war; in this theater, the contours and sensory attributes of material reality are looped endlessly in pixels and bytes; they are processed to recreate digital data and knowledge whose power to render the physical world intelligible and controllable and conquerable is of a piece with the sophisticated technology, pragmatic ingenuity, and exceptionalist thinking that characterize American society.

Anarchy of global surveillance

Kevin Haggerty and Richard Ericson (2007) propose a new paradigm called "surveillant assemblage" to describe surveillance as a process that manages the flow of information and data produced through a surveillance of ideas, things, and people in migration, thus making mobility a crucial dimension of the politics of visibility. They write:

> *This assemblage operates by abstracting human bodies from their territorial settings and separating them into a series of discrete flows. These flows are then reassembled into distinct 'data doubles' which can be scrutinized and targeted for intervention. In the process, we are witnessing a rhizomatic leveling of the hierarchy of surveillance, such that groups which were previously exempt from routine surveillance are now increasingly being monitored. (Haggerty and Ericson 2007, 104)*

The body here becomes disembodied but does not replace the corporeal body but acts as its "data double" (Haggerty and Ericson 2007, 109). Surveillance, writes Daniel J. Solove (2004) in *The Digital Person: Technology and Privacy in the Information Age*, leads to the creation of "digital dossiers" that are "collection[s] of detailed data about an individual. [...] data is digitized into binary numerical form, which enables computers to store and manipulate it with unprecedented efficiency" (1–2). A prominent theorist of information technology and data management, Roger A. Clarke (1998) in "Information Technology and Dataveillance" coins the term "dataveillance" to characterize a new modality of surveillance enhanced by the growth of digital technologies: "dataveillance is the systematic use of personal data systems in the investigation or monitoring of the actions or communications of one or more persons" (499). Dataveillance in this context is best apprehended as "meticulous rituals of power," asserts William G. Staples (2003) in *Everyday Surveillance*, because they are "microtechniques of social monitoring" and "'small' procedures and techniques that are precisely and thoroughly exercised"; they are "ritualistic because they are faithfully repeated and are often quickly accepted and routinely practiced with little questions"; and they exude "power because they are intended to discipline people into acting in ways that others have deemed to be lawful or have defined as appropriate or simply 'normal'" (xii, 3).

Hence, the Gorgon Stare: with twelve cameras, the MQ-9 Reaper can surveil an area of four kilometers and produce images and video feeds that can be differentially accessed and analyzed by people separated in space and time (Shachtman 2009). A drone with ARGUS-IS (Autonomous Real-Time Ground Ubiquitous Surveillance-Imaging Systems) takes this further: it can cover fifteen square miles and send video

feed to sixty-five windows, each capable of focusing continuously on a moving target or one location (Hambling 2009). In 2005 during the Bush presidency, the Force Application and Launch Continental United States Program (Falcon) was designed to release remote controlled spacecraft that could fly close to five times faster than the speed of sound, at 100,000 feet, and with 1000 pounds of armaments and supplies. The aim of the program, in the words of John E. Pike, of GlobalSecuirty.org, is to "crush someone anywhere in world [sic] on 30 minutes' notice with no need for a nearby air base" (Pincus 2005). "Surveillance, a technology of racial sorting and subjugation," writes Jennifer Rhee, "structures drone technology and its dehumanizing tendencies" (2018, 164). Drone surveillance establishes a "regime of figuration, a way of seeing and, therefore, a modality of thought," argues Nathan K. Hensley (2018, 229).

The Gorgon Stare, ARGUS, and Falcon are designed to bring all things within their scopic purview and enable America to establish global strike capacity. They seek and probe and trace and map the daily activities of several groups of people, including women and children, without their knowledge. In *Drone: Remote Control Warfare*, Hugh Gusterson observes, "As the drones gaze unblinkingly from above, there can be voyeuristic pleasure in watching the Other. In fact, it is hard to imagine a more voyeuristic technology than the drone" (2016, 62). Some of them would turn out to be terrorists or actively aiding them, but not all. But to catch the few, the Gorgon Stare compels all whom it watches to lose privacy and dignity. To apprehend the few, the Gorgon Stare requires all whom it sees to demonstrate their innocence.

The Gorgon Stare is biopolitical in two ways: it moves beyond the individual to surveil people as a totality, a mass of subjects made amenable to the scopic, panoramic gaze of the drone, and it seeks to manage and regularize life. As Michel Foucault explicates, "It is therefore not a matter of taking the individual at the level of individuality but, on the contrary, of using overall mechanisms and acting in such a way as to achieve overall states of equilibrium or regularity; it is, in a word, a matter of taking control over life and the biological process of man-as-species and of ensuring that they are not disciplined, but regularized" (1997, 246–7). Biopower seeks to manage all of life, or bring the multitude of the living under the domain of governmentality—to administer, to take charge, to mange, to sort,

to distribute, to maintain life. It is this biopolitical impulse that gains incredible computational and surveillant power in the age of drones and the cultures of surveillance they engender.

Thus, the drone instantiates a new structure of biopolitical power that seeks invasive domination through constant, secret surveillance of a space, its peoples, its inhabitants. It is within the drone's optic field of operations that guilt is assumed and innocence a burden to be proven. The terror of the drone is not only that it takes life without notice and with blinding speed, or that it comes from nowhere and recedes into nowhere, or that it hums its presence and withdraws into thin air whenever it chooses. It is much more than that—it adjudicates life on a daily basis of surveillance that considers everyone suspicious, leaving little room for innocence to become the norm and guilt an aberration. This is the terrifying nature of the Drone: it is a predator on the prowl not only for those intending to cause harm, but for those who, in some situations, cannot speak, establish, or convey their innocence.

