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Drone On Reconsidering Art2Drone

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ABSTRACT

Drone On considers artistic and scholarly responses to the evolution of drones from military machines to consumer toys. The author traces the changing meaning of the term "drone" by implementing the metaphor of "domestication" while discussing the artworks and essays from the 2015, Art2Drone exhibition and catalog, curated by the collective, v1b3. This essay is focused on works which critically address drones; consequently, the works discussed represent diverse forms including tactical media performance, image interventions, objects made from data generated by military drones and works which use functioning drones.

INTRODUCTION

As I write this in late fall of 2017, I have just skimmed another online tech news post asking for tips for a new "drone pilot." This ritual, repeated annually for seven years as we head into the holiday buying season, shifts the expected context: drones are toys and it is understood that the pilot in question is not military. He is an enthusiast, a civilian, looking to play, master and control its ability to fly, and perhaps capture images. Child's play, sixteen years after the 1st drone kill by the United States government on October 7th of 2001.

The terms and labels we use to talk about this technology are used interchangeably, whether discussing toys or military tools of war. Through sharing of these labels, we engage in a process of domesticating tools originally meant for the battlefield. Caren Kaplan, in her essay, *Drone-O-Rama*, identifies this process as a kind of remediation which removes "most traces or connections to the past and thereby misdirecting historical, ethical, and political analysis and critique." The toy drone modifies and pacifies the root term; drone.

By 2010, "drones" had begun their semantic migration from governmental and DIY hobbyist communities to the public at large. That year, the Parrot Ar.Drone, a very popular toy, was announced to much fanfare online. Interestingly, in one early review, the Parrot was referred to as a WIFI Helicopter, an emphasis on its connectivity and control system versus it's "droneness." The Parrot was designed to be controlled by a mobile application, and was marketed to amateurs. One of the features of the Parrot is its ability to hover in place and its relative stability, which makes it far easier to control. This in contrast to the enthusiast drones which require special controllers, like those used for advanced radio-controlled airplanes, cars and boats; far more manual in their control.

As these toy drones became more accessible and the DIY drone community grew, artists began to experiment with them as a symbol and a material. Artist's projects emerged from multiple areas of the arts including, but not limited to dance, visual art, cinema, performance and new media. This increased activity by artists led to the *Art2Drone* catalog and virtual exhibition, which was produced in 2015 by v1b3: video in the built environment, with support from the College Art Association.⁴ v1b3 is an artist-led collective which explores media art's ability to influence and shape the experience of space, while also shaping its sense of place. Since drones, in their military role, serve to control and define geographies and the bodies of those who inhabit those spaces, the v1b3 curators saw a connection to the group's central research interests. The resulting effort includes twenty projects by twenty-four artists and three critical essays. *Art2Drone* was curated by Conrad Gleber, Chris Manzione, myself and Gail Rubini. Included with the artist's projects are critical articles by Meredith Hoy, Abigail Susik and George Monteleone. Works were selected for the catalog to highlight diverse artistic approaches to grappling with the topic of drones as both idea and material. As a result, each of the projects includes the "drone" through implication, the manifestation of drone forms, and/or functional civilian drone platforms.

Drones began as a military technology and evolved and expanded its reach to consumer, business and domestic applications. This transition is akin to the process of *domestication*, a multigenerational development of technologies and cultural pressures which yield progeny able to capitalize on their new ecosystems and contexts. Artist's have used their projects to engage with many moments of shifting meaning and contexts of "drones". It is important to recognize at the outset that *Art2Drone* is not a comprehensive survey of artists working with drones. Important work has been done by numerous artists working prior to the catalog release, and throughout the historical process of the domestication of drones on this subject. The following examples are important reference points outside of the *Art2Drone* project.

Early projects by the German artist Roman Signer are particularly significant in this regard, including his 2008 work, 56 kleine Helikopter, which is critically prescient as to issues surrounding the difficulty of controlling semi-autonomous and autonomous platforms. Signer's 56 kleine Helikopter is a performance in which fifty-six radio controlled helicopters are flown in a gallery space. The resulting collisions produce a field littered with inoperable proto "drones".

Martha Rossler's *Theater of Drones*⁶, 2013, is also significant. An installation of interpretive print materials which functioned to educate viewers about military drones, their use and the (then) new connection to consumer drones, it also included images of protests against American military aggression and drone use. One panel, featuring an Amazon.com page for the Parrot drone, was plainly composed in juxtaposition with a drone command center, a drone sculpture used in a protest, and an image of a pile of bricks; a building destroyed in a drone attack. The project has been presented in public spaces, further functioning to engage the public about the details of drones otherwise perceived as distant governmental activity, disconnected from the everyday life of its citizenry.

