DRONE WARFARE:
TWENTY-FIRST CENTURY EMPIRE AND COMMUNICATIONS

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“Our enemies are innovative and resourceful, and so are we. They never stop thinking about new ways to harm our country and our people, and neither do we.”

— George W. Bush

In this paper, I examine the rise of drone warfare in light of media theorist Harold Innis’s seminal work on empire and communication (1995, 2007). Specifically, this discussion applies and extends Innis’s insights on the bias of communication to a critical analysis of the targeted killing program initiated under US President George W. Bush and expanded by his successor, Barack Obama. Throughout, I contend that weaponized drones embody a long-standing paradox of American culture: the impulse to collapse the geographical distance between the United States and other parts of the globe, while simultaneously magnifying the cultural differences between Americans and other peoples and societies. In doing so, the paper demonstrates the relevance of Innisian approaches to the relationship between technology and culture articulated through this new kind of war.

The paper is organized into three sections. The first offers a brief description of the aerial, navigational, imaging, and computational technologies employed by America’s fleet of weaponized drones. Throughout, I highlight the networked intelligence that distinguishes armed drones from other weapons platforms. This section also describes the operational logistics required to launch these aircraft, surveil their targets, and fire their missiles. Contrary to

media portrayals and popular belief, drone missions require more than a handful of operators. Rather, combat patrols routinely involve three or four unmanned aircraft, requiring upwards of 150 personnel, including ground crews, remote pilots, sensor operators, intelligence analysts, and legal advisors (Chatterjee 2015). These flight teams constitute the operational component of what the US military aptly describes as the “kill chain.” Thus, Innis’s insights into the relationship between communication technologies and the rise of administrative classes—what he describes as monopolies of knowledge and power—can be applied to “the assassination complex” (Scahill 2015) that authorizes and conducts drone strikes.

The second section employs Innis’s space-time dialectic to examine the rise of drone warfare. According to Innis, communication technologies manifest and express certain tendencies—what he called biases—that enable or constrain the ability of organizations, institutions, and empires to control space (territory) and time (continuity). Innis’s historical analysis reveals how speech and the oral tradition emphasize the temporal duration of social organization, thereby facilitating the establishment of long-lasting and sustainable communities. Conversely, the written word, followed by print and later electronic communication, emphasize the spatial extension of social organization, thereby facilitating territorial growth and administrative control over enormous expanses. This expansionist tendency deeply troubled Innis. According to James Carey, Innis “placed the ‘tragedy of modern culture’ in America and Europe upon the intrinsic tendencies of both printing press and electronic media to reduce space and time to the service of a calculus of commercialism and expansionism” (1992: 133–134).

The third section considers the moral and political implications of drone warfare in light of Innis’s thinking about technology and culture. As Catherine Frost reminds us, “There is a powerful moral voice speaking in his communications work, and it carries a message about the achievements possible in a good society and the brutalizing effects in a bad one” (2003: n.p.). Writing in the midst of a Cold War that threatened to annihilate humankind, Innis’s work took on great urgency. Were he alive today, Innis would no doubt condemn the depravity of killing by remote control. Here, then, we can appreciate the value of taking a discursive turn to Innis’s approach to empire and communication (Angus 1998). That is to say, Innis understood that the bias of communication could only be controlled through deliberative politics. “The genius of social policy, he thought, was to serve the demands of both time and space; to use one to prevent the excesses of the other: to use historicism to check the dreams of reason and to use reason to control the passions of memory” (Carey 1992: 160–161). In short, Innis fully appreciated the role of
language and culture in shaping technology—and viewed his scholarship as an intervention into the politics of technological development.