A good example of how these risks have become military tactics in drone warfare is the "signature strike," a strategy for increasing domination through dataveillance where nuances and specificities are subsumed into behavioural types, correlative data doubles, and predictive analyses (De Luce and Paul Mcleary 2016). As one operator says, "the drone program amounts to little more than death by unreliable metadata" (Storm 2014), because, as Alcides Eduardo dos Reis Peron points out, "the practice of constructing an enemy before identifying him, and incriminating all those related to him, is extremely controversial and insufficient to properly clarify those on the ground as enemies" (2014, 91). Moreover, "according to several administration officials," write Jo Becker and Scott Shane (2012), the policy "in effect counts all military-age males in a strike zone as combatants. […] unless there is explicit intelligence posthumously proving them innocent." This policy goes beyond surveilling and identifying individual terrorists to targeting groups of people engaged in suspicious activity.

Derek Gregory (2014) observes, "Combatants are thus vulnerable to violence not only because they are its vectors but also because they are enrolled in the apparatus that authorizes it: they are killed not as individuals but as the corporate bearers of

a contingent (because temporary) enmity" (7). Peter Bergen notes (2012), "These are drone attacks based on patterns of merely suspicious activity by a group of men, rather than the identification of a particular individual militant."

When drones are equipped with transceivers or Air Handlers to mimic satellite towers to absorb telephonic communication, which is looped into data feeds for target analysis by intelligence and military personnel, the identity of a suspect becomes predicated on patterns of phone use. In instances where a strike is authorized, it is the SIM card (subscriber identification module) of the phone that leads to the targeting of the person using the phone (Scahill and Greenwald 2014). When a suspected phone is targeted and authorized for elimination, the exigencies of human interaction where different people end up using the targeted phone become redundant, because, in the surveillant assemblage, it's the metadata that ascertains guilt and rationalizes death, not the individual or individuals using the phone. It is this process of data mining, geo-tagging, and algorithmic analysis that forecloses the possibility of separating suspects from innocents. Sheer incidental proximity in the everydayness of human interaction where innocent people end up using a targeted phone only to end up blown to pieces is what Jeremy Scahill and Glenn Greenwald (2014) refer to as "death by metadata [...] where they think, or they hope, that the phone that they're blowing up is in the possession of a person that they've identified as a potential terrorist. But in the end, they don't actually really know. And that's where the real danger with this program lies."

The surveillant assemblage reduces the need for gathering reliable intelligence based on close, extended observation and evidence in favour of a guilt-by-association logic that dramatically increases the risk of targeting innocent people, or those whose culpability does not deserve the ultimate punishment of death. In September 2011, drone strikes killed Anwar al-Awlaki and Samir Khan, US citizens and terror suspects, in Yemen. A few weeks later, a drone attack killed Abdulrahman, aged sixteen and son of al-Awlaki (Benjamin 2013, 65). In February 2010, US drones mistakenly killed close to two-dozen civilians, including women and children in Afghanistan (Benjamin 2013, 94). Low estimates of casualties in Pakistan, Yemen, and Somalia include 4,228 killed, 522 civilians, and 184 children, according to the Bureau of Investigative Journalism (2019).

The psychosocial impact of drone strikes includes fear and paranoia among helpers and official rescue personnel who retrieve the dead, rescue the living, and care for the injured. Because the blasts from the strikes often burn bodies, dismember them, or sometimes simply incinerate them, the process of identifying victims means gathering whatever body parts can be found and handing them to friends and relatives of the victims. In villages where the Jirga is conducted—public hearings and discussions to resolve disputes by the *maliks* (local elders) and *khassadars* (local police forces overseen by *maliks*)—due to drone strikes that killed dozens of attendees, some of whom were the Taliban who were present at the meeting to resolve local disputes, there is growing fear and anger about drone attacks that target militants but more often than not result in the loss of innocent life (Cavallaro, Sonnenberg, and Knuckey 2012, 23–4).

Because of the "double tap" strategy of striking targets twice or more, rescuers often hesitate to rush to aid the injured, fearing becoming targets and losing their lives, thus depriving the injured, especially the innocent, of timely medical attention (Cavallaro, Sonnenberg, and Knuckey 2012, 74). Strikes that destroy places housing targets also sometimes destroy surrounding houses, leaving individuals and families helpless and destitute. Because medical expenses are high, many of the injured do not get adequate care or take loans they simply cannot afford but need if only to stay alive or avoid becoming severely handicapped. It is common for witnesses to drone strikes to exhibit "anticipatory anxiety" caused by the fear of impending strikes anytime and from anywhere (Cavallaro, Sonnenberg, and Knuckey 2012, 81). Terror, anxiety, and fear of becoming victims of drones generate post-traumatic disorders among those living in places hit by drones, or witnesses to the devastating impact of drone missiles. In some instances, parents and families are pulling children from school awhile, or refusing to send them, fearing that when groups of children get together, they could easily become drone targets. Similarly, practices of mourning and burying the dead, which happen in public gatherings, are observed with trepidation because it increases the likelihood of drone attacks on groups (Cavallaro, Sonnenberg, and Knuckey 2012, 89).

Sites of drone killings or crashes give visibility to the power, structure, and infrastructural systems that facilitate drone wars. As Lisa Parks (2017) argues, in terms of infrastructure, for instance, using Google Earth, we can discern how drones deal with "geology, physics, energy, and weather" through "earthmoving, importation, construction, installation, and maintenance" to build large air strips and hangars, which become the "staging ground for drone campaigns and vertical maneuvers" (137–9). In terms of the forensic, places where drones kill or crash become material signs that make visible the invisible structure of drone warfare, as the bodies of killed and the injured vivify the violence inflicted, and the debris reveals the type of drone, materials used in its construction, technological systems, and so on (Parks 2017, 151–2). In terms of the perceptual, drones and the surveillance regimes they establish produce "spectral suspects," whose identities are established not by epidermal and other discernable features, but through infrared contouring of heat-emitting entities (like the human body), which can appear black or white, based on a given set of technological settings. Spectral suspects are "visualizations of temperature data that take on the biophysical contours of the human body while its surface appearance remains invisible and its identity unknown" (Parks 2017, 145). But here, since identities are not known, "seeing according to temperature turns everyone into a potential suspect or target and has the effect of 'normalizing' surveillance since all bodies appear similar beneath its gaze" (Parks 2017, 145). It is why other assessments and verifications of threat and identity come into play, like signature strikes and double tap, including computational approaches like maintaining data repositories, metadata analysis, data dossiers, data doubles, and dataveillance. To grasp human behaviour as part of a network of actions and patterns, drone surveillance facilitates a distant reading of human collectivities, a macroanalysis of information flows to ascertain suspicious activity and spectral suspects in order to contain or eliminate them pre-emptively.

