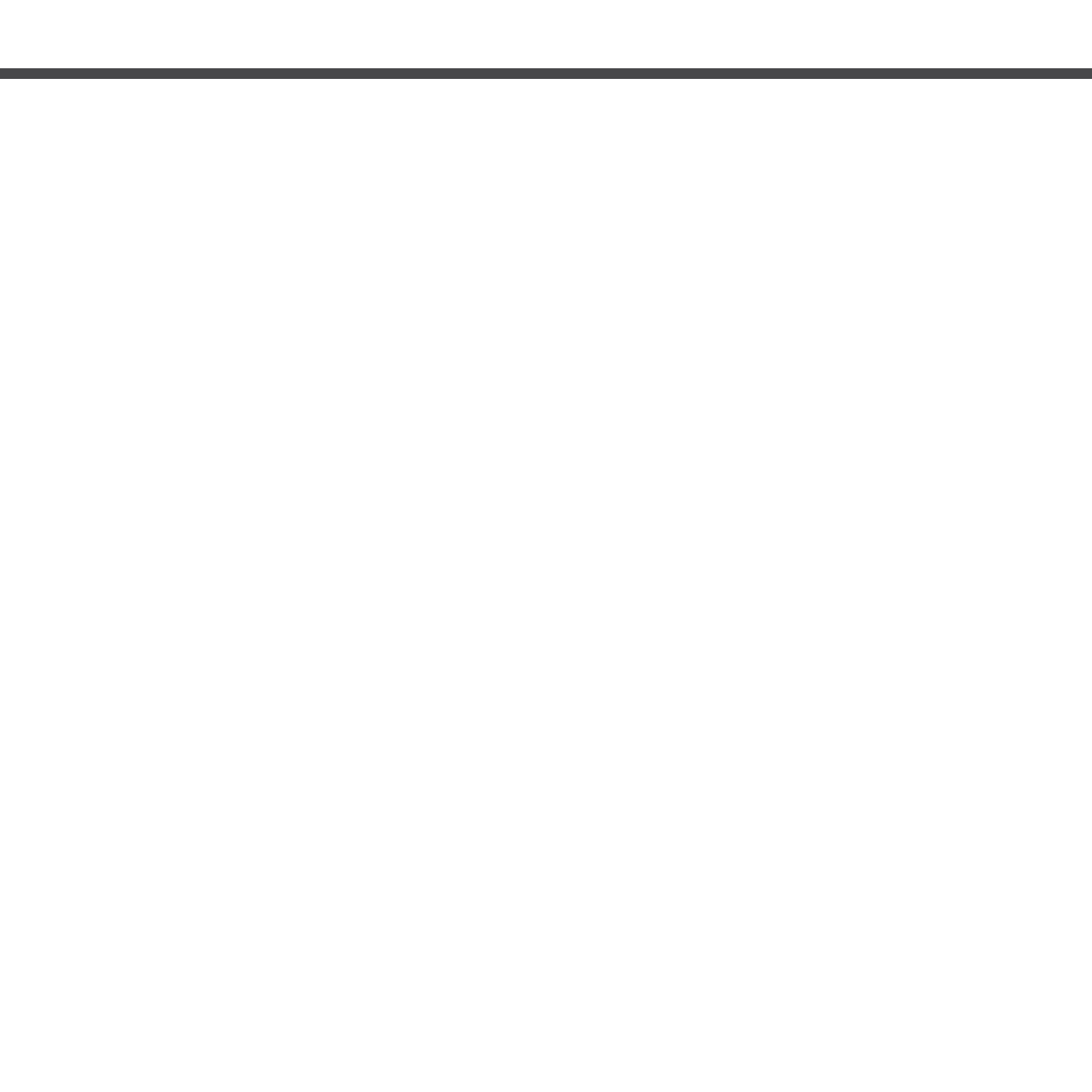




ART<sup>2</sup> **DRONE** is a catalog exhibition that brings together the work of artists who investigate drone technology and its cultural implications. The artworks will highlight political, social, scientific and artistic impacts of drone technology. The catalogue is distributed by the College Art Association and **v1b3** as a printable PDF.

[v1b3.com](http://v1b3.com)  
[conference.collegeart.org/art2drone](http://conference.collegeart.org/art2drone)





A SPECIAL THANK YOU GOES TO THESE ORGANIZATIONS WHO HELPED TO MAKE THIS PROJECT POSSIBLE.



ARTspace was initiated twelve years ago by CAA's Services to Artists Committee. It has grown into one of the most vital and exciting aspects of CAA's annual meeting. A conference-within-the-conference, ARTspace presents programming designed by artists for artists and is free and open to the public.



ARTspace is made possible in part by funding from the National Endowment for the Arts.



vI b3 is an artist-led curatorial project that aims to present media art that explores emerging media practices through curated site-specific interventions, presentations and published documentation.



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Design is the driving force behind La Salle's DArt digital arts program. The program offers students opportunities to become professional designers. At the heart of the program is the belief that media artists have a special role to play in making the world a better place.

## PROJECTS

Nadav Assor, Ophan  
Andrej Boleslavsky, Crash!  
Paul Catanese, Visible From Space  
Sterling Crispin, Charon  
Joeseph DeLappe, In Drones We Trust  
Ricardo Dominguez + Ian Alan Paul + Jane Stevens, Drone Crash Incident  
Abelardo Gil-Fournier, Sanguine  
Nathaniel Hartman, ASM\_frag  
Jim Jeffers, Flyover 16  
Richard Johnston, Weightless  
Maria Judova, Composition for a Drone  
**Patrick Lichty** with Mark Skwarek  
Patrick Lichty + Mark Skwarek, AR Drone “Love Bomber” Over Bushwick  
Lee Montgomery, Learning to Write with Remote Control  
Simon Remiszewski, Drone Conditioning  
Kathleen Rogers, My First Dronie  
Carlos Rosas, Revelry Revealed  
Nicholas Sagan, For the Love of...  
Lile Stephens, Flight Simulator  
Scott Patrick Wiener, Landscape Acquisition  
Jeff Will + Liz Wuerffel, My Drone Brings People Together

## CRITICAL ESSAYS

Meredith Hoy, Invisible Shadows: Overturning Secrecy in Drone Technology  
George Monteleone, Liminal Airspace!  
Abigail Susik, The Drone in Social Imaginaries

custom graphic and stickers by Michelle Graves.



ART<sup>2</sup>**DRONE** is a catalog of art projects that explore diverse and critical approaches to “drone” technologies. In recent years radio controlled and mobile application driven quadrocoptors have become ubiquitous toys simultaneous with greater public awareness of commercial and military uses of UAVs (unmanned autonomous vehicles). Artists have adopted and adapted these tools to their practices.

ART<sup>2</sup>**DRONE** is the fourth in a series of experimental catalogs that explore artists’ responses to new technologies. Previous projects include **Scan<sup>2</sup>Go**, **Art<sup>2</sup>View** and **Art<sup>2</sup>Make** which focus on QR codes, augmented reality and 3D printing respectively. Each publication includes a feature on each project with links to a rich media web site and critical essays that extend the viewing experience.

ART<sup>2</sup>**DRONE** would not have been possible without the dedication of many collaborators. My thanks and appreciation go to Professors Meredith Hoy, Abigail Susik and George Monteleone for contributing critical perspectives that shape how these works are understood. Artist Michelle Graves designed the ART<sup>2</sup>**DRONE** logo, a work that references the tension between the mechanical and the organic. The logo, featured on the cover of this catalog and the website, has also been made into vinyl stickers that will be distributed at the CAA Conference.

CAA’s Services to Artists Committee sponsored this project as part of the 2015 Annual Conference. I would like to express my gratitude to Conrad Gleber, Chris Manzione and Gail Rubini from the media arts collective vlb3 for organizing the project, and designing the catalog and companion website. Finally I would like to thank the administrative staff of CAA for sharing this four-year journey that gave critical representation to forms that often seem fringe.

Mat Rappaport  
Associate Professor  
Columbia College, Chicago

#### KEY WORDS

drone, droning, attack, fly, unite, selfie, plane, mapping,  
unmanned aircraft

## George Monteleone

*LaSalle University, Philadelphia, PA*

### LIMINAL AIRSPACE

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.

What did you see? A face or a word?

it is a global component of spiritual and musical history: the om, Hindustani and Carnatic music, Japanese gagaku, the Australian didgeridoo, Scottish pibroch, La Monte Young, doom metal.