The paper concludes with some thoughts on Innis’s legacy and its relevance for both communication and American studies in the age of drone warfare. As Megan Mullen notes, “One might well claim that the American empire has been Innis’ best theorized, even though he did not live to witness its most revealing manifestations” (2009: 177). Simply put, the US drone program is but the latest manifestation of American empire. In an effort to mitigate the self-destructive values and perspectives fostered by space-biased cultures, then, we must be wary, as Innis was, of inscribing new technologies with the sublime (Carey 1992). Doing so, especially in the American context, has wrought a great many engineering and electrical wonders: from the railroad and the Brooklyn Bridge to the electric light and the Moon landing. More ominously, the American fascination with new forms of what David Nye (1994) calls “the dynamic sublime” led to the development of atomic weapons that so troubled Innis at middle of the last century—and which likewise ushered in the era of drone warfare at the dawn of new millennium.

“It’s About The Data Link, Stupid”

In news and popular culture, the growing fascination with drones rests in large measure on the futuristic design of these aircraft and the lethal payload they carry. For entrepreneurs and commercial drone manufactures this public perception is both a blessing and a curse. But for students of communication, the drone’s true innovation lies elsewhere. Speaking to *The Atlantic* magazine, retired Air Force major general James Poss, who supervised the transformation of the Predator from a surveillance vehicle to a weapons platform, put it plainly: “It’s about the data link, stupid” (Bowden 2013: 62). Absent the array of information gathering and processing technologies used to conduct US drone strikes, these unmanned planes are something of a throwback to the propeller driven aircraft of the early twentieth century. Thus these high tech killing machines integrate modern transportation and communication technologies: essential ingredients for the command and control requirements of empire, both ancient and modern. As Wayne Cocroft observes, “The Roman Empire developed a sophisticated system of roads, imperial messengers and, along its frontiers, a network of signal stations” (2013: 65). Likewise, the US drone fleet—the tip of America’s imperial spear—relies upon a network infrastructure that connects these remotely piloted aircraft with far-flung launch and recovery units, signal processing centres, and ground control stations (GCS) via radio, fiber optics, and telecommunication satellites.
Made of lightweight composite materials that enable the aircraft to loiter above a target for hours at a time, the distinguishing physical characteristic of the Predator drone—and its larger more heavily armed counterpart, the Reaper\(^2\)—is the vehicle’s bulbous nose. Housing an array of sensors, actuators, antennae and cameras, this section of the aircraft not only allows pilots to fly these aircraft from halfway across the world, but also gives these vehicles an unprecedented ability to combine long duration intelligence, surveillance, and reconnaissance (ISR) missions with the capacity to take lethal action. Specifically, these operations include launch and recovery units using line-of-sight C-band radio signals operating in or nearby the aircraft’s theatre of operation in the skies above Afghanistan, Iraq, Pakistan, Yemen, and Somalia. Once airborne, a ground control station in the United States assumes control of the vehicle using Ku-band satellite signals. Data and images collected by these unmanned planes are processed at the US Air Force base in Ramstein, Germany and subsequently relayed across the Atlantic Ocean to the United States via fiber optic cables.

CIA operations originate adjacent to the intelligence agency’s headquarters in Langley, Virginia, while Creech Air Force Base in Nevada is home to the US Air Force’s best-known Ground Control System (GCS). Meanwhile, Special Operations Forces (SOF) and other ground troops have real-time access to information and imagery collected by drones flying overhead. In turn, authorized military personnel, intelligence analysts, and civilian leaders around the world can access this data via the Distributed Common Ground System (DCGS): what journalist Andrew Cockburn describes as a “little-known global network” that acts as “the central nervous system funneling, collating, and sharing unimaginable quantities of imagery and electronic information” (2015: 3). Coupling intelligence gathering, data analysis, target selection, and rapid strike capabilities in this fashion, drones are the embodiment of what Pentagon strategists describe as “network centric warfare” (Kometer 2003).