James Bridel's 2013, *Watching the Watcher*, ⁷ showcased the artist's evolving collection of satellite images of drones, excavating images of drones and drone sites from a mass of publicly available data. Similarly, Trevor Paglen's *Untitled Drone Series* is assembled from seemingly pastoral

images of the sky. Yet, within each image, hiding in plain sight, is a drone captured by the artist. The drone, barely perceivable, is easy to miss (and/or ignore).

Transposing Spaces

It is a constant sound. A set of tones, a complex hum. An ambience, perhaps becoming part of what we perceive as the noise floor of our environment. Eventually, it might cease to be differentiable: the refrigerator, outside traffic, midnight sewer maintenance, urban helicopter rotors, cicadas. It also works visually: a field of gray as the gestalt product of a random array of millions of bits of black and white, an undetectable signal.

Liminal Airspace!, George Monteleone⁸

George Monteleone's *Art2Drone* essay presents a litany of contexts in which we engage the term "drone." These span music theory, the entertainment industry, biology, commerce, utopian science fiction, and war machines. In his process of presenting short text fragments, he enacts the slippage around the term drone; the semantic drift. As the meaning jumps its tracks, we are presented with more and more examples of drone culture from our daily lives, where the deadly intent is obfuscated, and the defining of such terms as "friendly" and "enemy" obscure the implications of bodily harm, which are likewise lost. This is the harmless and desirable promise of a drone pizza delivery service, one faster than Uncle Enzo's speeding black cars in the seminal cyberpunk novel Snowcrash. However, one only needs to search YouTube for "Epic Drone Crash" to see video after video of pilot and technology failures.

As a collection of works, the projects in Art2Done represent responses to the many issues raised on the continuum from military drones, to commercial drones as production tools to drone toys. This continuum traces a non-linear change in our use of the term, drone as well as a process of domesticating the drone as an object. One of the principle ways in which the artists of *Art2Drone* engage drone cultures is by imagining its implications for western populations by transposing location and landscape. This tactic realigns the site for experience of drones to supposedly unaffected populations, transforming the subject, a public used to hearing about (military) drones as something that happens "over there." It is now a domestic issue¹⁰.

Domestication, is understood as "a sustained, multigenerational, mutualistic relationship in which humans assume some significant level of control over the reproduction and care of a plant/animal in order to secure a more predictable supply of a resource of interest and by which the plant/animal is able to increase its reproductive success over individuals not participating in this relationship, thereby enhancing the fitness of both humans and target domesticates." In the case of domesticating animals, society gains more stable and proximal resources: grain, meat, pollinators. Through selective breeding and artificial selection, desirable traits are reinforced or enhanced to generate an advantage. These changes can radically change the ecosystems into which they are introduced. Similarly, the introduction of drone nomenclatures and technologies into the public sphere transforms the techno-social ecosystem, shifting forms and function of "drone-like objects" while modifying public perception. The ability to utilize the broader definition of drone and consumer technologies affords artists unique opportunities to engage in metaphor and material.

Abigail Susik, in her essay, "The Drone in Social Imaginaries," connects the use of drones by artists as a means of both interpreting this seemingly new technology as an imaging and locational extension of the body; a cyborg's component.¹² Artists are thus able to integrate this extension into their practices while choosing whether to address the militarized parent of these consumer children.

...the drone distinguishes itself in its unusually disparate applications as an amusing hobby toy, a banal commercial tool, and a terrifying prosthetic weapon. The drone encompasses a double affective potential to appear as both laughable, endearing, and pet-like— or— as nightmarish, uncanny and symbolic on a primal level. If the drone itself currently possesses a riven identity given these wildly divergent applications, then it is no surprise that social imaginaries about the drone are likewise fragmented.¹³

Susik rightly argues that this current cultural moment, in which artists are investing in new technologies, is one of diversity. The drone has evolved and in its movement towards domesticity, it has adapted to a plurality of ecosystems and functions. However, a consideration of drone use and critical artistic practices must begin with military drone use within theaters of war.