Sunn O)))

It is a harmless apian familiar. Fatherless in origin, straight from the queen bee's egg. Slow, he gathers no resources, a little sex machine, furry and without a stinger, to be softly petted with a gentle fingertip, a docile meme.

### CARL MY COUSINS PET BEE

It is a military killing machine, an international controversy. It has recently become a ubiquitous colloquial vehicle. A light spectacle at clubs and raves—a hovering, illuminated, anthropomorphized voyeur, it is noticed briefly, easily accepted, considered non-invasive and more fun than a concert photographer.

Thursday Rave (pt.3 FT A Mini Drone)

The satellite image has become a commonplace access tool, as is dropping down to a virtual street view, which provides limited virtual routes through terrestrial space. The aerial intermediate, in our current virtual landscape, is a liminal space between the familiar satellite map and the street view. An oft-blogged quote from Wikipedia is apt enough: "Liminality is sacred, alluring, and dangerous." With personal, small-scale flight, there exists the prospect of access to liminal airspace to explore and map it in putative anonymity with minimal risk. The sky-dreaming earthbound no longer need flight simulators,



planes, or licenses. We can explore and demystify the sacred and alluring while evading the danger though in doing so, the space may not remain liminal for long. Perhaps this is the nature of mapping frontiers.

#### DroneTube.tv

There is also, of course, the push to commercialize. Hollywood is a proponent and catalyst of civilian and commercial use, enjoying recent exemptions from the FAA. Drones have recently found their way into scripts as well as onto film sets. In *Interstellar*, Christopher Nolan's aviation engineer protagonist (played by Matthew McConaughey) hijacks and salvages a former military UAV to supply his dying terrestrial farm before being sent off to the dark corners of space and time to help save humanity.

#### Amazon Prime Air

Unmanned vehicles have played the hero for decades, having been sent on exploratory missions to areas humans do not yet have the means to control: millions of miles to planets and moons, beaming back data about uninhabitable, theretofore imaginary landscapes. They have not been considered "drones" so much as "probes." Though the latter is a bit of a disagreeable term, they have been given far more agreeable names: Messenger, Pathfinder, New Horizons, Pioneer, Venera, Voyager, Spirit, Opportunity and Curiosity. Scientific machine vessels of positive affect, easy to root for as they struggle through harsh territory sending us marvelous images despite now-obsolete photographic technology like images from some forgotten past. We cheered them on as covered land distances equivalent to a moderate bicycle ride.

#### Out of this World Records! (NASA)

These unmanned vessels are adorably, tragically inept in the face of the most basic of terrestrial problems. Spirit, disabled for nearly a year after getting stuck in soft soil, was recommissioned as a stationary unit before succumbing to a harsh Martian winter. NASA abandoned contact attempts in 2011. If only it had been equipped with a quad-copter, or even a balloon.

## Rotorcraft as Mars Scouts

As rare explorers of unknown territory, unmanned machines in space cannot yet overwhelm the liminal spaces they visit. This makes them endearing: persistent workers in the face of adversity, out in the terrible unknown sampling specimens and computing data until they can sample and compute no more. This sensibility is not limited to the extraterrestrial: we can send them to the limits of nature, lava flows and polar ice caps, bursting and dripping with equal parts objective curiosity, spectacle, and romantic tragedy.

## Watch This Drone Fly Right Into An Erupting Volcano (Buzzfeed)

As for government sanctioned commissions, unmanned vehicles are less kindly branded in nomenclature: the notorious X-37, surrounded by internet speculation on its surreptitious role in systems of control: space-to-space surveillance, an eye on China's space station, jamming satellite signals, and so on—a more sinister turn on the notion of Curiosity. As things comes back down to earth, the names become considerably less cute: RQ-7 Shadow, RQ-12 Wasp, MQ-1 Predator, MQ-9 Reaper, RQ-4 Global Hawk, RQ-3 Dark Star, RQ-14 Dragon Eye, RQ-11 Raven, MQ-1C Warrior, MQ-8B Fire Scout. For vehicles whose operations are shrouded in classification, the names seem to make the intention clear enough. So, the aura of liminality remains after all, but with menace. Without a clear context, liminal intrigue can just as well give way to practical anxiety, from cloaked U.S. military operations to our neighbors' hobbies. Images crop up on social media, through the focus-softened mesh of a window screen:

Man test-flying a drone outside the apartment #ohno #bushwick #bushwhack  
(mdubs888)

A flying lens, a ghost in the noise, or, as in the film *Poltergeist*, the titular “noisy ghost” of German folklore historically revised for a media future, emerging from random video signals. What is it about ghosts? Perhaps it is the otherworldly ability to move uninhibited, to occupy all corners of space and time. Invisibility. The sense of lurking, the fear that we might turn around to suddenly find it, on the other side of the window, or, at the foot of the bed, seemingly undeniable but gone without a trace, a blink and a whisper, blending with the surroundings, difficult to detect—qualities shared by birds, aquatic life, and





military aircraft.

### Countershading

Should one find a drone loitering around the apartment window, it would seem perfectly reasonable to haul it in for questioning. “Drones that Attack And Take Over Other Drones” Find out if it is up to something, or if is just carrying an innocent payload of Pamperstm. Pull its data and have a look, or if that is not possible, swallow hard while wondering if it was streaming. What does this call for? Are drone detectors, hijackers, and jammers our latterdaytin foil hats? Or is this only reasonable? The West does experience the horrific physical potential of this technology firsthand; the pressing issue here tends more towards privacy. Does this portend an aesthetic, social, and political future in yet another liminal space mediating utopianism and paranoia? We can consider how best to respond: in dialogue, in protest, in poetic appropriation, in attempts at redefinition, in nihilistic exhibitionism, in a defiance of the surreptitious, and/or in a process of ever bolstering awareness. It is time to consider the Spirit and Opportunity of this technology, to counteract the objectives of the Shadow and Reaper; and to establish an imperative to send these drones where they belong: if not in full view to be accepted or rejected by a knowing public, then at the very least, to the ends of nature, poetry, and critique.

## Abigail Susik

*Associate Professor at Willamette University, Oregon*

### THE DRONE IN SOCIAL IMAGINARIES

As new technology impacting the cultural sphere, 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 has a double affective potential to appear as 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. Given the incredible quotidian proximity of advanced technologies to our bodies in the current moment, and also the heightened pace of the production, development and obsolescence of these technologies, the manifestations of what might be called technological social imaginaries are possibly more conflicted and illegible than in previous spans of modern history.

Surveying the contributions to the Art2Drone exhibition, it becomes clear that what I call in a sociological sense “social imaginaries,” or the intersection of shifting collective and individual imaginative attitudes, are accordingly divergent and impassioned in relation to the drone at present. As evidenced by these curated works, drone technology awakens a remarkable range of ethical, anachronistic and psychosomatic reactions. Art2Drone conjures mythologies and prophecies from ancient religion and myths; anticipates apocalypses, dystopias, and techno-futures; suggests the genetic evolution of technology as anthropomorphic, zoomorphic, or A-life; revivifies profound metaphysical fears and fantasies of omniscient surveillance, fatal overexposure, and imminent mortality.

Beyond the question of art-shaping social imaginaries, apprehending and comprehending some of these diverse iterative paths of drone art offers the opportunity for rapport with and implementation of a kind of drone technology that escapes the dominance of media rhetoric and also the pragmatism of the commercial sphere. Between the extremes of technophilia and technophobia await myriad avenues of possibility, if not necessarily promise. The Art2Drone works come together as a kind of inadvertent think tank for the extended pro-suming or DIY applications of drone mechanisms, just as they condense and clarify latent and explicit cognitive reactions to the wave of drone production— in particular the unique concatenation of dread and wonder that often accompanies new technologies that have evolved out of war cultures. While the drone is now obviously a war machine, reconnaissance tool, hobby toy and vehicle of commerce, among other things, Art2Drone conjectures: might it not also in the future be a dancer, landscape painter, musician, friend, pestilence, savior, god or pranksterish vandal?