It bears mentioning that the US military developed the Global Positioning System (GPS) employed by these unmanned aircraft, and all manner of civilian technologies from automobile navigation systems to smartphones, for purposes of command and control. From an Innisian perspective, then, drones exploit the twin revolutions in satellite navigation and digital communication to annihilate space and time in the service of military

\(^2\) Billed as the United States’ most lethal unmanned aircraft, the Reaper carries laser guided Hellfire missiles, much like the Predator, as well as two 500 lb. “smart bombs.” In contrast, the high altitude Global Hawk is an unarmed surveillance platform.
expansionism. Tracing imperial history through the ages, Innis came to view media and communication technologies as “the staples of empire” (Watson 2007: 14). In turn, improvements in navigation and communication cultivated an expansionist mindset increasingly reliant on the projection of force over vast territories. Describing the rise and fall of ancient dynasties, Innis found that “military organization essential to the expulsion of the invaders became the basis of expansion and growth of an Egyptian empire. Protectorates were established beyond the borders as a means of economy in the use of soldiers and in administrative costs” (40). Similarly, in the aftermath of the Second World War, the United States emerged as a global superpower whose reach and influence extended across Europe and the Pacific Rim as never before. Since that time, America’s imperial ambitions have been inextricably linked to the rise of what President Dwight D. Eisenhower (1961) famously described as the “military-industrial complex”: a self-perpetuating alliance between the military, industry, academia, and the political class, that not only assured US global hegemony but also secured the political-economic dominance of arms manufactures.

In the aftermath of the attacks of September 11, 2001, the United States embarked on a new round of imperial expansion, including the repurposing of existing military bases and the construction of new ones, to facilitate what war planners call full spectrum dominance—the ability to control every dimension of the battlefield: land, air, and sea; as well the virtual terrain of information space. As a result, the so-called defence industries—aeronautics firms, electronics and telecommunication companies, weapons manufactures, private contractors, and related corporate interests—have reaped enormous profits over the course of America’s decades-long war on terror (Turse & Engelhardt 2012). Notwithstanding the chronic failure of US news organizations to acknowledge, much less discuss, American empire, an emerging constellation of drone bases has not gone completely unnoticed. For instance, in 2011 the Wall Street Journal reported: “The military has reopened a base for the unmanned aircraft on the island nation of Seychelles to intensify attacks on al Qaeda affiliates, particularly in Somalia” (Barnes 2011: n.p.). More recently, investigative journalist Nick Turse identified no fewer than 60 such bases across Africa—including a single $100 million drone base currently under construction in Niger (Turse 2016). Like earlier empires that built transportation and communication infrastructures for the purpose of administration and control over vast territories, these postcolonial outposts enable the United States to project force across the globe, albeit with little public knowledge at home; but not without the support of local, frequently despotic regimes. Writing for the independent news site TomDispatch, Turse notes:
These bases, camps, compounds, port facilities, fuel bunkers and other sites can be found in at least 34 countries—more than 60% of the nations on the continent—many of them corrupt, repressive states with poor human rights records. (2015: n.p.)

Thus the sorrows of empire, to borrow Chalmers Johnson’s (2004) haunting characterization of US militarism, encompass far more than the eclipse of American democracy and the nation’s economic subservience to merchants of death. Like Innis before him, Johnson recognized and cautioned against the brutalizing effects of space-bound societies evident in twenty-first century American empire and its unrelenting assault on tribal Islam.

This ring of drone bases increasingly relies on the National Security Administration’s (NSA) global surveillance infrastructure to “find, fix, and finish” (F3 in military shorthand) targets of US drone strikes. To that end, the NSA employs two tactics: the first uses the intelligence agency’s phone-tracking capabilities to geolocate the cell phone SIM cards of potential targets. NSA furnishes this information to either the CIA or the Joint Special Operations Command’s (JSOC) High Value Targeting task force for subsequent “kinetic military action.” Significantly, this technique does not monitor or collect the content of cell phone conversations; rather, geolocation relies on the metadata associated with cell phone activity. The second tactic equips drones and other aircraft with so-called virtual base tower receivers that mimic cell phone towers, effectively turning a suspect’s phone into a tracking device. As we shall see, the drone program’s reliance on signals intelligence (SIGINT) raises profound moral questions. For my present purposes, the sheer volume of metadata gleaned from cell phones—as well as computers, wireless routers, and other electronic equipment—is noteworthy.