A major reservation about drone warfare, says Greg Kennedy (2013) in "Drones: Legitimacy and Anti-Americanism," is the question of legitimacy, a term often used "in such circumstances interchangeably with concepts such as proportional, moral,

ethical, lawful, appropriate, reasonable, legal, justifiable, righteous, valid, recognized, and logical" (25). There is a tendency, point out Sarah Kreps and John Kaag (2012), to conflate technological sophistication with ethical and legal assessment, because technology is not neutral but used by human beings: "the ability to undertake more precise, targeted strikes should not be confused with the determination of legal or ethical legitimacy," which raises the question of war and justice (17). Fred Kaplan (2013) underscores a key fact: drone strikes take place outside of war zones. They can happen anywhere the US decides a threat is imminent. He writes, "For when we talk about accidental civilian deaths by drones in Pakistan and Yemen, we are talking about countries where the United States is not officially fighting wars. In other words, these are countries where the people killed—and their embittered friends and relatives—didn't know that they were living in a war zone" (Kaplan 2013). To further complicate matters, sometimes, those targeted by drones were "low-level, anonymous suspected militants who were predominantly engaged in insurgent or terrorist operations against their governments, rather than in active international terrorist plots" (Zenko 2013, 10). Such instances lead to drone warfare camouflaging proxy wars fought by a powerful state to help another government, and not necessarily to defend itself against foreign suspects.

To the two dimensions of just war theory—the justification for war (jus ad bellum) and the rules of engagement during war (jus in bello)—philosopher Michael Walzer (2004) in *Arguing About War* adds a third, justice after the war (jus post bellum) (viii). A good argument can be made that in drone warfare, the new dispensation of American empire, all three dimensions are skewed. The ethical conundrum is this: the US is engaged in a global hunt for people posing imminent danger to the country and scours the entire world for them without formal intimation or declarations of war; the US envelopes entire regions and populations and subjects everyone, without distinction, to a surveillance regime to ferret out suspects and kill them; the US disposes its targets without consistently verifying the proportionality of the strikes, because the targets are chosen by macroanalysing big data generated by covert digital surveillance.

Critiques of and opposition to drone warfare emerged from various parts, both within the US and other parts of the world. Especially significant are the efforts by individuals and groups to make the invisible wars of drones visible, literal, palpable, visceral. And here, the turn to art and creativity becomes the avenue for expressing dissent against drone wars, while humanizing their deadly effects. But as we shall also see, drones and surveillance in cultural production raise complex questions about the power of art to register dissent and resistance, and foreground the uneven terrain of freedom and responsibility negotiated by culture producers and consumers; they shed light on the gendered inscriptions of drone warfare in military culture, which feminize drone piloting, because of its distance to and immunity from real-life battlefield risks of injury and death, while affirming the technological superiority of the countries that engage in drone wars, and the manifestation of male anxieties in celebrating bravery and honour produced in the drone techno-spatial ecosystem (Schnepf 2017; Hensley 2018; Clark 2018). They also seek to resist the power of the "robotic imaginary," which Jennifer Rhee (2018) describes as the "shifting inscriptions of humanness and dehumanizing erasures evoked by robots" that emerge in "the inextricable entanglement of 'technology' and 'culture'." She adds, "as a concept, the robotic imaginary offers the capacity to identify both an abiding vision of the human that is held up to be, however provisionally or circumscribed, universal, and the extensive erasures of human experiences that enable this inscription of the human" (2018, 5–6). Drone art and culture foreground the manner in which the human is constructed through a regime of surveillance that generates data repositories, which serve as the basis for algorithmically identifying human targets for threat removal. However, as the next section will show, producing the data and extrapolating the human from the data involves a struggle for the human. Drone art and culture foreground the multifarious dimensions of this struggle, in order not to restore a stable, fixed human entity but to resist digital networks and protocols with the power to adjudicate life and death through invasive biopolitical surveillance. It's in art, literature, and culture that we see a struggle for the human play out with poignancy (Center for the Study of the Drone 2019).

The struggle for the human in drone wars

Operating Predator drones is not an easy task; it requires new skill sets and a new mode of understanding "battlefield," "enemy," "emergency," and "collateral damage." Just twenty-one years old when he started working as a drone pilot, Brandon Bryant operated from the Ground Control Station at Nellis air force base, close to Las Vegas, Nevada. In discussing his experiences as a remote pilot operating MQ-1B Predators flying over Afghanistan, Bryant notes that his squadron made 1,626 strikes; in dealing with the aftermath of each strike, Bryant eventually sought therapy and was diagnosed with post-traumatic stress disorder. He realized that "the job made him numb: a 'zombie mode' he slipped into as easily as his flight suit" (Power 2013). Bryant "sometimes felt himself merging with the technology, imagining himself as a robot, a zombie, a drone itself. Such abstractions don't possess conscience or consciousness; drones don't care what they mean, but Bryant most certainly does" (Power 2013). Surveilling targets and their habitations on pixelated screens for days and weeks on end and releasing Hellfire missiles that obliterated them with explosive power and, sometimes, finding out that the target's identity was uncertain, their guilt not fully established, turned drone piloting into a job where ethics were always at risk of being compromised.

Hovering virtually more than two miles above the earth to surreptitiously surveil people's lives every day on computer screens in cockpits located thousands of miles away in Nevada, the drone pilot can discern a full range of personal and public behaviour of the people subjected to the drone's watchful gaze. For drones to function as tools to carry out military or police missions, digital tools, software, and networks produce thousands of still and moving images and multimedia feed, which are amassed and assessed as large datasets. In tandem with intelligence reports, data is sorted, tagged, distributed, mined and made amenable for evaluation and assessment by data and military analysts, so as to identify suspects and launch missiles through remotely controlled armed drones to destroy targets. The role of human agency—an embodied sentient being feeling and thinking and deciding—becomes subordinated to the dynamics of data gathering, surveillance, and decision-making.