Like the Italian Futurists, who fervently responded to the advent of automobile, aeronautic and bomb technologies in the first quarter of the twentieth century, contemporary artists recognize the dialectical implications of the drone as a remarkable novelty that paradoxically also signals the waning of a range of cultural phenomena. The cultural relevance of the landscape tradition as defined by the horizon line, the privileged physical mastery and training of the artist's eye, and the aesthetic insularity of "represented" reality, among other things, are all put into further question by the drone's imaging capacities. For the Futurists, the car, airplane and mortar presented an immediate redefinition of aesthetics on both a macro and micro-level, proclaiming the destruction of the edifice of tradition as such, but also unveiling stylistic effects like blurred motion, all-over composition, and radically disproportionate scale. Yet, whereas the Futurists dogmatically identified with the advantages of these new technologies and celebrated the hybrid aesthetics of beauty and violence resulting from them, contemporary artists are unable to assemble in a unified avant-garde to take a unanimous position on the ramifications of the drone for culture and art. Certainly the aesthetic qualities of the drone as ghostly, uncanny, automatist and hypnotizing are explored in artistic responses such as the examples included in Art2Drone, however as of yet there have been understandably no proclamations comparable to the radicalism of the Futurist orientation. The vagaries of historical relativism considered, the current aesthetic equivocation about the drone is productive. This is the case even if the equivocation does not for the most part stem from a position of social agency but rather from the confusion of the media vortex, a now-entrenched cultural habit of techno-pessimism, and most importantly, the extensive deployment of the war drone by the United States in a sequestered manner.

However, the question of agency does play a part in the expression of social imaginaries about the drone through art. Unlike the Futurists, who did not employ their favored emergent technologies to make art itself, probably due to the fact that these technologies were either unobtainable or unwieldy, contemporary artists just as frequently make art with drones as they do about them. Accessibility and adaptability are vastly increased in the case of the drone, hence art and techne are able to merge once again to a notably heightened degree—and with that art and warfare also become more proximate. The ability to utilize the drone for art production offers a historically unique opportunity for artists themselves to shape the evolutionary path of this technology.

Due to its prosthetic and visualizing capabilities, the drone is readily assimilable to the artist's practice as a method of shaping and reflecting the physical world. This practical application of the drone for art is highly significant, but nevertheless such developments have not yet outweighed the immense psychological impact of the other kind of drone unavailable to artists— the spying and killing war drone. This twofold identity of the drone as approachable tool and foreboding, distant force, render it complex and explosive aesthetic material. A relative of the balloon, the unmanned submersible, the security camera, the helicopter and the satellite, the drone is not so unprecedented in its traits that it exceeds historical associations. Yet, the implied potential of the drone to achieve an alarming level of ubiquity, oversight and mortal dominance in the atmospheric layer between earth and space, sways its appearance in social imaginaries and also therefore in art.



## Meredith Hoy, PhD

*Assistant Professor of Art History and Theory at ASU Herberger Institute for Design and the Arts, Arizona*

### INVISIBLE SHADOWS: OVERTURNING SECRECY IN DRONE TECHNOLOGY

Drones, or unmanned aerial vehicles (UAVs) have become central components of the arsenals of contemporary warfare. Because they are remotely controlled, they impart a sense of Godlike distance between the operator and those under attack, potentially mitigating guilt or responsibility by erasing the immediacy of presence. Drones tend to leave behind a great deal of collateral damage, killing hundreds within their blast radii. One trend amidst art production is the exhibition or “making visible” covert operations and the suppression of information about military technologies. An incisive look at these technologies and a decisive attempt at a critical interpretation of their contribution to contemporary ways of seeing is necessary in a time in which “our technical infrastructure is becoming ever more invisible.”[1]

Several issues arise when considering the implications of the utilization of drone technology both in the military-industrial complex and in artistic adoptions of their technical capabilities. Both in a metaphorical and a literal sense, drones act as an extension of networked technologies such as the Internet insofar as they perform as the eyes of the network of satellite communications, data collection, and instructional codes. Artist James Bridle has concurred with this estimation, stating that “one way of looking at drones is as a natural extension of the Internet in terms of allowing sight and vision at a distance. They’re avatars of the network for me.”[2] Drones function as nodes in a complex network of location-aware surveillance technologies that are guided and deliver information about their activities via satellite. They are instructed to attack after the covert gathering of data, but outside of the military, no one knows exactly how this information is gathered about targets. Moreover, as Nadav Assor has remarked, drones are constructed not as a singular technological entity, but rather as a conglomerate of individual mechanisms including code, motors, mechanics, and electronics.[3] Both in their individual physical makeup and in relation to one another, they operate as engines of distributed activity enacted as a result of internal and external linkages, between the mechanisms that constitute them as devices, and between the data that drives them to attack at various points of a global network of locations.

Drones are instruments that are both known and visible (they can sometimes be seen overhead) and unknown and invisible. Artist Trevor Paglen has commented about the recent history of drone deployment that as early as 2003, “if you were driving through Nevada you would sometimes see them.” However, “that base is on complete lockdown now.”[4] The early

visibility of the technology has been suppressed, and drone operations have become increasingly covert. The public has some idea of their presence, but they become shadows of themselves, seemingly immaterial because they go unnoticed. See, for example, the project entitled “Drone Shadow” by Bridle, in which he creates chalk outlines of drones on the ground similar to those inscribed around the bodies of murder victims by law enforcement. This project emphasizes the physical presence of drones in the skies above, as well as our propensity to ignore or simply not perceive signs of that presence, such as shadows (both literal and metaphorical—i.e. “living under the shadow of the drone”).

Despite their seeming omnipotence as agents of surveillance and catalysts of violence, drones exhibit a marked potential for glitch that is frequently experienced and sometimes exploited by artists who have appropriated them for creative ends. There is a high rate of catastrophic crashes in projects that use inexpensive drones, such as Lee Montgomery’s experiments with the Parrot.AR drone, Greg Riestenberg’s use of the SCOTUS drone, and Suzanne Treister’s piece called “The Drone that Filmed the Opening of its Own Exhibition,” during the opening of which the artist was forced to buy a new drone when her first crashed. In Art2Drone, one project specifically addressing the phenomenon of the drone crash is Ricardo Dominguez, Ian Alan Paul and Jane Stevens’ “Drone Crash Incident”. Staged on the UC San Diego campus, “as a form of critical fiction or disturbance theater,” the “crash” was manifested theoretically through publicity. [5] The artists created and distributed different elements of “hard evidence” of the drone’s existence, including press releases, documents, photographs, and other communication mechanisms. The status of the crash as simulation rather than actuality did not fail to produce responses from officials within the University of California system. 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.

As the technology becomes more fail-safe it also becomes more powerful, and therefore more dangerous. Montgomery likens this difference to riding a bike versus driving a car. But the difficulty, danger, and potential for glitch in drones are the very properties that appeal to artists working with them. Artists, unlike perhaps military controllers of drones, are interested in the instabilities and unpredictable nature of technology, and work to foreground this in their experimentations with it. Revealing this instability undercuts the sense of omnipresence/omnipotence associated with the military use of drones in contemporary society. It shows them to be flimsy, prone to error, and also opens up the possibility of productive critique wrought by repurposing drone technology.[6]

In the context of Art2Drone, Jim Jeffers has turned drone technology towards the goal of providing protection instead of perpetrating destruction: in his project “(Fantabiography) Flyover 16”, he generates “a fantasy drone surveilling and pro-



tecting locations on the earth.” The project exists as fantasy because it assembles a network of points, rather than utilizing physical drone technology. Many drone projects use photographic evidence of the “drone’s eye view” either to expose the sinister aspects of distantiated drone vision or to reveal the specificities of place (as an order of protection) in the case of Jeffers’ piece.

Although drones are largely imagined as technologies that extend the human threshold of visibility, several projects in Art2Drone explore manifestations of auditory phenomena potentiated by drones. In Richard Johnston’s music video for the song “Weightless,” physical actuation of audio signals on the body (specifically reduction of stress and heart rate) are augmented by the creation of a visual component—an abstract video compiled using drone technology in which the flight of the drone creates a three-dimensional choreography (which the artist calls a dance) to illustrate the movements within the song. Another project deploying sound, this time the generation of sound through movement rather than the generation of movement (visuals) driven by sound is Maria Judova’s “Composition for the Drone.” In Judova’s project, the drone becomes a sonifying instrument by collecting data and converting it into sound. Rather than the omniscience of the drone’s eye view, this renders an experience of a small quadrilateral area that incorporates a different register of the human sensorium. A third project based on sound is Simon Remiszewski’s “Drone Conditioning.” In this case, the sound produced by the drone is not generated by outside data or towards an abstract musicality. Instead, the sound communicates far more literally. As drones fly above Pakistan and Yemen, inhabitants experience the ever-present buzzing of the devices overhead. They are both terrified by the sound and become conditioned to it, perhaps becoming accustomed to a life of fear. Remiszewski’s intervention brings the drone “home” to the US, asking US citizens to place themselves within the experiential threshold of the distant and often faceless “other” constructed in the popular imagination. In this way, the seemingly great divide between two cultures is narrowed, and the perpetration of violence by the unmanned vehicles is brought to the attention of those who might rather ignore it. In his artist’s statement, Remiszewski invokes the power of satire, turning a potentially acerbic critique towards humor. “By introducing you and your loved ones to the sound of the drone long before they’re hovering above your neighborhood, you can preemptively eliminate such stress and anxiety!” This ironic tone serves to dispel a purely fearful reaction to the buzzing sound of overhead drones, instead provoking a more reflective view not only of the outright destruction perpetrated by drone technology, but also its more subtle effects.