Within loosely defined war zones, the presence of drones and the sound of their buzzing overhead is a method of defining geographies and of using fear and intimidation tactics to control the movement of bodies living in in these contested territories. Derek Gregory calls these zones "spaces of exception" and defines them as a space "... in which a particular group of people is knowingly and deliberately exposed to death through the political-juridical removal of legal protections and affordances that would otherwise be affordable to them. ¹⁴" The presence of drones in military contexts affects the treatment and definition of the rights of those inhabiting these spaces through a negotiation and enforcement of internal laws and policies. As we consider domestication within a conceptual frame, it makes sense to discuss a set of artist's projects that distinctly addresses the militaristic function of drones, in order to drive home the introduction of this technology into such a diversity of social and cultural contexts.

A number of projects included in *Art2Drone* imagine a scenario in which domestic locations are spaces of exception. These works seek to intervene and interrupt our privileged distance from the tangible outcomes of the drone wars. *Drone Crash Incident* by Ricardo Dominguez, Ian Allen Paul, and Jane Stevens is a multimodal project the artists describe as "disturbance theater." Acting as consultants for the fabricated UC Center for Drone Policy and Ethics, the stated mission of the (UCOP) is as follows:

The UC Center for Drone Policy and Ethics (UCDPE) is a new research institution founded by the UC Office of the President (UCOP) to explore the emerging implications of drone research, use and production within the UC system. Bringing together a group of interdisciplinary scholars and researchers from across the UC campuses, the center is involved in several collaborative research projects involving students, faculty and policymakers at the cutting edge of Unmanned Aerial Systems studies.¹⁵



<u>Figure 1.</u> Drone Crash Incident by Ricardo Dominguez, Ian Allen Paul and Jane Stevens. Courtesy of the artists.

The artists distributed evidence of a domestic drone crash through UCOP in the form of documentation and press releases, and hosted a public town hall meeting. Press outlets including, *The Blaze, The Huffington Post*, NBC San Diego and *Boing Boing* picked up the story and further distributed the troubling image of a fractured drone in front of the UC San Diego Library, as well as context which revealed the UCOP as a critical art project. As part of the Town Hall Meeting, organizers stated that they wanted to "teach basic drone safety techniques that can be practiced on a daily basis to keep ourselves and others safe." Drone Crash Incident presents a plausible fiction as a means to generate a dialog about the use of drones as remote war machines by erasing the distances between there and here and forcing us to confront these technologies in our own spaces.

The tactic of both transposing location and preparing, training or sensitizing local populations to the "new reality" of drones is shared in a number of other *Art2Drone* projects. *Drone Conditioning*, by Simon Remiszewski is a satirical web-based work which spoofs self-help aesthetics and language, while subjecting the viewer to the ever-present sound of a drone's buzz. The piece deftly plays with codes of pop psychology and infomercials; a script-type heading signifying the personal, a nearly transparent image of a loving couple in the blue sky background (the file name is family_fun.png), a call to "learn more" and a narrative text that talks about sound conditioning as a therapeutic counter to the anxiety living under the constant buzz of overhead drones will evoke. Once the web page loads, a sound file of a drone is activated and loops endlessly, thus beginning the conditioning process. One of the unavoidable implications is the privilege of the ability to end the drone's assault on the viewer's senses by simply closing the page.



Figure 2. In Drones We Trust, Joseph DeLappe. Courtesy of the artist.

The push into public space, as demonstrated by *Drone Crash Incident* or the shareability of *Drone Conditioning* are strategies for prompting an otherwise inattentive American public into awareness and dialog about these issues. Joseph DeLappe's *In Drones We Trust*, moreover, locates the site of intervention to the personal and the politically symbolic space of currency. The artist has made available a series of stamps which allow the user to modify the pastoral landscapes on the back of the one dollar bill with a MQ1 Predator drone. Delappe says he noticed the empty sky on the bill and felt that "It seems appropriate, considering our current use of drones in foreign skies, to symbolically bring them home to fly over our most notable patriotic structures." Once stamped, the money is released back into circulation to be found by an unsuspecting public. The project hacks our system of currency by creating the viral opportunity for the drone, in this case a political and critical image, to hitch a ride on the bill as it travels through our economic system.

In a similar vein, albeit with an upbeat imaginary drone payload, AR Drone "Love Bomber" Over Bushwick, by Patrick Lichty and Mark Skwarek, uses a mobile augmented reality application to place images of quadcopter drones into "real" environments. Users experience the piece on their smart-phone, which displays an image of the world as seen through its camera. Onto that image, and using gyroscopic and gps data, the augmented reality graphic is mapped onto a space, thus appearing as if it exists in the "real world." Lichty and Skwarek's project embraces popular culture aesthetics. The drones graphics are clearly based on consumer models and they are depicted dropping a payload of internationally cute and nostalgic 8-bit hearts reminiscent of 1980's video

games. The piece was first shown as an intervention during the Occupy Wall Street protests, and used the ubiquity of smartphones and social media to distribute the work.

