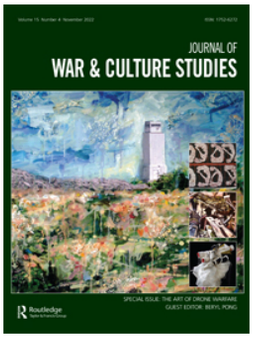

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The Art of Drone Warfare

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The increasing prevalence of drone strikes, and the expanding applications of drones in different industries, are dissolving the boundaries between military and civilian realms. This special issue considers 'the art of drone warfare' by surveying the field of scholarship on drone warfare and drone art to date. It addresses the affective, discursive, technopolitical, and colonial histories underpinning drone systems, through essays discussing various cultural works encompassing marketing video, film, literature, and the visual arts. Despite the unresolved controversies surrounding the ethics of remote warfare, military drone use has become normalised. Examining the art and aesthetics of drone warfare helps to make its politics perceptible at a time when the logic behind autonomous military systems is becoming entrenched.

KEYWORDS drones, aesthetics, culture, imaginary, warfare

On 24 February 2022, when Russia invaded Ukraine, the art of drone warfare entered a different phase. Thousands of drones are being used on both sides in the war, with Russia using the Orlan-10 and Ukraine relying heavily on the Turkish-made Bayraktar TB2; the latter has become legendary in both Turkey and Ukraine, and it is often the celebrated subject of viral social media posts, including one on the Facebook page of Ukraine's commander-in-chief, Valerii Zaluzhnyi. While these models are already less expensive and more accessible than military drones such as the Reaper and the retired Predator, even commercial, off-the-shelf drones such as China's DJI Mavic 3 are also being used, both for surveillance and intelligence gathering and for delivering small explosives. On Twitter in July 2022, Mykhailo Federov, Ukraine's minister of digital transformation, made an appeal

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for 'dronations' (in addition to crowdfunding campaigns for cryptocurrency donations) for building up the country's 'army of drones' (Vallance 2022).

This development in drone warfare, which mixes military and non-military unmanned aerial vehicles (UAVs) and sees drones being used both for intended and improvised purposes, should come as no surprise. In one instance, a captured Orlan-10 was taken apart and revealed to carry the standard device of an amateur photographer, a Canon DSLR camera, fixed into place with Velcro straps, demonstrating how war devices couple purpose-built military technologies with the most common consumer products (Hambling 2022). Although non-state actor drones have been using commercially available rotary-winged drones and equipping them with improvised explosive devices (IEDs) and cameras for some time (Sims 2018), their incorporation into the Ukraine-Russia war is the first instance in which a state actor has explicitly embraced the prosumer drone's immanent improvisatory capabilities. The longer-term repercussions of opening this pandora's box will make themselves known only with time.

Time is something we have already had with military drones, despite popular perception and journalistic accounts of its unprecedented and contemporary nature. Drones date back to the First World War, and they gained new prominence, and actualized new potentials, in the early twenty-first century, when they were used in the identification and 'targeted killing' of suspects in the post-9/11 era with Barack Obama's expansion of the CIA drone programme. This catalysed a first wave of drone scholarship, much of which is concerned with the aesthetics of the drone's-eye view in enmeshing vision with violence. Drone technology has been analysed as primarily one of visual perception as a 'militarized regime of *hypervisibility*' (Gregory 2011: 193) in which the 'fateful coincidence of eye and weapon' entailed nothing less than the convergence of perception and lethality, to go back Paul Virilio's classic argument in *War and Cinema: The Logistics of Perception* (1989: 110). Expanding the reach and role of vision alongside those of projectile weaponry, drone strikes in America's counterinsurgency and counterterrorism campaigns collapse Intelligence, Surveillance, and Reconnaissance (ISR) capabilities with targeting, producing a single process of 'lethal surveillance' (Kindervarter 2016). Because drone visuality is mediated through an array of technologies–including screens, sensors, audio relay, satellites, mobile phone signals, and algorithms–the logical conclusion is a broader post-human transformation of both vision and war (Bousquet 2018, Wilcox 2016).