In sum, drone technologies, typically conceived as sinister instruments of the military-industrial complex, have been adopted in a variety of ways by contemporary artists. In some cases, these artists launch a powerful and prescient critique of the dangerous aspects and impacts of these devices. In others, their capacities for surveillance and violence are turned towards other aims, such as their potentiation of sentiments of care and protection and their activation of visual and auditory stimuli

that reduce the stress levels of the viewer/listener. Regardless of particular artists' point of view on the potential for good or harm of drones, the omnipresence of this technology has provoked a need for an active consideration of its social and political implications. As world-shaping agents, artists occupy a unique position, as they have regarding other political technologies and issues, in their ability to critique through the creative use and repurposing of this powerful, unstable, and contentious technology

[1] Harger, Honor. "Drone's Eye View: A Look at How Artists are Revealing the Killing Fields." Rhizome.org. <http://rhizome.org/editorial/2012/nov/13/drones-eye-view-revealing-killing-fields/>. Accessed January 10, 2015

[2] Davies-Crook, Susanna. "Art in the Drone Age." Dazed. <http://www.dazeddigital.com/artsandculture/article/16183/1/art-in-the-drone-age>. Accessed January 10, 2015.

[3] (from the creators project the complexity of drones in art)

[4] Davies-Crook, Susanna. "Art in the Drone Age." Dazed. <http://www.dazeddigital.com/artsandculture/article/16183/1/art-in-the-drone-age>. Accessed January 10, 2015.

[5] Paul, Ian Alan. "Drone Crash Incident." <http://www.ianalanpaul.com/drone-crash-incident-2012/>. Accessed January 10, 2015.

[6] Rothstein, Adam. "The Complexities of Drones in Art." The Creators Project. <http://thecreatorsproject.vice.com/blog/longreads-the-complexities-of-drones-in-art>. Accessed January 10, 2015





THANKS TO THE FOLKS WHO WRITE ABOUT NEW MEDIA ART

MEREDITH HOY

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Meredith Hoy is Assistant Professor of Art History and Theory in the Herberger Institute for Design and the Arts at Arizona State University. Hoy's research focuses on technological interventions in art and social practice, revealing the transformative possibilities of technological systems. Her current book project, *From Point to Pixel: A Genealogy of Digital Aesthetics*, traces links between contemporary digital art and modern painting. Her newest book, *Walking the Line: Ambulatory Practices in New Media and Art History*, will examine the relationship between art, technology, and ecology in the process of changing social awareness of environmental conditions.

GEORGE MONTELEONE

<http://vimeo.com/georgemonteleone>

George Monteleone lives and works in New York. He holds a degree in cognitive science from Northwestern University, and completed his graduate studies in film and studio art at the School of the Art Institute of Chicago and Skowhegan School of Painting and Sculpture. His practice encompasses film, video, computer programming, electronics, sound design, and performance. His work has been presented at numerous venues including The Kitchen, SITE Santa Fe, Roots and Culture Gallery, The Neuberger Museum of Art, the Crossroads Moving Image Arts Festival San Francisco, Tāt Berlin, the Edinburgh International Film Festival, and the European Media Art Festival Osnabrück. He currently teaches in the Digital Arts and Multimedia Design program at La Salle University, and the Department of Film at Brooklyn College.

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Professor Susik's primary area of expertise at Willamette University is modern art history and theory, with a research focus on issues of culture and aesthetics in the European avant-gardes between the World Wars. A secondary research area includes new media aesthetics in contemporary art. After a decade of teaching experience in New York City and elsewhere, Dr. Susik offers courses at Willamette University related to nineteenth- through twenty-first-century art history, the history of photography, methodologies of art history, and specialized topics in modern and contemporary Art. She is an Associate Editor of Media-N, Journal of the New Media Caucus.

NADAV ASSOR  
OPHAN

[www.nadassor.net/2014/10/ophan/](http://www.nadassor.net/2014/10/ophan/)



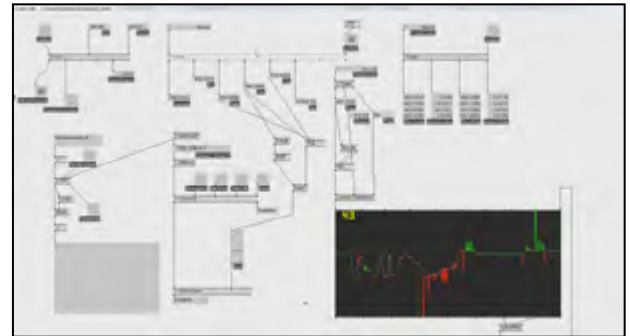
## STATEMENT

Ophan is an installation incorporating a physically restrained, customized hexacopter as a mechanized cantor, flying and reciting all 28 verses of chapter I from the biblical book of Ezekiel. When Ophan is at rest, with no people present at the center of the space, the hexacopter softly hums, whispers, or even sings to itself (its favorite song is “Someone to Watch Over Me”). When a presence is detected in the space, the hexacopter’s rotors turn on and it takes flight, struggling against the cables that restrain it, singing and gesturing its way through all the biblical verses mentioned above, as sung in Hebrew in the Yemenite tradition by the Cantor Dan Jacobi. The Yemenite style of Cantorial singing/chanting (cantillation) is monotonous – that is, there is no melody, rather a droning recitation similar to other eastern musical traditions. The cantor who recorded the verses for Ophan tuned his voice to the pitch of the buzzing generated by the hexacopter’s rotors, so that they create a harmonized droning sound when combined. At random intervals during the flight, Ophan’s chanting is interrupted by a live broadcast of the Israeli Defense Force radio station (Galei Zahal). When the broadcast takes over, Ophan’s gestures change as well. It wildly flashes its lights and enters a semiepileptic seizure. Ophan is in the air only for a short while, and thus takes many flights to finish reciting the entire chapter as it usually manages only 34 verses before landing again. Ezekiel I 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 outofbody experience. The installation is named after one of these angels in particular – the “Ophan,” a spoked wheel in Hebrew. 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”.



ANDREJ BOLES LAVSKY  
*CRASH!*

<http://id144.org>



## STATEMENT

What happens if you connect the Drone and the Bitcoin exchange?

AR Drone 2.0 is controlled by a patch connected to Bitcoin exchange BTC-E. Real-time trading data control the thrust of the drone engines. If you like the thrill of the online trading of cryptocurrencies, this data eventification tool gives even more drama to it.

Andrej Boleslavský is an independent artist purposing technology in the fields of new media art, interactive design, physical computing and 3D printing. His primary inspiration comes from cross-disciplinary interaction and the free exchange of ideas among collaborators. His work also maintains a strong fascination with the entanglement of nature and technology

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[WWW.PAULCATANESE.COM/ARTWORK/VISIBLE/INDEX.HTML](http://WWW.PAULCATANESE.COM/ARTWORK/VISIBLE/INDEX.HTML)



## STATEMENT

Visible From Space is a thought experiment (2009 – present). It is an open series that exists in multiple materials video, relief prints, installation, projection, handmade paper, artist's books, found objects, field notes, interviews, essays, and site specific events. In this work, I am conducting a thought experiment about the phrase visible from space which erupted from a fanciful supposition to create drawings on the Earth so large they would be visible from the moon. For Art2Drone, I am presenting a field report outlining those speculative actions in response to this point of departure conducted in October 2014 while working at the Playa Artists' Residency in Summer Lake, Oregon. This project is funded in part by a grant from the Efroymson Family Fund. Additionally, this program is supported by a grant from the Illinois Arts Council Agency.