Flyover 16 by Jim Jeffers, similarly positioned as a web-based work and thought experiment, inverts the socio-cultural context of a military drone and turns it into what the artist calls a "peace drone." In its new role, the drone follows a predetermined path and surveilles 16 locations important to the artist's personal history. The resulting ephemera is a map of the locations and pathways coded not based on their narrative or cultural significance, but instead coded using GPS coordinates (perhaps another level of protection).

Other artist's projects explore the political and ethical ramifications of military drone programs using a variety of strategies within gallery contexts. Nicholas Sagan's, *For the Love of...*, is an installation that combines live and prerecorded video projected surveillance feeds of the audience. The video is meant to root observers' bodies firmly within the space; capturing the subject. Overhead, one hundred and forty-six drone models of various small scales hang suspended from the ceiling of the gallery and create a distant and unmoving swarm.

In contrast to simulating the sense of being seen and observed, with *Flight Simulator*, Lile Stephens presents an experimental recreation of drone flights over Pakistan, Yemen and Somalia. Instead of relying on drone iconography, such as a military Predator drone, Stephens transposes the drone with an eagle; a pervasive symbol of American identity and power. The installation presents the underlying technical systems, the computer and monitor, as integral components and a matter-of-fact transparency made literal, both mounted in Lucite enclosures. Mounted in front of the monitor is a Lucite eagle, with airplane inspired led lights on the wings, which adds the first person/animal subject we imagine flying through the video landscapes.

Most drone missions operate outside the awareness of American civilian populations. However, military drone missions leave behind indications of their occurrence in the form of satellite images. Landscapes and built environments are altered after the explosion of missiles and bombs, and at times also include evidence of drone crashes. *ASM_frag*, by Nathaniel Hartman makes tangible the results of these "live fire" missions through the use of image translation and 3D printing. His source images are from smuggled photographs of air to surface Hellfire missile strike fragments. These images are translated into 3-dimensional forms and made into sculptures that act as evidentiary totems of these often secret events.

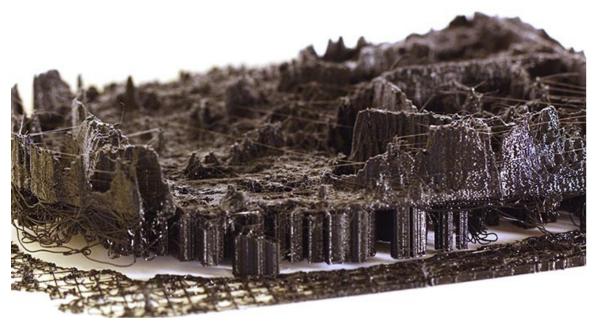


Figure 3. ASM_frag, by Nathaniel Hartman. Courtesy of the artist.

For Landscape Acquisition, Scott Patrick Wiener uses a scale model Reaper RQ-1 drone to capture video footage of landscapes and contrasts this footage, presented on a wall-mounted monitor, with stills of archival military surveillance photography from unknown locations. Wiener's work aestheticizes the source material in an effort to have the audience's initial response relate to the artifacts as "beautiful" landscape photography and video. After reading wall texts, one can imagine disorientation upon recognizing the military and utilitarian origin of the footage.

Grappling with unseen operators, and the use of aerial surveillance technologies as a component of a larger system of controlling populations in protest, is central to the concerns of another gallery work, *Sanguine: Crowd Colorations* by Abelardo G. Fournier. Fournier appropriates ground level documentation of protests in Istanbul's Taksim Square and obscures the images of crowds with colored flower petals. Using an overhead projector, shadows of drones overlay photos of the protesters being hit by water cannons; the drone is the all-seeing eye, the conduit between the actors (police and protesters) and governmental power.