We have by now become familiar with particular kinds of images from the War on Terror from the counterinsurgency side. The array of screens surrounding a drone pilot sitting in a claustrophobic shipping container; the drone's-eye view from above of a grainy, grayscale environment, with bodies below indiscernible only as blobs of white registered by infrared: such aesthetics of drone warfare have been circulated on YouTube videos and mainstream news in what Caren Kaplan (2017: 161) calls the 'drone-o-rama': the ongoing public interest and immersion in the views of UAVs, which need to be understood as part of the

'military-industrial-media-entertainment network' (Der Derian 2009). For this reason, art-historical criticism and the visual arts have played a significant role in the cultural critique of drone warfare. The 2016–2017 period, in particular, experienced a peak in public drone discourse, and three significant exhibitions took place concurrently: 'To See Without Being Seen: Contemporary Art and Drone Warfare' (2016), at the Mildred Lane Kemper Art Museum in St. Louis; 'The Age of Terror: Art Since 9/11' (2017), at the Imperial War Museum in London; as well as a solo exhibition, also at the Imperial War Museum, by the American-Pakistani artist Mahwish Chishty (2016), whose work is discussed in this special issue. These exhibitions brought together not only important artists working and thinking about art in the age of remote warfare; they concretized the coordinates dominating drone scholarship, including the drone's troubling of categories such as visibility, documentation, and evidence.

Nevertheless, scholarship on drone warfare and drone art remains predominantly focused on those with power, on those who decide on what 'counts' as visible and visualizable. And visualization is a central component of modern warfare from even before Carl von Clausewitz's theorization in *On War* (1832). It is part of what American army doctrines, like *Field Manual 100-5: Operations* (1993: 2), call 'operational art': the art of establishing 'when, where, and for what purpose major forces will fight. It governs the deployment of those forces, their commitment to or withdrawal from battle, and the sequencing of successive battles and major operations to attain major objectives'.[1] As Nicholas Mirzoeff (2011: 19) has argued, visualizing was a key activity of the modern general from the late eighteenth century, when the battlefield became too extensive for one person to physically see; a corollary was the creation of a new, lowest-ranked officer class, the subaltern, who did the seeing but whose information was then supplied to the commanding general for 'visualizing' the operational art. That differential aspects of seeing, visualizing, and perceiving in war are tied to histories of oppression and colonialism have become well established. The emergence of the drone dovetails not only with longstanding developments related to vision in warfare, but with the logic and practice of colonial policing and population control through airpower in the Middle East and Afghanistan, particularly in the early twentieth century (Neocleous 2014, Satia 2014, Tahir 2017, Kaplan 2018). Accordingly, *Field Manual 3-24: Counterinsurgency*'s understanding (2006) that success in the field is contingent on the 'commander's visualization' of the area of operations, 'incorporating history, culture, and other sets of "invisible" information into the topography,' is deeply racialised (Mirzoeff 2011: 19).

[1]The language of field manuals needs to be considered in light of contemporary war's dissolution of spatial-temporal boundaries, in what others have variously called the 'forever war' (Filkins 2008) and the 'everywhere war' (Gregory 2011). As Jimena Canales (2014: 37) points out, the updated version of *Field Manual 100–5* was controversial because, in a 1998 draft, 'operations' and 'war' became synonymous: 'The 1998 FM 100–5 folds the concepts of war and operations other than war (OOTW) into one–*Operations*.' With OOTW construed as equivalent to war, areas such as surveillance, intelligence, diplomacy, and even political relations writ large can be seen as martial, as war.

The colonial history of airpower, and the racial and cultural violence it brought forth, is why some have called the drone a 'technology of racial distinction' (Allinson 2015: 120). This distinction is supported by the affordances of the technology, since the aerial view, and the drone's capacity to be nearly invisible to the human eye below, can reinforce impressions of distance, objectivity, and near-mythical vision for those who use it (Haraway 1988). However, if we pay attention to the experiences of those civilians on the ground for whom the constant buzz of the drone and the fear of imminent, unlocatable violence from above have led to chronic anxiety, we will be confronted with a 'thicker definition of civilian harm,' one that 'dismantles the visual regime of the drone' (Hussain 2013; see also International Human Rights, 2012: 80–1).

The divides that the drone creates–between high and low, seer and seen, us and them–is a recurring concern of drone art, and various artists have grappled with how to represent, but also bridge, these chasms in their own ways.[2] The two endeavours often appear to be ethically incompatible, though, as reconciling them would make one side seen only on the terms of those who see. A way forward, Jennifer Rhee argues (2018: 147), is to explicitly engage with the limits of 'the identificatory relation' between Western subject and non-Western subject in order to acknowledge the racial dehumanization that underpins military drone technology. Although less concerned with race, Thomas Stubblefield's *Drone Art: The Everywhere War as Medium* (2020) finds in even seemingly apolitical drone artworks a desire to encourage distributed modes of authorship and meaning-making; in this way, he considers the problem of identification by emphasizing the heterogeneous and often unpredictable meanings that viewers give to the drone beyond martial paradigms. Meanwhile, Ronak Kapadia's *Insurgent Aesthetics: Security and the Queer Life of the Forever War* (2019: 15) draws from a different archive of drone art from diasporic artists of the Global South, one that overtly aims at 'defamiliarizing and queering' the logic of gendered racial violence, not necessarily by directly representing it, but by rendering and making its corporeal and sensorial effects visible to those not touched by the drone's racial distinctions.