Paul Catanese is a Hybrid Media Artist, Author, Associate Professor, Director of the Interdisciplinary Arts & Media MFA Program at Columbia College Chicago, ISEA International Board Member, and President Emeritus of the New Media Caucus. His artwork has been exhibited widely including at the Whitney Museum of American Art, the New Museum of Contemporary Art, SFMOMA Artists Gallery, La Villette and Stuttgart Filmwinter. Paul is the recipient of numerous grants and awards, including commissions for the creation of new artwork from Turbulence.org and Rhizome.org.



STERLING CRISPIN  
CHARON

<http://www.sterlingcrispin.com/charon.html>  
<http://www.sterlingcrispin.com/>

STATEMENT

*Charon* is an interactive installation and sculpture intended to physically embody the tension between humans, robotic autonomous agents, and the virtual models which these agents rely on to understand the world.

A quadcopter was programed to fly autonomously in a motion capture lab while aggressively, defensively, and playfully tracking a human body within the space. The video documentation of this interaction has a performative, dance-like quality, but is unrehearsed and spontaneous because of the unpredictable nature of the drone's behavior. Interacting with the drone gave me a sense of cautious curiosity as our behavior ebbed and flowed between combat and cooperation.

A motion-capture system and computer simulation recorded the drone's flight path and rendered it as a 3D form based on the drone's velocity and orientation during flight. As I evaded and lured the drone through the lab its virtual representation collided with the previous flight path which then sculpted the form in the direction of the flight. This feedback loop gave the sculpture a kind of memory and responsiveness which allowed for the complexity of our interaction to be faithfully embodied.

These physical and virtual forces created a two-way boundary crossing between the internal world-model of the drone, and its external physical surroundings. The resulting sculpture can be considered as the shadow of this boundary crossing, fueled by the complex exchange between a sentient human and a robotic proto-lifeform.

**Joseph DeLappe**  
*IN DRONES WE TRUST, 2014*

<http://indroneswetrust.tumblr.com/>  
<http://www.delappe.net>



## STATEMENT

A Crowd Sourced, Participatory Rubber Stamp Currency Intervention.

A participatory project inviting volunteers across the United States to rubber stamp a tiny image of an MQ1 Predator Drone on the back of their money. The idea came after closely examining U.S. currency—all but the one dollar bill feature a pastoral depiction of a notable government building or monument on the back of the bill, albeit with lonely, empty skies. 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. I've created one hundred of these laser-etched and hand-assembled rubber stamps which are currently being shared with volunteer participants throughout the United States and a few internationally.

I've invited participants in the project to each send me one image of a stamped bill, noting location and date where the bill was stamped and put back into circulation. The project has been created as part of my work as an Artist in Residence at [Instructables.com/Autodesk](http://Instructables.com/Autodesk) Inc. Further images will be posted in the coming weeks.

Joseph DeLappe is a Professor of the Department of Art at the University of Nevada where he directs the Digital Media program. Working with electronic and new media since 1983, his work in online gaming performance, sculpture and electromechanical installation have been shown throughout the United States and abroad including the Museum of Modern Art in New York City.





**Abelardo Gil-Fournier**  
*SANGUINE. CROWD COLORATIONS*

[www.abelardogfournier.org/projects/sanguine-crowd-colorations](http://www.abelardogfournier.org/projects/sanguine-crowd-colorations)  
[www.abelardogfournier.org](http://www.abelardogfournier.org)

## STATEMENT

The use of colored water cannons against participants in a demonstration is an old police force technique increasingly widespread. Apart from dissolving the group, it aims to tag the individuals for subsequent identification. It is a primitive form of current digital-tracking technologies, as the ones that have come to light parallel to the massive demonstrations of citizenship all around the world these last years.

The installation stems from this double nature of the digital: on the one hand, it helps collectivities to emerge; but on the other, it has an unusual power to track the individuals. Next to an image of a colored water cannon against groups of people, a vertical projection lightens an aerial photograph of a demonstration. Over it, a layer of fragments of colored petals cover the area occupied by the people in the picture. The projector, with the aid of a computer, maps the petals over the image and, while making them glow, fictionally introduces a surveillance-like moving shadow, a hovering elliptical drone-like presence as a ubiquitous scanning machine.

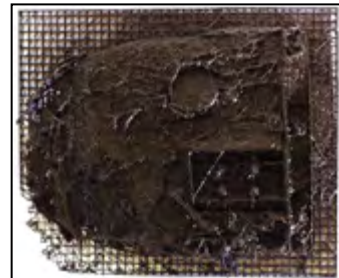
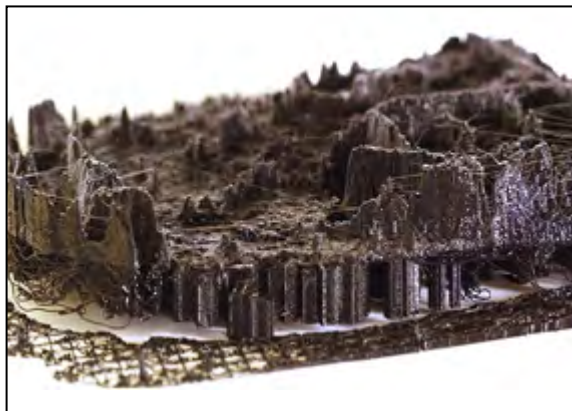
Artist and educator, his work is settled around the crossings between the abstraction of systems and the specificity of social and cultural objects. His projects are elaborated as platforms—installations, devices, tools, games and workshops—that mimic open laboratories to erode, distort and transform standard production processes.

**NATHANIEL HARTMAN**

**ASM** *FRAG*:

[www.nathanielhartman.com/projects/asmfrag/](http://www.nathanielhartman.com/projects/asmfrag/)

[www.nathanielhartman.com/](http://www.nathanielhartman.com/)



## STATEMENT

3D printing technology allows me to explore object abstraction in a very intimate way. Objects, places, data, and moments all become fodder in 3-Dimensional software that can be remixed, reprinted, and experienced in a sculptural form. *ASM\_frag* creates a reanimated, 3D printed object from photographic documentation of a drone strike. A hellfire missile fragment was smuggled out of Pakistan, photographed, sent through the web, and became viral documentation of a very destructive and violent moment in time. The virtual lifecycle of the missile itself was completed by the person who took the photograph. Physical missile, to exploded fragment, to virtual fragment, to exploded physical form once more. The abstraction evokes a sense of a desolate landscape; craters feel vast and peaks like crumbling buildings. The structure had to be supported during the 3D print, layer by layer, which created strings, webs, and imperfections straying from the original 3D model. The singular object for me creates a space for contemplation and reflection. It is not shiny and perfect like many other 3D prints, but delicate, messy, and violent.

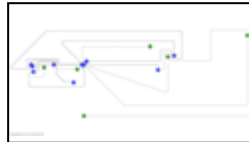
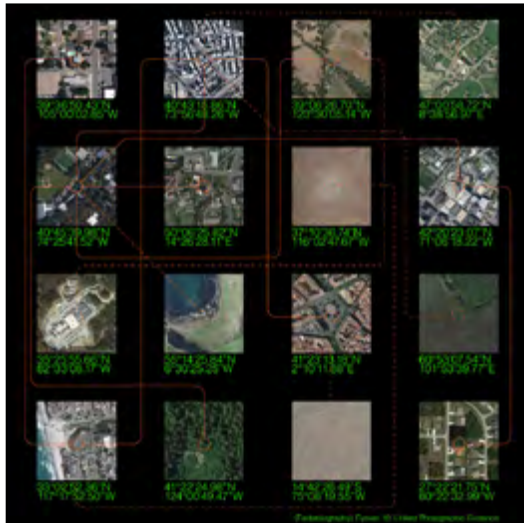
Nathaniel Hartman was born in Cleveland, Ohio in 1988. He received his MFA from The Ohio State University in 2012. His work has been shown internationally and nationally, notably at the Boston Cyber Arts Gallery, P.S. 142, the Seattle Center, MIXLab Gallery, Robert and Elaine Stein Galleries, and the Argo Film Festival in Volos, Greece. He has received numerous commissions and awards including a Seattle World's Fair art commission, NPR's best classical albums of 2013, and accolades in the *The New York Times*, *The Boston Globe*, and *The New Yorker* for his performances and albums. He lives and works in Columbus, Ohio.