One of the military advantages of drone use is the lack of physical risk to the operator (not to detract from the emotional trauma that pilots experience.) Humans can pilot drones from halfway around the world. Yet, these drones can sometimes still suffer catastrophic failures resulting in dangerous crashes. According to the Washington Post and the Drone Crash Database, over 400 large U.S.

drones have crashed worldwide since 2001. Of those, 25% have occurred in the United States on training missions, and 33% of them occurred in Afganistan. ¹⁸¹⁹

Failure is metaphor and a technological reality in a number of the presented works. Meredith Hoy says, "The malfunction of the drone, instantiated by the crash, is also the very thing that establishes its existence and renders it visible. The crash disrupts the capacity of the drone to control a territory through, first, disembodied vision and second, the brutal deployment of firepower."²⁰

Domestications

Joseph Beuys' 1974 performance *I like America and America Likes Me* is instructive here. For the performance, Beuys interacted with a coyote, brought in from the wild, in a closed room for eight hours over a period of 3 days. The coyote had varied responses to the artist, who was wrapped in felt, throughout the duration of the performance. By the end, Beuys was able to wrap his arms around the coyote, possibly a sign that the animal no longer feared Beuys. This performance has a number of complex metaphors, but at its core it was placing a human agent in close proximity with a wild, undomesticated animal. The tension of coming face to face with the wild conveys an underlying danger. The rules and norms of social interaction are suspended when one actor is not part of or restricted in their behavior by the norms and values of the society in which it participates.

Long before dogs were considered welcome members of our family units, they were domesticated as work animals. They would protect, herd and hunt. A set of projects in *Art2Drone* similarly explore the drone as a semi-wild or semi-domesticated agents within the specifically domesticated cultural spaces of the gallery and performance theatre. The drone's visibility and close proximity, in their consumer guises, provides the opportunity to use the drone's semi-autonomy, its coded-in ability, to respond to inputs like sound, motion and data. Thus transforming the drone into a useful and responsive actor in its own right.

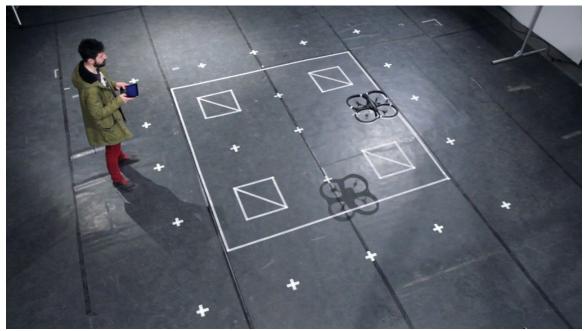
Charon by Sterling Crispin is a performance piece and sculpture that places a human in tension with an autonomous robotic agent. The drone is programmed with multiple interactive modes based on social conventions of aggressiveness, defense and playfulness. The human and drone appeared to dance with one another as the human attempts to read the "semi-wild" drone's "mood," and act accordingly. The resulting flight path and movement data was translated into a 3D printed sculpture as a means of documenting and preserving the interaction.

Another work which uses performance as a critical framework, and situates the drone as an autonomous actor within it is *Ophan*, by Nadav Assor. The piece is centered on a restrained and tethered drone that sings using the modified audio of a Jewish cantor singing chapter one of the book of Ezekiel. Assor explains,

Ezekiel 1 is one of the main roots for a branch of Jewish Mysticism called "Merkabah mysticism". This name refers to the esoteric tradition concerned with achieving visions of the chariot of god and its component angels, usually via a shamanic out-of-body experience. ... The Ophan as described by Ezekiel is essentially a mechanical being, a flying entity that is a wheel within a wheel, both of whose rims are covered with eyes. It is

remotely driven by the spirit of an anthropomorphic angel, the Cherubim, that is "within it.

Thus, the form of the drone, a hexacoptor with six arms extending out from a central core, combined with the drone as a sensor platform, resembles the Ophan of scripture. This spiritual aspiration is tempered by the physical restraints placed on the Ophan; it cannot fly free, as well as the interposed live broadcast from Israeli Defence Force radio. This audio snaps the piece from a spiritual state to one rooted in the political reality of contested geographies and the heavy use of drones as a tool of military and civil control. In the arena of the gallery, the piece acts out these complex dynamics.



<u>Figure 4.</u> Composition for a Drone, Mária Júdová and Andrej Boleslavský. Courtesy of the artists.

Two works use drones to visualize systems: *Composition for a Drone*, a collaboration by Mária Júdová and Andrej Boleslavský and *Crash!*, a solo work by Andrej Boleslavsky. In them, drones become instruments; tools and visualizers for hidden systems of sound and digital economies. *Composition for a Drone* uses the drone's location in space to activate different musical patterns and sequences. The operator plays the drone instrument by flying it through the performance space, and responding to the sounds and rhythms taking place in it. *Crash!* surrenders any sense of human control and instead patches Bitcoin values into the drone's flight controls, thereby visualizing the volatility of this digital currency, and risking both financial and literal lift or crash.