In the words of a former drone operator, this data requires “millions of dollars and millions of man hours” to assess and interpret (Scahill & Greenwald 2014: n.p.). In turn, this process yields material collected in “target information folders” on suspected terrorists; ultimately this information is distilled into the widely reported “baseball cards” used by the President and his national security team to select individuals for targeted assassination (Becker & Shane 2012). Once SIGINT “finds” a target, the unblinking stare afforded by the aircraft’s imaging technologies, including daylight and infrared cameras, “fix” a suspect in a specific location until such time as JSOC, the CIA, or other high-ranking officials authorize a drone strike to “finish” the target. In short,

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3 Commonly used by politicians and media spokespeople, this phrase is another in a long line of euphemisms for the use of violent force by US military and paramilitary units.
intelligence analysts are but one link in a kill chain that extends from ground control stations to the Oval Office.

Thus the assassination complex (Scahill 2015) resembles the bureaucracies Innis observed coalescing around each new medium of communication. According to Innis, these administrative classes constitute monopolies of knowledge and power that exert enormous influence over social, economic, and political life. For instance, the “distributed intimacy” engendered by drone warfare is asymmetrical. That is to say, US personnel come to know intimate details about their quarry, while potential targets know little more than the fact that their lives are under constant surveillance. Conversely, the clandestine nature of the drone program, including specifics regarding how targets are selected, represents yet another dimension of this monopoly of knowledge. Outside of the President’s national security team, few members of Congress, let alone the American people, have even a rudimentary understanding of the inner workings of the targeted killing program. As Innis notes of Egyptian empire, “Complexity favoured increasing control under a monopoly of priests and the confinement of knowledge to special classes” (2007: 44). So too the secrecy and sociotechnical complexity of the drone program constitutes a special class of “hi-tech assassins” (Cockburn 2015). Put differently, in twenty-first century American empire, the President’s self-granted authority to act as judge, jury, and executioner—coupled with what a former drone operator described as the “godlike power” of killing by remote control⁴—bears a striking resemblance to the religious and quasi-religious consolidation of power Innis identifies with monopolies of knowledge.

**Drones and the Problems of Time and Space**

In his final years—at the middle of the twentieth century—Harold Innis lamented the shortsighted, and to his mind, self-defeating tendencies of space-biased cultures, and cautioned against the diminishing importance of time, reflection, and historical perspective. All of which begs the question: What would Innis make of twenty-first century empire and communication? For Gaëtan Tremblay the answer is clear: “Computers and telecommunications networks have strengthened this trend significantly, to the point that one wonders if we are not witnessing the emergence of a new form of imperialism, which would not necessitate, in most cases, the establishment of a sprawling political administration” (2012: 573). We can discern this new form of imperialism in the space- and time-annihilating capabilities of weaponized

drones described above. Leveraging leading-edge aeronautics with advanced optics, data processing, and networked communication, drones represent an archetypal “space-biased” technology. In short, the ability of remote operators and others to monitor, select, and strike targets from half a world away, and in real-time,\(^5\) epitomizes the “pernicious neglect of time” Innis analyzed in his later writing (Compton & Comor 2007: 47). This growing contempt for time facilitates and promotes a state of perpetual war.

Indeed, despite the much-heralded success of the US drone campaign in news and official discourse, the so-called war on terror proceeds with no end in sight. Nearly two decades on, American forces continue to conduct military operations across the Greater Middle East, with little to show for it other than increasing tensions and volatility. The possibility that this regional instability is due, in large measure, to American militarism rarely enters mainstream political discourse. Nonetheless, the targeted killing program has failed to defeat jihadi movements and may in fact serve as a recruitment tool for extremist groups across the region; on a par with the radicalization of Muslims in the wake of revelations of indefinite detention and torture of suspected terrorists at the US detention facility at Guantanamo Bay, Iraq’s infamous Abu Ghraiib prison, and dozens of CIA “black sites” around the world.