Between the target and the drone pilot is a semi-autonomous digitally-run system that generates vast gigabytes of data for surveillance, but as it multiplies its data and coordinates with a slew of other data structures and robotic systems to manage drone vehicles and pilot them, surveillance becomes dataveillance and the pilot and target merge into a vast digital superstructure where they become important nodes whose value and significance is internally assessed in relation to the purpose and viability of the military mission embodied in a global network of surveillance managed by the most powerful country on the earth. Ethics becomes immanent to the form and function of dataveillance, a situation in which external points of reference to pose questions about decisions and policies justifying drone strikes become harder to find or redundant. Accidents or mistakes that result in human lives being lost or strikes where innocent men, women, and children are wiped out with devastating missile power are evaluated in terms offered by the digital structure and system: assessing inputs and outputs, transmission protocols, evaluative criteria, collaboration among people reading and assessing a variety of data sets and military intelligence, readability of still and moving images, algorithmic machine learning to mine big data and generate patterns and trends to surveil and targets to identify. Put differently, human life is adiaphorized, as Zygmunt Bauman puts it. To wit, adiaphorization refers to situations where "systems and processes become split off from any other consideration of morality [...] surveillance streamlines the process of doing things at a distance, of separating a person from the consequences of action" (Bauman and Lyon 2013). An action becomes "neither good nor evil, measurable against technical (purpose-oriented or procedural) but not against moral criteria" (Bauman 1993, 125). The military designed a software to mock up a drone strike in order to asses its strike capability and surrounding damages. When drone pilots release missiles that rip apart or hollow out structures of steel, aluminum, iron, wood, earth, and human bodies, there is a splattering of things, and of blood and tissue; the result of a drone strike is uncannily rendered in the colloquial term given to the military's software program (now called Fast Assessment Strike Tool) designed to assess strike capability and damage: bugsplat (Cronin 2018, 2). The damage done

by a drone attack is akin to bugs splattering on a windshield of a vehicle travelling at high speed. Because humans appear as bugs on pixelated screens, and there is a visual blob when destroyed, there is human splatter, or bugsplat—"collateral damage estimate methodology" (Department of Defense 2012).

To counter the invisible power of drone warfare, a collective of anonymous artists from America and Pakistan produced giant posters of victims of drone strikes and plastered them in the area where they were killed in the region of Khyber-Pakhtunkhwa in Pakistan. Featuring the photo of an innocent child whose parents were killed in a drone strike, the poster is enlarged enough to allow drone pilots see not a bug-like pixel on a screen but the face of a human being whose life is impacted by armed drones. Interestingly enough, a photo of this poster was taken by a small drone with cameras and posted online at *#NotABugSplat.com* (https://notabugsplat.com/). As Rhee (2018) notes, "*#NotABugSplat*'s representation of young drone victims is in tension with drone technology and the drone operator's labo[u]r, which trains them to view those who come into the frame of their drone surveillance as bugs or dehumanized and threatening racial Others" (164–5).

In this public art installation, the aim to humanize victims re-orients the drone pilot's field of vision as his/her drone cameras surveil the terrain and send image feeds back to intelligence analysts and military brass. This reorientation of the field of vision is both literal and conceptual. At the literal level, what is remote and bug-like becomes its actual representation in the artistic rendition of a poster photo of a victim's visage and body. The technology to zoom inwards on a camera's subject to reveal its details comes up short in the drone video feeds, where the subject's human features are pixelated into non-human entities like bugs. Rather than covering the site or hiding it from drone operators, the artists explicitly foreground the killing site with enhanced pictures so that the literal field of vision of the drone pilot sees a different terrain, one re-mapped by human actors on the ground. At the conceptual level, this enhancement of the subject who is now dead or living through the trauma of being victimized in drone strikes serves to change the logic of adiaphorization in dataveillance into one of human calculation in daily life: drone warfare is not an

autonomous, self-engineered mode of waging battle but one in which human beings use digital technologies to fulfill foreign policy and military objectives. The giant poster thus shortens the literal and conceptual distance: literally, it shortens it by enhancing the subject's image to make it easier for the drone camera to locate it, and it shortens the psychological distance between the drone pilot and drone technology, with the hope that the tendency to automatize drone war is undercut by empathy in the pilot for the actual or intended victim of future strikes. The giant poster serves to highlight the past (drone strikes killed innocent people) and foreground the present (local and other human agents register their views of the strike by signaling who was victimized), so that the future will be bereft of such strikes (drone pilots realize the human cost of drone wars and refrain from firing missiles).

In addition, the poster functions as a geo-tagger: it memorializes the victims while documenting history in local topography. Its historical accounting involves a remembrance with geo-spatial and temporal coordinates: time and location, space and place are crisscrossed with the explicit purpose of countering the adiaphorization of drone warfare. By taking pictures of the giant poster with a mini drone attached with cameras and broadcasting them in digital spaces that can be viewed by millions across the world, these dissenters enact an artistic politics of adaptation and subversion: drone technology is used not to kill or maim or surveil but to relocate the drone that kills and maims and surveils within a re-mapped topography that explicitly foregrounds the ethically compromised effects of drone warfare. Where the US military cannot or does not (or does so surreptitiously) keep records of civilian casualties of drone strikes, the artists publicize history by both documenting the location and victim of strikes and exhibiting them for the public and the drone pilot. This artistic creation installs drone war in public memory by subverting the use of drone technologies for ends that directly counter those of the drone pilots and their commanders: the giant photo makes public what the drone operators would prefer remain private; the giant photo registers the innocent victims of drone wars where the drone operators see bug splats; the giant photo interrupts the drone's pilot's field of vision by serving as a constant signifier of the ethical dimension of drone warfare,

one over which the drone pilot has little control: the poster has to be obliterated with another drone strike or constantly made part of the surveilled topography, which means practicing studied indifference or wanton forgetfulness, which places the onus of both actions squarely on the shoulders of drone pilots. Such art reinserts what drone warfare actively seeks to silence: the humanity of drone strike victims.