With drone technology having now fully entered areas of non-military life–from agricultural drones to drone delivery systems, from humanitarian drones to medical drones, from hobbyist photography drones to spectacular drone light displays–it is more urgent than ever to call attention to the discursive and technopolitical conditions which are shaping drone proliferation and its expanded applications. 'The arc of drone art,' Arthur Holland Michel writes (2020: 226), 'is a valuable object lesson for how art about technology emerges, flourishes, evolves, fades and ultimately, becomes something else'—that is to say, how drones have become technological woodwork, naturalized as a familiar presence in everyday life. Michel states that drone artworks from the past ten to fifteen years 'now function

[2] I am thinking in particular of James Bridle's *Drone Shadows* series (2012–2015), Tomas van Houtryve's *Blue Sky Days* (2012–2014), and Heather Layton and Brian Bailey's *Home Drone* (2012), all artworks which variously transpose the drone's assumed presence over other lands onto the West, playing up the viewer's distance from drone violence to solicit empathy.

not as active interventions, but as artefacts' in the field though still hold value as such (232). This special issue returns to such recent 'artefacts' of film, popular culture, literature, and the visual arts, but it sees continued possibilities for intervention in doing so. It argues that there is a need for us to look again at the rise of drone warfare *because* it has become normalized despite its unresolved politics and the controversies surrounding the ethics of remote killing. The number of countries operating military drones has increased by 58 percent between 2010 and 2019; at least 95 countries now possess or export what was once a novel technology, and in geographies beyond those of the War on Terror (Gettinger 2019: VIII). More than ten countries have conducted drone strikes as of 2020 (Bergen *et al.* 2020), and at the moment of my writing of this article, there are continued strikes in northeastern Syria by Turkey with confirmed civilian casualties (Abdulrazek 2022).

Alongside the prevalence of military drones and the normalization of drone strikes, drone warfare has also come to be seen as just one aspect of drone use. Cases for considering 'good drones' (Sandvik and Jumbert 2017) have been made, and there certainly are many positive applications to drones that are developing. As sensorial and sensing devices (Agostinho *et al.* 2020b) that are 'more-than-optic' (Jackman 2017), drones are creating new ways of moving, experiencing, and understanding the spaces around us, whether that is in terms of social communities (Hildebrand 2021), cultural relations (Richardson 2020), or the natural world (Fish 2020). As with many disruptive technologies, however, drones are 'malleable' devices (Jackman 2019), and decreased costs and increased accessibility provide opportunities for experimentation as well as exploitation. Rather than seeing drones as only good or bad, the current state of drone development and proliferation is not conducive to binaristic thinking. The boundaries between military and civilian drone uses are dissolving: military drones are now regularly used to monitor and secure borders against migrants (Koslowksi and Schulzke 2018) and to surveil domestic protests (Kaplan 2020), and police drones have been used to enforce exceptional rules like lockdowns during the first wave of COVID-19 (Schippers 2020). Drones are falling into the hands of more diverse communities, but as they become less and less exceptional, this also means that they have become harder and harder to critique in their capacity to create 'everyday militarisms' (Richardson 2020, Kaplan forthcoming).

The rise of drone warfare tells us important lessons about the role that our values, laws, and institutions have played in making public acceptance of drones' incursion into our lives possible. This includes how we see drone technology as desirable or undesirable in terms of how we wage war, but that also intersects with broader concerns such as privacy, the uses of data, the role of sensors and AI, and how and where to draw the lines of responsibility between humans and machines, especially as drones are intersecting with practices of data collection that are increasingly part of everyday life (Agostinho *et al.* 2020a). Therefore, this special issue brings together the art of drone warfare with recent work being done on the drone's