Rather than eliminate potential threats, US drone strikes fuel popular resentments and swell the ranks of local insurgencies. This is a recipe for endless war: a corrosive and counterproductive strategy that represents a genuine existential threat to American civilization. Writing in the early 1950s, Innis argued: “Losing touch with the problems of time, [the state] has been willing to engage in wars to carry out immediate objectives” (1995: 76). From an Innisian perspective, then, the short-term tactical victories afforded by drone strikes that kill militant leaders overshadow the long-term strategic implications of waging perpetual war. Killing by remote control has become so commonplace that analysts sometimes characterize the program with a callous but revealing euphemism: mowing the lawn.\(^6\) The domesticating logic behind this metaphor is hard to miss: an otherwise mundane household ritual serves to normalize and routinize drone assassination. This seemingly innocuous figure

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\(^5\) As Andrew Cockburn (2015) observes, there is in fact a 2–5 second delay or “latency” owing to the vast distance data travels from an airborne drone, to orbiting communication satellites, then via fiber optic cable from the US Air Force base in Ramstein, Germany, across the Atlantic Ocean and on to command and control stations across the continental United States.

of speech belies the depraved indifference for human life cultivated by drone warfare and underscores a growing indifference for time that Innis associated with space-biased cultures. Thus, the euphemism “mowing the lawn” performs the important ideological work of promoting, while simultaneously trivializing, a state of perpetual war.

In addition to normalizing endless war, unmanned aircraft and the associated surveillance and computational technologies used to conduct robotic warfare work in effect to weaponize time. Doing so, this new kind of war exacerbates historical processes, which, Innis argued, “destroyed a sense of time” (1995: 86). Consider the US Air Force’s Gorgon Stare IRS system. Grouping the imagery taken by as many as ten remote planes flying simultaneously over a target area, the Gorgon Stare enables analysts to continuously monitor and record activity throughout an entire city: “Computers store these moving images so that analysts can dial back to a particular time and place and zero in, or mark certain individuals and vehicles and instruct the machines to track them over time” (Bowden 2013: 63, my emphasis). This preoccupation with prior knowledge—something of an obsession in the post-9/11 American psyche—is antithetical to the importance of time to the stability, continuity, and duration of societies Innis observed in his histories of communication.

Likewise, the use of so-called signature strikes, which target unidentified groups of “military-aged men” based solely on their geographic location, physical attributes, and patterns of behaviour, reveals an utter disregard for time emblematic of space-biased technologies and societies. In this respect, signature strikes dramatically reveal “an undue obsession with the immediate” that all too often claims the lives of innocent civilians (Innis 1995: 61). Unlike targeted assassination, this tactic does not require presidential approval. Rather, military personnel monitor, surveil, and frequently assault targets whose actions bear the “signature” of militant activity, without any evidence of violent or criminal activity. Small wonder, then, that critics liken signature strikes to “pre-crime”—a preemptive law enforcement technique that incarcerates people who are suspected of committing some future crime (Calhoun 2016).

As depicted in Steven Spielberg’s 2002 thriller, Minority Report, based on a short story of the same name by acclaimed science-fiction writer Philip K. Dick, would-be criminals are apprehended before they break the law. But in contemporary law enforcement and military operations, the philosophy and practice of pre-crime has transmogrified from the stuff of dystopian fiction to the harsh reality of lived experience (e.g., Smith 2016). From an Innisian
perspective, pre-crime reduces time to a commodity, subject to manipulation and control by monopolies of knowledge and power. Unlike pre-crime, however, signature strikes forego capture altogether and instead kill suspects without charge or trial. Upending the temporal order of criminal investigations, pre-crime attempts to predict and control criminal activity before it occurs. So too, signature strikes violate any notion of due process—a time-honoured legal tradition—and instead target groups of people for execution based on actions and behaviours observed from “eyes in the sky.”