JIM JEFFERS  
(FANTABIOGRAPHY) FLYOVER 16, 2014

[www.fantabiography.com](http://www.fantabiography.com)  
<http://fantabiography.com/flyover16>  
Logein@gmail.com



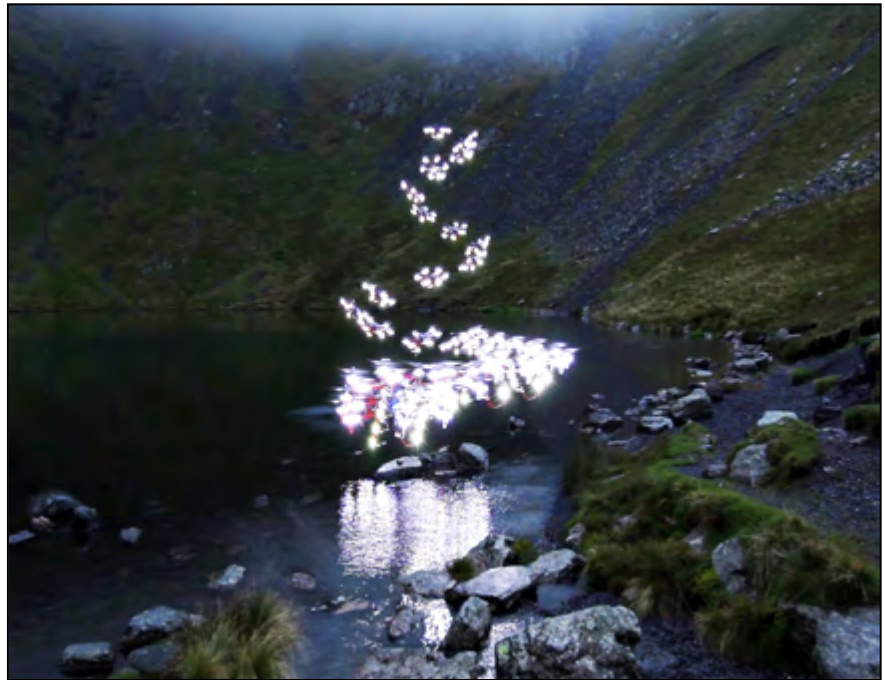
## STATEMENT

When thinking about a drone (UAV) as a stealthy killing machine, surveilling, targeting, and assaulting ground targets, I pondered the inverse, a peace drone—a fantasy drone surveilling and protecting locations on the earth. I picked sixteen locations important to me to ‘protect’, either because I’ve been there or because I fantasize about going there. Mapping the locations with web-based applications and gathering the longitudinal and latitudinal coordinates, I started creating relational timeline flowchart drawings digitally; connecting geographical locations time, action and thought. The pre-visual output from this project is manifest literally as Art to Drone; these are (mostly) navigable points. Formally, this project will be a website displaying the coordinates, and the images created from my personal unpacking of these sixteen flyover points.

Jim Jeffers is an intermedia artist and designer working with computer mediation, web-art, performance, photography and video in conjunction with conventional media. Working with cultural material and material culture, he finds the meta-spiritual and psychoactive critically important as incredibly elusive in making art. Jim exhibits and performs his work both in the United States and internationally. Jeffers’ performance work has been in public for over a decade, with his Superhero Actions (and other performance iterations), as well as, performances in numerous pieces by other artists. Since the early 21st century, Jim has maintained a presence in cyberspace with Fantabiography.com: a shifting blend of digital / computer art, artist portfolio, and truthful lies. He teaches graphic design and digital media at Indian River State College in Fort Pierce, Florida where he lives with his amazing wife and son.

**RICHARD JOHNSTON**  
*WEIGHTLESS*

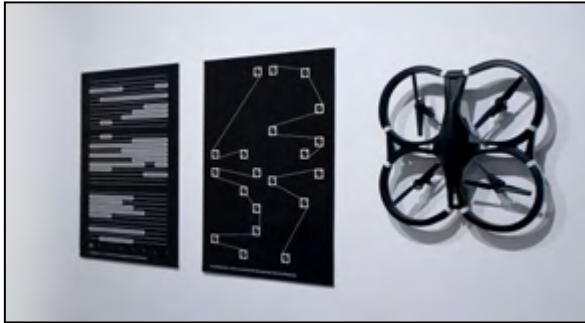
[hCps://vimeo.com/105189344](https://vimeo.com/105189344)  
[www.richiejohnstononline.com](http://www.richiejohnstononline.com)



## STATEMENT

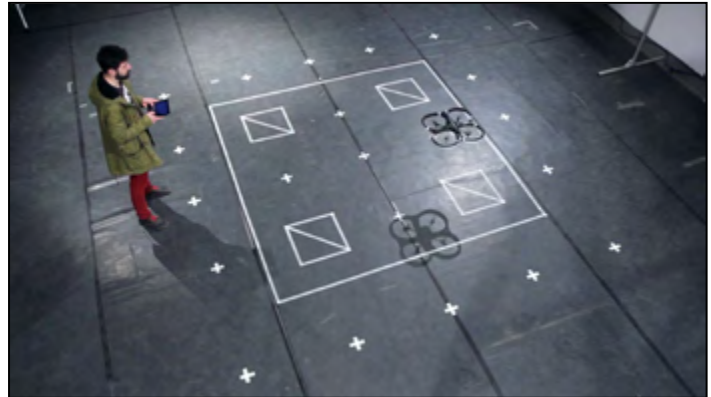
The weightless project was a big undertaking because it was my first music video and the song already had a lot of hype around it. "Weightless" was created in collaboration with the British Academy of Sound Therapy and Mindlab International, UK. The track is scientifically proven to reduce the listener's heart rate and help with stress. I was glad to be part of such a positive scientific experiment and to be creating a work of art that referenced the current drone boom in the UK. I chose to use a drone because its precise flight capabilities and ease-of-use made it very easy to choreograph a three-dimensional "dance" for the drone to perform to the song. Once I had the shot I wanted I then used a technique called "time displacement" to map the flight pattern of the drone and make the choreography I used to make the video visible. It was a lot of fun and it was great to be using a new piece of technology. I hope drones stay around for a long time because they are a great tool for creating art and gathering data for a lot of positive reasons.

I am a videographer from the Lake District and studied BA Honors Fine Art Photography from Falmouth University. Since graduating I have been working freelance on various projects including music videos, viral marketing campaigns and promotional material. I use my drone a lot for aerial photography/video and it was great to have the machine as a subject for this video. I constantly try to push my practice/art in new and exciting directions.



## Music composition: Mária Júdová Tracking system: Andrej Boleslavský

<http://mariajudova.net/works/composition-for-a-drone/>  
<https://vimeo.com/96177923>



### STATEMENT

Short music piece composed for AR.Drone 2.0 Parrot Quadricopter. It consists of the sound synthesis generated by a drone's movement in space as well as the sound of engines. When the tracker detects the drone flying in defined area, it generates data, which is then interpreted using a pre-defined algorithm in an open source visual programming language called Pure Data. In this way the drone shapes and structures musical material and becomes an instrument. The drone is controlled via the FreeFlight application running on iPad. A depth image is produced using a Kinect sensor and is evaluated by a patch in vvvv which detects the drone's location in space (more precisely its relative position inside the bounding-box). A vvvv is sending it to Pure Data, which then transmit it to a music system. When a quadcopter flies into the defined area it generates musical pattern sequences based upon a predefined algorithm. In this way the drone takes control over the sound synthesis.

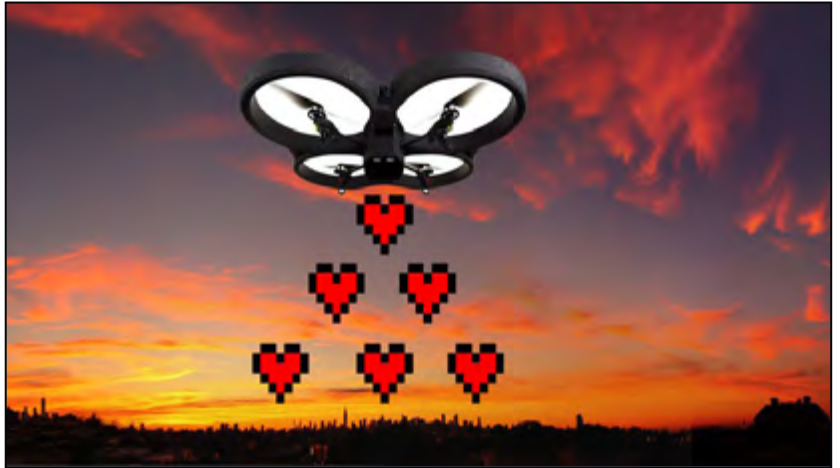
Mária is a cross-disciplinary artist from Slovakia. She received a Bachelor's of digital media at Academy of Arts. She is currently getting a Master's degree at the FAMU Center for Audiovisual Studies in Prague, researching, dance-tech and technologically-informed dance practices—more precisely, the use of bio-sensors in the field of contemporary dance.