Drone art and politics

Where *#NotABugSplat* seeks to reinsert the human into a war whose techniques are virtual but results are materially deadly, Pakistani-American artist Mahwish Chishty seeks to change the symbolic meaning of the drone, from one associated with American empire and postmodern violence effected through virtual means to an object worthy of artistic curiosity. She seeks to abstract the drone from its militarized setting and turn it into a canvas where local Pakistani truck cultural practices can be painted, so that the drone is delinked from foreign state violence and turned into a tool or site for creative experimentation with local culture. However, the delinking is not an act of transposing politics into art, moving from one medium or modality into another, but of juxtaposing the political and the artistic, or, better still, of showing their imbrication, in order to reveal the contradictory, circumstantial nature of aesthetic production, where national and international interests do not undermine local specificities, while simultaneously not granting the latter a monopolizing power to determine the terms of aesthetic and political engagement. Featured at www.mahachishty.com/ are more than a dozen gouache paintings on paper, handmade paper, birch plywood and Masonite boards. Drones are painted in many shapes, with the MQ-9 Reaper, a popular armed US drone, used as the prominent design. Chishty draws from the folk painting traditions of Pakistani trucking industries where carvings, bright colours, mirrors, calligraphy, and paint are used to adorn trucks, often at considerable cost to their owners.

Trucking in Pakistan is a major industry, as its roadways are used more than its waterways, railways, and airways for freight and public transportation. 60% of its 258,000-kilometre road network is paved, and the Bedford Rocket, an iconic British-based truck brand, now shares popularity with Hino and

Nissan models from Japan (Elias 2011, 55; 58). Truck art, observes Jamal E. Elias (2011) in *On Wings of Diesel: Trucks, Identity, and Culture in Pakistan*, is "a function of visual culture as a window into the structure and politics of contemporary societies" (12) (**Figures 3** and **4**). Truck drivers are not the sole initiators of truck painting, but are usually intermediaries between owners and painters with often different intentions for painting: the owners seek to make a business statement and establish uniqueness in the market, which also gives them a chance for personal expression as paintings can include specific requirements of subject and theme and colour of the painters; the painters are part of a large circle of locally-based small businesses run individually or in groups. Calligraphy in Urdu and English, for instance, signals the owner's familiarity with official or mainstream culture; on roads where top speeds are not feasible, decreasing the likelihood of wear and tear of the vehicle, decorative items like pinwheels are used inside trucks, which increases the longevity of art décor.

Figure 3: Truck Art, Islamabad, Pakistan.

Figure 4: Truck Art, Karachi, Pakistan.

Elias (2005) further notes:

> *"The motifs on trucks display not just aesthetic considerations, but attempts to depict aspects of the religious, sentimental and emotional worldviews of the individuals employed in the truck industry. And since trucks represent the major means of transporting cargo throughout Pakistan, truck decoration might very well be this society's major form of representational art."*

He distinguishes among five styles based on regions: Rawalpindi (stylized cowlings, appliqués of plastic), Sawat (wooden door carvings and metal hammered into shapes), Peshawar (a mix of the previous two styles that use carvings, metal, cowlings, paint), Baluch (chrome cowlings, complex, ornate designs patterned into mosaics), and Karachi (biggest truck centre showcases all styles, with woodcuts and wide colour spectrums). Subjects of decorative art include figures from religious, political, and everyday culture, women, personal art or objects as talismans (Elias 2005).

Chishty uses many of these elements in painting drones, which are also represented in a variety of drone shapes: some are small, sharp, triangulations with boomerang shapes akin to X-47B; some have bulky, oval front-ends akin to

Reaper and Predator drones; some are cast as twins joined at the back with two fronts facing opposite sides; some appear like thin butterflies in flight; and others have a burst of colourful missiles falling downwards from a flying drone. In an interview with Josh Harkinson of *Mother Jones* magazine, Chishty observes that her aim in painting drones this way was to make them "friendlier looking, instead of such hard-edged, metallic war machines" (Harkinson 2013). When asked if she were viewing militarized weapons idealistically, Chishty replies, "I don't know if I am glorifying it. I just want people to talk about it. At the same time, it has some kind of beauty to it. I am also looking at them as objects, and not as much as war machines" (Harkinson 2013).

To her, just as the truck drivers decorate their trucks ornately and with distinctive styles, which she views primarily as aesthetic expression, drone painting by using Pakistani folk art means using local culture to turn an object associated with death and war into an object of aesthetic contemplation. In "By the Moonlight," a gouache painting on birch plywood, Chishty portrays the front underside of a wide-angled drone in green with decorative patterns of white appearing as conjoined shapes; the middle body is yellow and the tail-end is blue, with the wings rendered in darkened peach and around twelve semi-circular shapes, their borders lined in blue and yellow and adorning each wing side. This colourful drone is placed at the centre of what appears to be a modern street etched into plywood with tea stain. Several electric poles with wires line each side of the street with multi-storied buildings. The contrast is sharp but not jarring. While the lack of colour in the scene in which the drone is placed suggests its destructive force, it can also be viewed as an attempt to make the drone appear pleasant, colourful, and worthy of beautiful self-expression à la truck drivers styling their trucks (**Figure 5**). Put differently, Chishty is not practicing representational art in the general sense of using Pakistani truck art to depict realistic drone strikes or their repercussions on property, land, or humans; she is using local art to individually express her desire to counter the dominant perception of drones as objects of violence by turning them into colourful cultural artifacts. Many of them unambiguously titled after formal terms used in military jargon—RQ 170: the Beast of Kandahar, Hovering Reaper, Predator, Black

Hawk, X-47B—the paintings evoke truck art in loud, pleasing colours, woodcuts, embroidered cloth, talismans, metal works, calligraphy, and religious and cultural symbols (**Figure 6**).