“Shoot first and ask questions later”—a quintessentially American sentiment—seems an apt description for this tactic. The cruel irony in all of this reveals an utter contempt for time: a barbarous and self-defeating present-mindedness that Innis would doubtless find appalling, but not at all surprising, given American empire’s reliance upon and fascination with the sublimity of space- and time-annihilating communication and transportation technologies.

Significantly, the bias of space-oriented media and communication is evident in the official language used to justify drone assassination. President Obama’s Office of Legal Counsel developed a “broader concept of imminence” to justify killing individuals, without evidence, who might, at some unspecified point in time, be involved in an attack on US interests and citizens. Critics decried this abuse of language in legal arguments asserting the President’s authority to execute suspected terrorists. The elasticity of this new definition, critics contend, not only defies common understanding and usage of the word. It also sets a troubling legal precedent, one that epitomizes a profound neglect for time. Indeed, this lexical sleight of hand may have significant and unforeseen ramifications in the years to come as other nations and non-state actors deploy weaponized drones of their own (Kreps & Zenko 2014). Such is the trap of present-mindedness Innis cautioned against. In sum, the rhetorical strategy of redefining the word “imminent” to provide legal justification for targeted killing does more than rob the word of its meaning. Rather, it is the discursive embodiment of the values, outlooks, and aspirations expressed by and constitutive of space-biased cultures. All of which underscores the crucial and decisive role discourse plays in shaping as well as reflecting technological development.

Innis and the Discursive Turn

With its focus on the material features of media and communication technology—its relative lightness or heaviness, its ephemeral or durable character—Innis’s historical analysis is sometimes criticized as reductionist
and determinist. These critiques overlook or fail to appreciate Innis’s attention to the varied forces and conditions—economic and cultural, geographic and political—that shape and inform technological innovation. Foregrounding the significance of space and time to the growth and development of human societies, Innis viewed the relationship between communication and social organization as dialectical and contingent, and made this the centrepiece of his study. As Ian Angus puts it, “The concepts of time and space are used to describe the constitutive power of media of communication in constructing and maintaining society” (1998: n.p.).

Furthermore, Innis’s historical analysis suggests that communication technologies are both a reflection and an expression of a given society’s bias toward its maintenance in time, or its expansion in space. In other words, while technologies have inherent characteristics, they are nonetheless malleable and, Innis believed, ought to be developed in a relational fashion, for purposes of serving society’s interests across both time and space. Viewed in this light, Innis’s work is at once descriptive and prescriptive. On the one hand, Innis identifies and celebrates past societies that achieved such a balance; on the other, he pleads for modern societies to strike a similar balance between these two cultural biases (Innis 1995).

Writing in *Empire and Communications*, Innis observes that human cultures “flourish under conditions in which civilization reflects the influence of more than one medium and in which the bias of one medium towards decentralization is offset by the bias of another medium towards centralization” (2007: 27). By contrast, an over emphasis on either dimension leads to monopolies of knowledge and power that undermine social stability and security. Equally important, as Catherine Frost observes, Innis recognized the moral implications of his analysis: “More was at stake than the staying power of civilizations. The civility of civilizations, their worthiness as articulations of the human community mattered as well” (2003: n.p.). Emblematic of the most repellent tendencies and aspirations of space-biased cultures, the use of drones to kill people from half a world away raises profound moral questions precisely because they epitomize the incivility, the cowardice—indeed the barbarism—of this new kind of war.

All of which contradicts news and official discourse that portrays these killing machines as sophisticated weapons capable of hitting their targets with pinpoint accuracy and precision. Indeed, drone survivors, investigative journalists, human rights lawyers, and anti-war activists produce and circulate alternative and oppositional discourses that challenge this dominant order of discourse (e.g., Benjamin 2013; Kahn 2013; Knefel 2012; Rehman 2013).
Consider the words of a former drone operator regarding the aforementioned geolocation targeting practices used to conduct and coordinate US drone strikes. Speaking to *The Intercept*, the unnamed source claims that insurgents are well aware of the NSA tracking system and have developed tactics to conceal or disguise their identities: “They would do things like go to meetings, take all their SIM cards out, put them in a bag, mix them up, and everybody gets a different SIM card when they leave. That’s how they confuse us” (Scahill & Greenwald 2014: n.p.).