Instrumentalizing Social Relations

In less political projects, like Lee Montgomery's *Remote Control*, an exploration of large-scale light drawings of typographic forms, Richard Johnston's music video *Weightless*, and Paul Catanese's *Visible from Space*, we see examples of artists using drones as an aerial platform, affording the placement of cameras and imaging tools in otherwise inaccessible locations. Both Montgomery and Catanese are invested in the act of drawing at large scales. Montgomery uses the drone as a platform for producing long-exposure light drawings of typographic forms. The drone is flown in the pattern of a "Y" and a ground-based camera captures the "Y" as a floating, illuminated form.



Figure 5. Visible from Space, Paul Catanese. Courtesy of the artist.

Catanese's *Visible from Space* work began as a thought experiment about creating drawings on the earth so large they would be visible from the moon. The drone facilitates access to great distances from the surface of the earth, thereby allowing for documentation of large large-scale drawings and sculptures. The materials used in making the drawing replicate measuring tools used by surveyors, archeologists and curators in both the documentation of landscapes and objects. The resulting works include photographic documentation, sculpture and video that together utilize the visual language of rational documentation and scientific control to explore a decidedly poetic question.

As domesticated animals are brought into the home, a new social framework emerges; one based on companionship, friendship and family. A number of *Art2Drone* projects imagine a fully domesticated drone, one that facilitates relationships and is a significant force for community-building. In some cases, the works may be satirical, yet they are presented as genuine. Popular culture is awash in selfies as both a declaration that (the photographer) exists, and as a currency to be traded. *My First Dronie*, by Kathleen Rogers catalogs selfies made by 1st time amateur drone operators, thereby capturing evidence of this newly defined subcultural community. In a similarly optimistic vein, Carlos Rosas' *Revelry Revealed* is a disco ball mounted to a drone platform, meant to be a party delivery system. *Revelry Revealed* shifts the emphasis from the intense interest in developing drone delivery systems for commercial application, back to the social.

The final *Art2Drone* project, which focuses on social and community-building, bridges multiple popular ideas of how drones exist in domestic life. Liz Wuerffel and Jeff Will have launched *My Drone Brings People Together* as a catalyst for developing and supporting community-based initiatives. They leverage the public's interest in drones as a toy and a tool by offering aerial photography and video services through university-community partnerships. Activities have included documentation of county fairs, festivals and parades, surveys of ecological sanctuaries, constriction sites and the production of artworks which resemble Jackson Pollock paintings. Each of these initiatives uses the public's curiosity about this technology and/or a public need as an excuse to engage in social interactions.

CONCLUSION

Access and habituation are socio-cultural forces that have acted to domesticate the drone in contemporary society. Initially a military tool for surveillance, drones took on the role of munitions platforms providing a means to conduct military operations without physical risk to their operators. As the critiques and visibility of drones in our military and foreign policy grew, we began to witness artists engaging critically with the policies and impact these technologies have on redefining and controlling geographies and human bodies alike. As drone technologies have slowly been adapted to civilian applications, both as entertainment and in industry, artists have engaged critically and creatively with these tools. *Art2Drone* is a manifestation of curatorial field work which documents the wide spectrum of work being produced by artists and scholars at an important transitional moment wherein drones as term and technology are being absorbed into domestic use across multiple military, law enforcement, industrial and creative agendas.

AUTHOR BIO

Mat Rappaport's is a Chicago based artist, curator and educator. Rappaport's art work has been exhibited in the United States and internationally in museums, galleries, film festivals and public spaces. His current work utilizes mobile video, performance and photography to explore habitation, perception and power as related to built environments. Rappaport is a co-initiator of V1B3 [www.v1b3.com], which seeks to shape the experience of urban environments through media based interventions. He has published essays on media art in public spaces and artists critical responses to the drone wars in the Media-N journal, the iDMAa Journal and a chapter in the book Beyond Globalization: Making New Worlds in Media, Art and Social Practices by Rutgers University

Press. Rappaport's photographic work is included in the Midwest Photographer's Collection at the Museum of Contemporary Photography Chicago and in and at the Newberry Library Protest Art Collection. He has received fellowships from the School of the Museum of Fine Arts Boston, Howard Foundation, the Mary L. Nohl Fund, the Montgomery County Ohio Cultural District, and University of Wisconsin Milwaukee's Center for 21st Century Studies. Rappaport received his MFA from the University of Notre Dame and is an Associate Professor at Columbia College in Chicago.

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