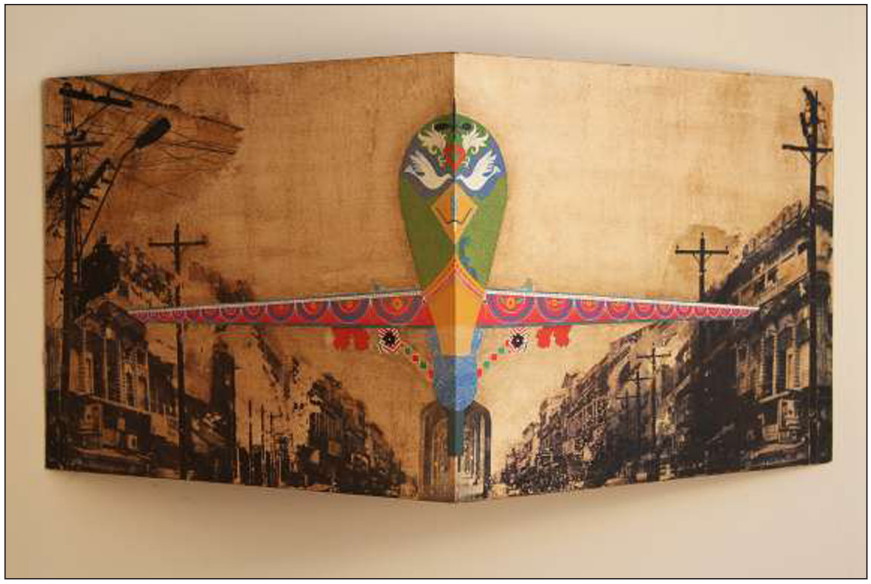

Figure 5: "By the Moonlight" by Mahwish Chishty.

Figure 6: "Reaper Drone" by Mahwish Chishty.

Meghan Neal (2013) calls such work a form of cultural repurposing: "Drone art can be seen as a form of reappropriation—taking back something that in the popular consciousness is so often a symbol of death and destruction and making it something beautifully provocative, even hilarious." Along similar lines, Anike (2013) in Muslim Media Watch of *Patheos.com* points out, "Chishty's drone art is reappropriation; it questions the popular image of the drone as an icon of death and destruction and thus in its own way protests this symbol by choosing to view drones as objects, not just as war machines." However, while many online commenters support Chishty's views expressed in her interview with Josh Harkinson at *Mother Jones*, others voice strong disagreement about her choice of subject and her artistic work. One among them, Mariam Sabri, pointedly counters the supportive comments by noting, "I've been having discussions with a few artists, those who are involved with political advocacy through art, and an art teacher in Pakistan about this (Harkinson 2013). We all feel collectively sickened after reading Mahwish Chishty's interview." Sabri calls such drone art "silly," "insensitive," and "deluded," because "she [Chishty] clearly seems to be depoliticizing drones" (Harkinson 2013). Sabri's criticism is not without merit given Chishty's observations in the interview: "I don't know if I am glorifying it. I just want people to talk about it. At the same time, it has some kind of beauty to it. I am also looking at them as objects, and not as much as war machines" (Harkinson 2013).

The key issue here is whether the appreciation of beauty is possible for people who experience the horror of drone strikes and the constant unease of living under drone surveillance. Even if we grant that it is theoretically or experientially possible, the question is, to what extent? In other words, what are the politics of location in cultural production and reception? Does *where* we are determine *how* we view art and culture? Evidently, yes. Chishty's strategic move to wrest drone technology out of the discourse and activity of warfare is predicated on the idea that art ought to function in autonomous, or, better yet, depoliticized spaces. Speaking of truck art, Chishty says that truckers "spend so much time on it and they don't get any funding. This is something that they do, just a personal interest. It has no reason whatsoever other than just an aesthetic sense" (Harkinson 2013). But aesthetic work, as Jamal Elias's anthropological analyses of truck art shows, moves beyond personal, artistic

expression to collective representation of trucking culture: travails of truck drivers, the sense of home they create and evoke on the road, the geographic differences that influence their choice of themes, and so on. In other words, truck art is woven into Pakistani trucking culture. Chishty's approach draws on contemporary US-Pakistan politics about drones to highlight drones as aesthetic objects, which is a profoundly political act, but justifies this politics on the grounds of aesthetic autonomy. What needs underscoring is the potential for slippage in intent and interpretation: wanting people to talk about drones might well lead people to talk about drones primarily as works of art or only as tools of war; this contradicts the fact that the very purpose of her drone art is to counter the dominant impression of drones as tools of violence, an impression based not on aesthetic insistence (the US military is not advocating that Pakistanis view drones as art objects even as it launches drone strikes), but on verifiable history (drone strikes have killed and destroyed people and infrastructure) (**Figures 7** and **8**).

Figure 7: Truck Wheel Art.

Figure 8: Mahwish Chishty's "Hellfire Missile."

Critics who dismiss Chishty's work as insulting to people whose lives were wrecked by drone missiles miss, understandably, the political import of her emphasis on drone aesthetics that seeks to grasp the drone primarily as technology, a tool built by human beings to accomplish certain ends. That it is used currently in warfare should not obscure the fact that as a technology, the drone is amenable for other uses, including creative ones that can bring the social and material impact of drone strikes into broader public spaces, a move that can shed light on the geopolitical imbalances structuring drone warfare. Her focus on individual freedom to pursue creative expression by appropriating a tool that has become a potent weapon of war towards non-military ends can be viewed as an attempt to re-centre the human subject that the drone, by its very nature, seeks to de-centre through data mining, algorithmic calculation, distant reading, and macroanalysis, what Bauman refers to as adiaphorization, as we have earlier seen.