Andrej is an independent artist purposing technology in the fields of new media art, interactive design, physical computing and 3D printing. His work also maintains a strong fascination with the entanglement of nature and technology. He has developed many interactive installations and lectured on open source softwares and programming platforms.

**PATRICK LICHTY**  
with Mark Skwarek

**AR DRONE “LOVE BOMBER” OVER  
BUSHWICK**

Patrick Lichty <pl@voyd.com>  
Artist website: <http://patricklichty.com/>



**STATEMENT**

This piece is part of a multi-year series of Augmented reality bombers, drones and quadricopters dropping video game hearts on the poplce below. Perhaps satire, perhaps envisioning a preferable world where love drops from the sky, the “Love Bombers” began before Manifest.AR’s Occupy Wall Street AR intervention, and came to full flower during the NATO Summit on Chicago in 2012. Here, a quad-drone drops love over the landscape of Bushwick, Brooklyn.

Patrick is a media “reality” artist, curator, and theorist of over two decades who explores how media and mediation affect our perception of reality. He is best known for his work as an Artistic Director of the virtual reality performance art group Second Front, and the animator of the activist group, The Yes Men. He is a CalArts/Herb Alpert Fellow and Whitney Biennial exhibitor as part of the collective RTMark. He has presented and exhibited internationally at numerous biennials and triennials (Yokohama, Venice, Performa, Maribor, Turin, Sundance), and conferences (ISEA, SIGGRAPH, Popular Culture Association, SLSA, SxSW).



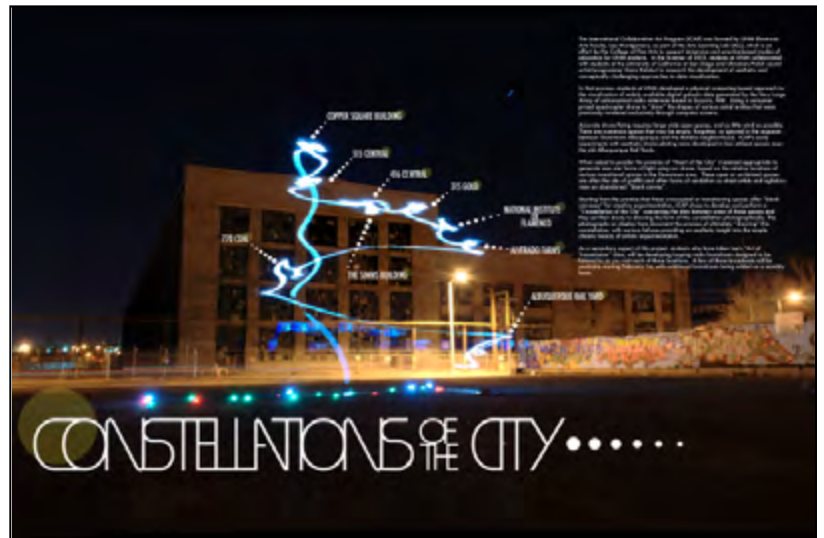
## R. LEE MONTGOMERY

(with Sheldon Bess, Kevin Bott, and Ryan Davis)

### CONSTELLATIONS OF THE CITY

<http://www.lee-web.net/droneart/cotc/>

Artist website: <http://www.lee-web.net>



## STATEMENT

*Constellations of the City* is the final embodiment of a series of drone-based experiments with abstract line drawing, data visualizations and mapping. It started with experiments between the Collaborative Art Program (ICAP) class at the University of New Mexico and visiting artist Denis Kolokol. Initially we experimented with trying to use a Parrot AR drone to draw shapes related to data obtained from the Very Large Array in Socorro, NM. After being invited to participate in a show at 516 Arts called “Heart of the City” I worked on drawing data-based forms related to more terrestrial maps. After identifying points on the map of downtown that contained transitional spaces, we connected the dots on the map using the shortest distance between each point in order from top to bottom. The resulting abstracted form became the flight path for our drone. After numerous trials, and many gorgeous failures, we eventually managed to draw the form in the air with the long abandoned Albuquerque Railyards as a backdrop. There is also an image created in collaboration with students in Leah Modigliani and David Demplewolf’s classes at Tyler School of Art at Temple University. The Tyler photograph is an attempt to apply this methodology to images created using maps of other cities as their source.





## Ian Paul and Ricardo Dominguez

### CRASH INCIDENT

<http://www.ianalanpaul.com/drone-crash-incident-2012>  
[www.ianalanpaul.com](http://www.ianalanpaul.com) and <http://bang.transreal.org/>



## STATEMENT

In December of 2012, the artists Ricardo Dominguez, Ian Alan Paul and Jane Stevens performed as researchers and consultants for the fictional UC Center for Drone Policy and Ethics and simulated a “Drone Crash Incident” on the UC San Diego campus. The drone crash, as a form of critical fiction or disturbance theater, was enacted over the course of one week through the distribution of press releases, documents, photographs, and other forms of ‘evidence’ which were subsequently published in various media outlets in and around San Diego. The simulation culminated in a public town hall meeting to discuss the simulated drone crash with students, faculty and various members of the public. The stated mission of the UC Center for Drone Policy and Ethics was articulated in press materials as:

*“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 policy-makers at the cutting edge of Unmanned Aerial Systems studies.”*

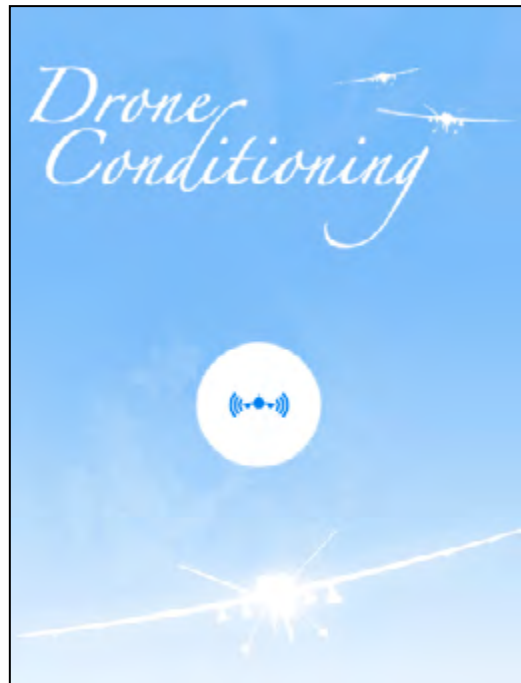
Before the town hall, University of California officials disavowed the occurrence of any drone crash and denied the existence of the UC Center for Drone Policy and Ethics. At the town hall event, Ricardo Dominguez and Ian Alan Paul presented records of the crash and discussed various theoretical and political concepts related to drones, as well as discussed the research and production of military drones in San Diego and on UCSD’s campus. Jane Stevens then gave a presentation.



**SIMON REMISZEWSKI**

*DRONE CONDITIONING*

[www.droneconditioning.com](http://www.droneconditioning.com)



## STATEMENT

Over the past few years, it has become ever more apparent that the interest in a global integration of drones is picking up speed. Unfortunately, the surveillance and destruction invoked by contemporary drone use in Pakistan and Yemen has left individuals with a perpetual fear of the drone itself—the never-ceasing buzzing of a US drone a constant reminder of horrific events that could arrive at literally any moment.

Will you be prepared when the drones make it to your home?

It's scientifically proven that sound conditioning works. By introducing you and your loved ones to the sound of the drone long before they're hovering above your neighborhood, you can preemptively eliminate such stress and anxiety! Please use this drone sound generator to prepare yourself for an imminent future. Leave it playing while you cook a delicious dinner, spend time with your children, go for a walk in the park—build your own positive associations!

By the time the drones arrive, you'll hardly even notice the difference.