broader relationship to imaginaries and biopolitics (Kaplan and Parks 2017). Imaginaries, Andreas Immanuel Graae and Kathrin Maurer write (2020: 2), are 'negotiations between personal, emotional experiences and the broader social imagination', and the different aesthetic dimensions of drones are central to understanding how and why drones are proliferating in our broader social and cultural worlds. If 'social imaginaries are ways of understanding the social that become social entities themselves, mediating collective life' (Goankar 2002: 4), then scrutinizing the imaginaries surrounding drone warfare will help to reveal how we have come to create and accept a 'targeted class' (Parks 2016) whom we allow to be on the receiving rather than controlling end of drone use, one whose traumatic experiences of the drone cannot be captured by the focus on accuracy statistics and casualty figures. How have we come to where we are? What histories underpin the continued use of drones strikes, especially at postcolonial sites? How has culture helped to promote and obscure–but at other times, reveal and resist–the increasing prevalence of drone strikes? What warnings does our acceptance of such histories provide for our future of proliferated drone use? Jill Stauffer (2021: 126) compares how we perceive military drone usage to how colonial settlers 'settle in' to a sense of the world and see these histories as just 'the way things are'; this special issue asks us to acknowledge our perceptual limitations, and the histories we have taken as given, and to keep re-thinking them anew in light of recent drone developments.

As evidenced by the role of social media in promoting drone use in the Ukraine-Russia conflict, in what others have called 'the world's first TikTok war' (Chayka 2022), public opinion is key in normalizing, as well as garnering funding for, military autonomous systems. In the first essay, Peter Burt from Drone Wars UK addresses one of the most visible, but least discussed, products of drone visual culture: marketing video. There is already an established history of collaborations between drone purveyors and film-making and animation professionals, such as General Atomics' six-minute promotional video (2009) for its Avenger model, which throws the viewer in *medias res* of a drone operation and emulates the scenes of an exciting war film. Its B-action film aesthetics derealise and glamorize drone operations (Holert 2017: 108), and some of that approach can be seen in the promotional videos Burt analyses by BAE Systems, SRC Defense, and a key governmental organization involved in developing military autonomous systems, the UK Royal Navy. Burt discusses how the videos' various styles and aesthetics, and their representations of seemingly infallible drone technology and straightforward human-machine relationships, work to obscure the technology's politics, ethics, and limitations. As a non-profit activist organization, Drone Wars UK has been instrumental in scrutinizing drone operations within existing contexts of international humanitarian law and international human rights law, and this essay complements their policy work in addressing the cultural forms through which military drone contractors and state users gain public interest and support.

The second essay turns directly to Hollywood to understand how hegemonic popular culture massages the moral complexities of drone warfare. Although Andrew Niccol's feature film *Good Kill* (2014) purportedly articulates an ethical critique of drone warfare, Alex Adams dissects how the film also makes it palatable and acceptable by focusing on the trope of aseptic military weaponry and by foregrounding the psychological pressures faced by military drone operators. The film's representation of incompetent military bureaucracy and private trauma, Adams writes, plays directly into a longer genealogy of empathetic war films. *Good Kill* therefore draws on conventional genres and forms to legitimate drone warfare at a time when very little was known or understood about it. This was also a time when popular culture in America was concerned with understanding the differences that war at a distance seemed to make to the combatant experience, a preoccupation fuelled by several whistleblower exposés, including those by former defense analyst Daniel Hale and drone sensor operator Brandon Bryant.

Although narratives of traumatized drone operators continue to appear in the mainstream press (Phillips 2022) other accounts of drone warfare imbibe the ideologies observed by Burt in his essay. Many of these are fictional, sensationalist suspense-thrillers that depict drone operators as new digital warriors, albeit within well-established conventions of the literary middlebrow (Hensley 2016). Others are non-fiction and written by drone pilots and sensors themselves, but Matthew Voice's analysis of their autobiographies shows different kinds of mediation at work. Taking as axiomatic the centrality of language to the sharing and interpretation of experience, he turns to cognitive linguistics for understanding how the phenomenologies of drone warfare are incorporated into the operators' psyches through discourse and narrative form. This happens through metaphor (of drone victims as bugs, of drone piloting as video-game playing) and through cognitive grammatical structures that both render and collapse drone operation's extended 'kill chain' of networked actors, from decision-maker to image analyst to drone pilot (Gregory 2011: 196). Understanding both elements, Voice writes, enables the reader to see the extent to which language functions to assimilate particular ideologies surrounding drone warfare while providing windows for critiquing them at the same time.