Chishty pushes this view further in the video art "Predator," which can be projected into dark areas for a performative event. The video, available on Vimeo (https://vimeo.com/129010049), runs for 5 minutes and 27 seconds; centred and

taking up the entire screen is a colourful image of a drone, speckled and painted with truck art colours and images; in the first minute, a hissing sound, almost a screech, builds into a crescendo of Aztec death rattles, the sounds produced when one blows air into the skull-shaped artifacts unearthed by archeologists in Mexico (Watson 2008). The sounds of these skull whistles are nerve-wracking, because they seem to condense a thousands screams, which is why they are also referred to in the vernacular as the "scream of a thousand corpses," ostensibly a reference to the manner in which the Aztecs used the whistles for ceremonial rites and to intimidate enemies, or ward off threats. In a minute or so, we can see and hear the drone take a strike, but for almost three minutes, the drone simply hovers, closing and opening its eyes; it hovers and hovers; that is, as we have seen, the drone is hovering because it is surveilling individuals, groups, and populations constantly; then in the last minute of the video, the ominous wailing returns, to end with a drone strike. In video and animation, mixed with painting and sound, Chishty brings aesthetics and politics into open collision—the secret wars of drones are rendered aesthetically, not to displace politics with aesthetics, but to put politics and aesthetics into constant, creative tension. The drone is now no longer a depersonalized weapon of war; it is an aesthetic creation that can also be turned into a tool for violence. It is this double-sidedness of creative political expression that repurposes or reappropriates in order to juxtapose, not replace, which is a unique feature of Chishty's art and installations.

Drones and surveillance in popular culture

The impulse to use drones aesthetically also finds expression in Pashto culture and literature. In "Impact of War on Terror on Pashto Literature and Art," published in March 2014 by the Federally Administered Tribal Areas (FATA 2014) Research Centre in Islamabad, Pakistan, the impact of war is generally divided between pre-9/11 and post-9/11 periods. Nature, romance, landscape, individual dreams, love, desire, friendship are thematic concerns of the pre-9/11 period, and with the start of the war, changes become apparent as poets and artists began to shift focus to the devastating effects of war on small and big, village and semi-urban communities. Genres like the ghazal, nazm (Pashto poems), tappa, and jihadi tarana (anthem) all register this shift

in focus. Popular and well-regarded artists who have engaged with this shift include Salim ur Rehman Salim, Muqadar Shah Muqadar, Akbar Sayal, Ajmal, Bakht Sher Aseer, Shabab Ranizai, Roshan Bangash, Ata Muhammed Wardag, Rehmat Zalmai, and Syeda Haseena Gul, among many others (FATA 2014). It would be a mistake, however, to romanticize the pre-9/11 period because the Soviet invasion in 1979, which lasted for more than a decade, saw noticeable effects on art and literature among Pashtuns, but what makes this periodizing important is the extent to which military themes of war, loss, devastation, enemies, invasion, destruction and death and their associated symbols permeate creative activity. Responses to this war range from extreme anti-Americanism, where the West becomes the First Cause for war and, therefore, needs to be countered militarily, politically, and culturally, to broader explorations of how peoples living under the constant threat of military action or in militarized regions experience their effects on personal and public psyches. In jihadi taranas, the Manichean dichotomy of the West and Afghani/Pashtun identity is explicit and is generally oriented towards inciting readers to protest and rise up against the oppressive foreign powers. The output in this genre, however, is limited, while the political manifestation of this ideology in the political party of the Taliban and other such entities is undeniable (FATA 2014). This does not mean that pro-Taliban materials are not read widely. In Mohalla Jangi (Neighbourhood of War), Peshwar, Pakistan, there are 2,000 printing presses, some of which regularly print materials supporting the Taliban, Islamic radicalism, and anti-Americanism (Siddiqui 2012). In art, poems, ghazals and tappas, artists and writers view the landscape with less thrall because it is pockmarked with the effects of war; there is mourning and sadness in witnessing the changing landscape, which makes habitation increasingly difficult and associated with police actions and American military presence, on the one hand, and extremist, fundamentalist groups eager to subjugate and control society, on the other.

Over the last three years, two songs by Pakistani Pasthto singer Sitara Younas received considerable attention on Youtube and in Pakistani regional popular culture. Her "Khud Kasha Dhamaka Yama" can be translated as "I am a suicide bomber." Part of the lyrics include, "Don't chase me. I am an illusion. I am a suicide blast." Written

by Pashto writer Rashid Johar and composed by Pashto musician Shakir Zeb, the song uses the on-going US-Afghanistan and Pakistan military activities against terror groups as materials for song writing and singing (Ali 2011). Its explicit analogizing of one smitten with amorous desire for another with the unexpected, shadowy power of a suicide bomber has drawn public attention, with journalists like Manzoor Ali paraphrasing poet Farooq Firaq, who says that "suicide attacks have left deep imprints on our society and that such songs are a result of overall negativity in society" (Ali 2011). Firaq "proposes establishing a censor board—comprising of actors, writers and elders—to oversee and filter such content" (Ali 2011).

We see here the lasting effects of wars and police and military missions on people living in these societies. The intent of this song is not designed as propaganda to convince young people, especially those disillusioned or frustrated with their lives, to become true believers in radical Islam and glorify the act of killing others through suicide; it is a registering of everyday life and the complex ways in which some people use the ideas and events they are familiar with to make sense of other aspects of their lives and infuse new symbols and analogies that dramatize the dynamics of young love, romance, heroism, risk, danger, and yearning, to wit, the stuff of which dreams are made in human societies.

Younas' second song pushes the envelope further in "Za Kaom Pa Stargo Stargo Drone Hamla," which translates as "My gaze is as fatal as a drone attack." Penned and given melody by Pashto director Maas Khan Wesal, the song was performed in an episode by actress Dua Qureshi in the television film "Da Khkulo Badshahi Da" produced by Khans Productions (Khan 2012). A translation of parts of the song reads thus:

> *My gaze is as fatal as a drone attack/The touch of my lips sweeten words*
> *Intoxicating wine are my looks/My gaze is as fatal as a drone attack*
> *Coquettish stare is a snare of beauty/Smile fresh as early morning dew*
> *Ensnares lovers with amorous pangs/My gaze is as fatal as a drone attack*
> *O lovers! Go through a lover's agony/A leaping flame and a rose bud*
> *The clink of my bangles leaves one enchanted/My smile rustles desires in many a heart*