The moral hazard of what this whistleblower describes as “death by metadata,” rarely acknowledged in such candid terms, undermines repeated claims by the Obama administration that the US conducts drone strikes only when individuals have been identified and that there is “near certainty” that innocent civilians will not be killed or injured. But as the former drone operator concludes, more likely than not, the person with the phone at the time of an assault is not the intended target:

People get hung up that there’s a targeted list of people. It’s really like we’re targeting a cell phone. We’re not going after people—we’re going after their phones, in the hopes that the person on the other end of that missile is the bad guy. (Scahill & Greenwald 2014: n.p.)

This same report underscores the moral discrepancies between US intelligence-gathering practices before and after a drone strike. Prior to an assault, the kill chain relies almost exclusively on SIGINT: the sort of intelligence-gathering techniques insurgents have learned to compromise and confound. Despite the moral, if not the tactical, advantages of having eyes and ears on the ground, as well as in the sky, human intelligence (HUMINT) rarely contributes to the target selection process. In contrast, Caitlin Hayden, a spokesperson for the National Security Council (NSC), described after-action assessments this way:

After any use of targeted lethal force, where there are indications that civilian deaths may have occurred, intelligence analysts draw on a large body of information—including human intelligence, signals intelligence, media reports, and surveillance footage—to help us make informed determinations about whether civilians were in fact killed or not. (Scahill & Greenwald 2014: n.p.)

The twisted logic of confirming the presence of civilian casualties after an assault has taken place raises profound moral questions: precisely the sort of
humanist concerns that motivated Innis’s communications work at the dawn of the Cold War (Frost 2003).

To this end, and in keeping with his training as an economist, Innis sought to strike a balance between time- and space-biased media. The moral and political shortcomings of industrial societies—especially the problems of “mechanized knowledge” Innis found most troubling—find a counterbalance in the dialogic character of the oral tradition:

Innis claims that orality was a stabilizing influence in civilization in the past, though this has not been adequately understood. In the present we need to recover and extend orality in order to develop greater stability in time and this is the healing intention of Innis’ theory—to restore balance where balance has been disturbed. (Angus 1998: n.p.)

Contrary to criticism that his work suffers from rigid technological determinism, then, Innis understood full well that the balance he sought was not a matter of technological innovation, but rather of politics and culture (Acland 2006). Nowhere is this more evident than in the discursive struggle over America’s use of armed drones in its decades-long war on terror. Political and military leaders—working in tandem with their enablers in the corporate news media—attempt to dominate policy discussions through secrecy, selective leaks, and sanitized press coverage of US drone strikes. Conversely, elements of civil society exercise power and influence policy through all manner of discursive practices—investigative reporting, whistleblowing, street protests, and graphic arts, to name a few.

None of which is to ignore or underestimate the power differentials operating across these orders of discourse. Still, this discursive struggle has tangible effects. For instance, in July 2016, following years of litigation and agitation on behalf of innocent drone victims and their families, President Obama issued an executive order calling for greater accountability for civilian casualties of US drone strikes. Three months later, a coalition of human rights groups followed up on the new policy and sent a letter to Barack Obama identifying ten drone strikes “requiring investigation and acknowledgement” of civilian casualties (Fulton 2016). These efforts to introduce a measure of transparency in America’s drone program underscore the significance of creating a discursive space to debate the wisdom, efficacy, and morality of drone warfare. Equally important, the discursive struggle surrounding the US drone program offers a stark political lesson on the relationship between language, culture, and technology. As James Carey puts it: “The bias of technology can be controlled only by politics, by curtailing the expansionist
tendencies of technological societies and by creating avenues of democratic discussion and participation beyond the control of modern technology” (1992: 136).