Literature by and about those who wage war is not neutral; indeed, reading recommendations for counterinsurgency commanders have included T. E. Lawrence (of 'Arabia') and nineteenth-century imperial war literature to encourage seeing present conflicts in continuum with past colonial wars (Mirzoeff 2011: 20). Both Adams and Voice note the need to study their primary texts alongside works by and about those who are targeted by military drones, and the next two essays do precisely that. Although Atef Abu Saif's memoir of surviving the 2014 Gaza War, *The Drone Eats With Me* (2015), has been called a 'nascent work of drone fiction' (Craps and Smethurst 2019: 87), that contradicts the text's claim as a work of testimony, and it downplays the text's emphasis on the enabling historical precedents for the drone's aerial violence. As Sophia Brown shows, the text needs to

be understood more specifically within the entrenched geopolitical violence undergirding Palestinian life since the 1948 Nakba. For this reason, Brown argues, both Abu Saif and his publisher, Comma Press, have needed to engage in their own mediations through the text's language and rhetoric, as well as through paratextual material, to emphasize Gaza's experience of drone warfare as only one chapter of what has been called 'the longest occupation in modern history' (Azarova 2017).

The fifth essay, by Madonna Kalousian, argues that the art of Rooj Alwazir, Noor Behram, and Mahwish Chishty respond directly to the violent metaphor of the victim-as-insect discussed by Voice in the drone operator autobiographies. Drawing from the theories of Martin Heidegger and Giorgio Agamben on distance, nearness, and the viewer of the screen, Kalousian suggests that their artwork adopts an anti-anthropocentric approach in light of the unsubtly named U.S. Department of Defense blast modelling software programme, 'Bugsplat', which calculates and shows the likelihood of where damage–intended and collateral–will occur. Where Chishty furnishes her drone silhouettes with bright colours to mimic the aposematic signals of deadly animals (Chishty 2021: 101), Alwazir and Behram focus on the politics of the human face: both are part of collectives who engage in the use of photographic portraits, installed in the everyday spaces of Sanaa, Yemen and Dande Darpa Khel, Pakistan, respectively, to emphasize the human stories of those who live under drones. All three artists resist the logic of what Kalousian calls bare insecthood, and they insist on 'the right to look' back (Mirzoeff 2011).

The last essay brings the reader back to what is now a canonical artistic rendition of drone invisibility and visibility in America, Trevor Paglen's photograph *Untitled (Reaper Drone)*, one of several images from his series of untitled drone portraits (2010–2015). To resist the military drone's dogma of one-sided information gathering, surveillance, and destruction, Sophie Maxwell enacts a practice of slow viewing with Paglen's photograph, in which the titular drone is elusive and barely visible against the Nevada sky, by tracing her own shifting experiences as the drone's spectator, seeker, and watcher. Reflecting on the artwork's play with words, as well as its amorphous call-out to paranormal photography, Maxwell considers a praxis of what she refers to as durational viewership, where the temporality of art 'watching' enables a more expansive and capacious conversation between viewer and object to take place. The form of the essay–and its cognitive grammar, to use Voice's terms–decentres the scopic regime and lethal perception of the military drone.

Maxwell quotes from T. J. Clark: 'Astonishing things happen if one gives oneself over to the process of seeing again and again: aspect after aspect of the picture seems to surface' (Clark 2006: 5). The essays in this special issue approach very different cultural products and media from many different backgrounds, geographies, and intentionalities, but they all share the conviction that these cultural products need to be seen and scrutinized again in order to intervene in the prevailing logic underpinning autonomous military systems which are becoming entrenched. These essays are concerned with aesthetics–aesthetics understood variously as art, as embodied experience, but also, as what makes politics perceptible. Jacques Rancière

(2004:13) argues that aesthetics are political because they produce 'the distribution of the sensible': aesthetics makes politics appear natural, self-evident, or inevitable by helping to establish 'what is seen and what can be said about it' and 'who has the ability to see and the talent to speak'. From drone marketing video campaigns to Hollywood film; from the language used by drone pilots to the life-writings of drone victims; from 'insurgent' works of visual art sprung from targeted classes to rarefied atmospheric portraits of invisible seeing-killing machines: these essays ask us how our consumption of such cultural works implicates us in the aesthetics of drone warfare; in historical lineages of geopolitical surveillance and colonial oppression; in establishing what is seen and what is said about it. Encountering again the art of drone warfare reminds us that drone warfare is not a thing of the past, but part of the fabric of our present, even as its politics, and the boundaries demarcating its presence, become less and less perceptible.

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