Tests lovers' courage/My gaze is as fatal as a drone attack
My beauty and body/At its prime
Leaves many going astray/My gaze is as fatal as a drone attack. (Khan 2012)

The singer recognizes the power that she, a woman, wields over a man; she is confident of her attractive looks as she croons that "the clink of my bangles leaves one enchanted" and "my smile rustles desires in many a heart." Her attractive features are so compelling that they heighten the desire of lovers to the point where their commitment to each is tested, because her "beauty and body at its prime, leaves many going astray." This woman knows she can "sweeten" her utterances and disorient others with her beauty such that they lose senses. The force of these sentiments is echoed repeatedly in the refrain "My gaze is as fatal as a drone attack." The link between drones and fatality is certainty. Drones are deadly weapons of war; they do make mistakes when they kill suspects, targets, and civilians, but what cannot be doubted is a simple certainty—they destroy, they kill. The power of the drone in this song derives less from the drone's technological capacity to unleash missiles from thousands of feet in the air and find targets with accuracy but from its "gaze" that is "fatal." In a neat stroke of lyricism, dance, and sentiment, the song captures the problematic nature of postmodern war: drones and surveillance cultures. Without the ability to subject a people to constant, detailed surveillance, drones lose their power as tools of violence. It is the drone's unique, invisible ability to gaze at the other that makes the other succumb to the drone's missile. Implicit here is the idea that to counter the gaze of this seductive woman, the lover has to resist her at the level of her gaze; he has to turn that gaze around or ensure that he cannot be located in her field of vision. In other words, he has to contest the power of her surveillance that recognizes the disorienting effects she has on him. But that is what he cannot, thus the deadly accuracy of the woman's power: "my gaze is as fatal as a drone attack."

Not surprisingly, such cultural interweaving of death, violence, romance, and love generated strong disapproval, even talk of censuring cultural production. Gul Nazir Mangal, an artist from Waziristan, a region administered by Pakistan, says, "We should not be proud of these attacks, which are being carried out by foreigners on our land. This needs to be condemned instead of making songs and dancing on its

tunes," because such songs are "not only harmful to culture and literature, but also create a sense of disunity amongst the people" (Khan 2012). Officials should, suggests Mangal, set up a censor board to check cultural content before it's released to the public. Arshad Ali, another musician, reiterates this, saying that "It's not appropriate to incorporate drone attacks in music as it's a grave issue faced by our country. Each artist has a certain responsibility towards society" (Khan 2012). But what is the nature of this responsibility when it comes to digital technologies, drones, surveillance, and networks? We cannot address these issues unless we frame them within global contexts, as we have seen in this essay. Drones and surveillance are woven into digital networks that not only connect different countries but impact individuals, groups, and entire populations around the world; it is hardly surprising, then, that cultural engagement with drones and their effects and the vexing issues of authority, representation, intention, and social purpose have transnational dimensions.

For more than a month starting in January 2014, the *Ann Arbor Art Center* in Michigan held a special gallery featuring the work of more than forty artists on the subject of drones. The Center explained its choice of subject thus:

> *Drones are the quintessential object of the 21st century. They are revolutionizing global warfare and domestic and foreign surveillance, galvanizing the creative impulse, and challenging democratic principles and personal values around the globe. They are changing the way we work, play, battle, and live in the 21st century. (Ann Arbor Art Center 2014)*

"Galvanizing the creative impulse" aptly characterizes the artistic and cultural activity about drones over the last decade. It is an international phenomenon with artists in Afghanistan, Pakistan, England, and America boldly and creatively thinking about and using drones; not just armed drones but drones as a new technological artifact with a unique ability to reorient us to space and time. But as we have seen, the artistic impulse about drones moves well beyond this laudable goal even as it stresses its humanizing potential. Drone art has become cultural life: people are painting drones literally and digitally; they are using mixed media to generate new

juxtapositions of ideas and symbols; they are singing about them in telefilms in Pahstun Afghani societies; they are making paper or cloth imprints to attract drone operators; they are using drones in live dance performances; they are rewiring them for paint bombing, or graffiti art. The digital, the arts, and the humanities become entwined in an act of creative exploration that allows suppressed voices to be heard, registers the unacknowledged effects of invisible wars in public discourse, and digitally enables human presence and the quest for dignity to find transnational resonance in a global world.

To conclude: when we moved beyond computational humanities to study the imbrication of the digital—as technology, tool, ideology, and episteme—in drones and surveillance, we bridge the digital humanities to postcolonial digital humanities by foregrounding a new biopolitical reality in which digital technologies fundamentally alter established notions of war and peace, guilt and innocence, privacy and the common good. Such a bridging involves, as Roopika Risam (2019) aptly puts it, "praxis at the intersection of digital technologies and humanistic inquiry: designing new workflows and building new archives, tools, databases, and other digital objects that actively resist reinscriptions of colonialism and neocolonialism" (4). If we don't move beyond the computational humanities to examine the governmental and military institutions that establish sophisticated, transnationally networked digital regimes to surveil peoples and kill terror suspects while also killing civilians, the threat to liberal democracy will increase, not decrease; we need to not only infuse the digital into the humanities but the humanities into the digital; that is, we need to apply humanities approaches to examine how social and political organizations thrive on constant technological innovation to realize national security goals at the expense of robbing thousands of peoples of their rights to privacy and dignity. It involves making the digital humanities public by widely disseminating specialized DH research to general, non-academic audiences, and bringing to bear DH tools and humanities methodologies on domestic and foreign policy, military practices, discourses of exceptionalism, imperial worldviews, in short, on matters of public concern; it involves drawing on complex fields of cultural and social production to enrich our

understanding of the human in a digital age, shape our scholarly endeavours, and inform our pedagogical practices. By affirming the human dimensions of surveilled subjects and examining the trans-territorial networks of surveillance in post-colonial societies, we can try to nullify, prevent, blunt, or deflect the same logic of national security being applied to us, right here in America, in American towns, counties, and cities. But that can yet happen, unless we rigorously study, question, and publicly engage with, adapt, re-orient, and transform the cultural and political dimensions of digital technologies.

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