Drones: The New American Sublime

It is tempting to view the US drone program in terms of a “clash of civilizations” between the Western and Muslim worlds (Lewis 2002). The appeal of this narrative pivots on longstanding and seemingly intractable tensions over religion and politics. But as Akbar Ahmed observes, a significant and frequently overlooked aspect of this analysis lies in the recognition that “the clash of civilizations is not the inevitable outcome of history, but a sign that communication and exchange has broken down” (2013: 304). Ahmed’s insight echoes a similar sentiment expressed by Harold Innis some 65 years ago: “Enormous improvements in communication have made understanding more difficult” (1995: 31).

This paradox is all the more startling in light of the multiplicity of communication forms and technologies employed by state and non-state actors alike in their respective struggles to win hearts and minds or, conversely, to strike terror in the hearts of their adversaries. Militant groups like Al-Qaeda and, more infamously, ISIS issue threats and document all manner of atrocities through social media and related platforms. All to the consternation and indignation of Western viewers. Conversely, the Department of Defense posts footage of US drone strikes to YouTube for purposes of “promoting UAVs domestically and ‘enlightening’ our enemies” (Franklin 2010). While the success of this “drone porn” in dissuading would-be extremists from taking up arms remains unclear, these clips generate enormous enthusiasm among American audiences.

The rhetoric of the technological sublime pervades much of our language and a good deal of our thinking about drones. The ability to wage war from a world away; to strike at adversaries while keeping US forces relatively free from harm has made war easy: a sublime state of perpetual conflict. In the American imagination, the technological sublime represents progress, ingenuity, and unrivaled mastery over the natural world. Curiously, the electric sublime—replete with promises of liberty, fraternity, and prosperity—finds one of its most vocal proponents in Marshall McLuhan, who was deeply influenced by Innis’s work. But Innis was far more sceptical of the rhetoric of the electric sublime. As James Carey points out, Innis “disputed the notion that electricity would replace centralization in economics and politics with decentralization,
democracy, and a cultural revival” (1992: 133). Drawing upon Innis’s clear-eyed assessment of more recent developments in computational, navigation, and communication technologies, Carey continues: “What we are witnessing is another increase in the scale of social organization based upon electronic communication” (170). Put in more theoretical terms, then, integrating elements of both the dynamic and electric sublime, drones represent a rather ominous development in a historic and ongoing process of time-space compression that collapses geographic distance, frequently exacerbating unequal relations of social, economic, and political power (Harvey 1990).

In conclusion, Innis’s work offers an invaluable heuristic tool for understanding the relationship between the technological sublime and the growth and expansion of American empire. The dynamic sublime of the railroad coupled with the electric sublime of the telegraph were instrumental in colonizing a continent and its Indigenous peoples. Led by the drone program, this latest round of American imperial expansion likewise threatens tribal Islam—oral cultures, not unlike the native peoples of North America, deeply rooted in place and tradition. All of which is to suggest that the sublime frequently (and purposefully) obscures the brutalizing effects of space-binding societies and technologies. In the American context, the sublime represents far more than a quasi-religious feeling or sensation. Rather, it is a way of thinking that inscribes technologies and social relations in discernable, replicable, perhaps even predictable ways—what Charles Acland describes as “grooves.” Acland concludes:

> It behooves us to examine seriously the lasting consequences of the grooves in social existence as scratched out by policy programs. In the end, we need to ask not only about the decisions taken, but what manner of cultural coherence is being fabricated, fortified and advanced by said decisions. (2006: 176, my emphasis)

Innis’s work poses fundamental questions regarding policy decisions in the twenty-first century, especially, as I have suggested here, the US drone program and the attendant “arms race” in military drones across the globe. More importantly, Innis’s moral voice demands that we consider the implications of such cultural coherence in a society enamored with drones: the new American sublime.
References


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