**KATHLEEN ROGERS**  
*DRONIES*

<http://www.celesteprize.com/portfolios/idu:64025/idn:6627/>

## STATEMENT

The selfie is a widespread phenomenon of recent times that in and of itself carries many social meanings related to identity, egotism, celebrity status, privacy and more. Now combine the drone and the selfie. The drone frees the selfie to go beyond arm's length. It can take in the landscape, and the person can become small. Images from way up high shrink the drone operator into a small figure with no clear identity. But there still are closer images, even close up's. Most of the figures in these images appear anxious. They are leaning to and fro. Their eyes are not directed at the lens. These are not the smiling conventional faces of selfies. They are people aware of the oddity and possible hostility to their drones. As a result, some strike combative poses—others are tentative. Drones can spy and be weapons, and the images capture the anxiety of the potential accused. On the other hand, the children are unaware and therefore carefree, more like the conventional selfie. There is unintended humor in most of the images. The viewer feels like these are in some way private images, and the only subjects in most of the images are the drone operators. They are alone and chose that setting, almost always secluded, but the images were posted on and taken from YouTube. You don't want to laugh at the subjects because they look vulnerable. The premise on YouTube is that these are their firsts "dronies," so add the additional anxiety of first-time images. We are left with images expressing society's anxiety about drones in the faces of proponents of drones.

Kathleen Rogers is a digital artist and photographer in the metropolitan NYC area. Kathleen uses Internet media and cameras to create groups of images both as art and social commentary.





## CARLOS ROSAS DODO

<http://dodo.emitto.net>  
<http://rosasstudio.com>  
<http://carlosrosas.cl>



## STATEMENT

Project DODO: The Drone Operated Discothèque Offensive  
 Mission: Revelry Revealed Objectives: Seek, Engage and Activate.

In the Revelry Revealed initiative (2014–Current), the DODO drone teams have sought to identify, confront and (if necessary) instigate acts of revelry in public and private sectors. Using a range of overt and covert operational strategies (usually more overt than not) the field research teams have been able to uncover a range of coordinated and spontaneous acts of celebratory exuberance with the help of our “dangling mirrored ball of delight,” a concept (not so) loosely borrowed from the deep sea Anglerfish. While these documents should probably remain classified—we think not. Initial DODO research files, field notes, images and running archives will become Declassified Documents and open to the public on November 28th, 2014. Stay Tuned.

“I got to go where the people dance  
 I want some action, I want to live, action, I got so much to give  
 I want to give it, I want to get some too  
 Oh I, I love the night life  
 I got to boogie on the disco ‘round, oh yeah  
 Oh, I love the night life  
 I got to boogie on the disco ‘round, oh yeah”  
 -Alicia Bridges (I Love The Night Life)

*Have a Quadcopter? Like to Disco?  
 Submit your best images.*

Free The Drones and the People  
 Team DODO(birds)



**Nicholas Sagan**

*FOR THE LOVE OF..*

[www.nicholassagan.com/interdisciplinary/installation-and-performance/for-the-love-of/](http://www.nicholassagan.com/interdisciplinary/installation-and-performance/for-the-love-of/)  
[www.nicholassagan.com/](http://www.nicholassagan.com/)

## STATEMENT

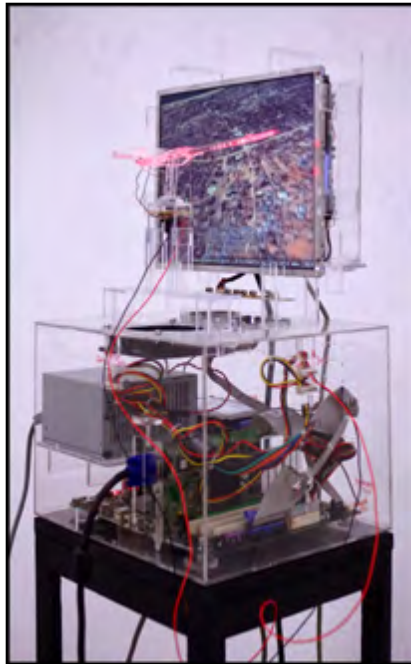
In 2012–13 I was awarded a HATCH Projects residency at the Chicago Artists Coalition and I made it a goal to generate new work; not just explorations of familiar topics but the complete investment in a totally new line of inquiry. In particular I had been interested in the public conversation of UAV, or drone, warfare. As complex a topic as it is, I chose to address certain aspects: general perception as well as what it means for surveillance tactics and technology, a portending of a particular existential state, or even as an extension of my hobby practice of scale modeling.

The phenomenon of the air show also holds my interest for a number of reasons, paralleling the UAV explorations. As these technologies develop, so does the conversation surrounding these tools. This is a paradox: how can something exist both as a tool to propagate the theater of war and as a function of cultural/global relevancy in a rapidly expanding technological ecosystem? With the case of *For the Love of...* — an installation composed of hundreds of various scales of MQ-9 Reaper UAVs (or drones) and a wireless surveillance and projection system — I was curious about the nature of public awareness of these issues. Another aspect of developing these ideas was to gauge viewers' response to the rise of these systems of surveillance. At first entering the installation space, the view might notice the swarms of drones and think back to boyhood bedrooms with model airplanes hanging about. But as they wander further in they might notice a pattern to the swarm; that the viewer is being herded. The climax, so to speak, of the experience is the realization that they are being watched, though the ubiquity of the UAV's prevents a pinpointing of source of surveillance.



**LILE STEVENS**  
*FLIGHT SIMULATOR*

<https://vimeo.com/110584854>  
<https://vimeo.com/lilestevens>



**STATEMENT**

In *Flight Simulator*, I used the flight simulator tool in Google Earth to 'perform' a series of flights over representative areas of Pakistan, Yemen, and Somalia where drone strikes have been confirmed. I wanted to 'visit' some of these locations in an attempt to view the landscape through the eyes of a drone pilot. It was through this process that I was allowed to indulge in the meditative quality of flight itself, although I felt that the video element required a physical inhabitant. I chose the bald eagle for this form, incorporating a periodically flashing LED circuit to evoke the running lights of modern aircraft. Both the eagle and the enclosure were laser-cut from acrylic. The result is a sculptural object that prompts the viewer to reconcile the beauty and relative silence of a bird in flight with the potential perversion of nature through the use of technology.

Our computer software is modeled on human thought—if not the actual mechanics of consciousness then at least in the way that we have historically recorded, indexed, and utilized information. In this project, I am considering the ability to process the aggregate data of thousands of video game participants in near real time in order to power the decision-making process of evolving automated systems, of which the 'brain' of an Unmanned Aerial Vehicle may be only one of many applications. The current iteration of CAPTCHA, the distorted letters one is required to translate in order to prove one is human, is used to digitize unrecognizable words from scanned books that our software is not yet sophisticated enough to understand. What if a similar method could be used, unbeknownst to the average user, as military strategy?



**Scott Patrick Wiener**

*LANDSCAPE ACQUISITION*

[http://scottpatrickwiener.com/section/398431\\_Landscape\\_Acquisition\\_2012\\_Present.html](http://scottpatrickwiener.com/section/398431_Landscape_Acquisition_2012_Present.html)  
[www.scottpatrickwiener.com](http://www.scottpatrickwiener.com)

## STATEMENT

The ongoing project *Landscape Acquisition* (2012–) is a multidisciplinary exercise in the collision between familiar vocabularies of airborne surveillance and the Western aesthetic history of beauty in nature. Several approaches are necessary to address these contradictory subject matters, which include video footage shot via cameras mounted to a scale model RC (radio-controlled) drone, appropriated and re-photographed stills of actual surveillance missions, and newly constructed archive images used to reorient those histories, to name a few. These are playful processes that work to filter and distill the technological image into its essentially discernable condition as an abstract object, one that is loosely attached to its referent and purified of its responsibility to depict concrete realities.

Through a series of substitutions and organizations, I interrogate these image histories to create a lopsidedness that points directly to the intrinsic connections between them. One is planted on the side of violence, caused by the ever-present sensation of being watched from above without notice. The other stands with the age-old conception of beauty in nature, inherited from painting, carried through to its conclusion by technological imagery, and expressed through the kitsch languages of computer desktops, postcards, calendars, and the like. The seeming incompatibility of this binary addresses cultural dependence on certain image types to express specific conditions of experience. It is here that the possibility of connecting paradoxical image languages might emerge as the very nature of banality.



**Jeff Will and Liz Wuerffel**

*MY DRONE BRINGS PEOPLE TOGETHER*

[www.mydronebringspeopletogether.com/](http://www.mydronebringspeopletogether.com/)

[www.valpo.edu/engineering/faculty/will.](http://www.valpo.edu/engineering/faculty/will.php)

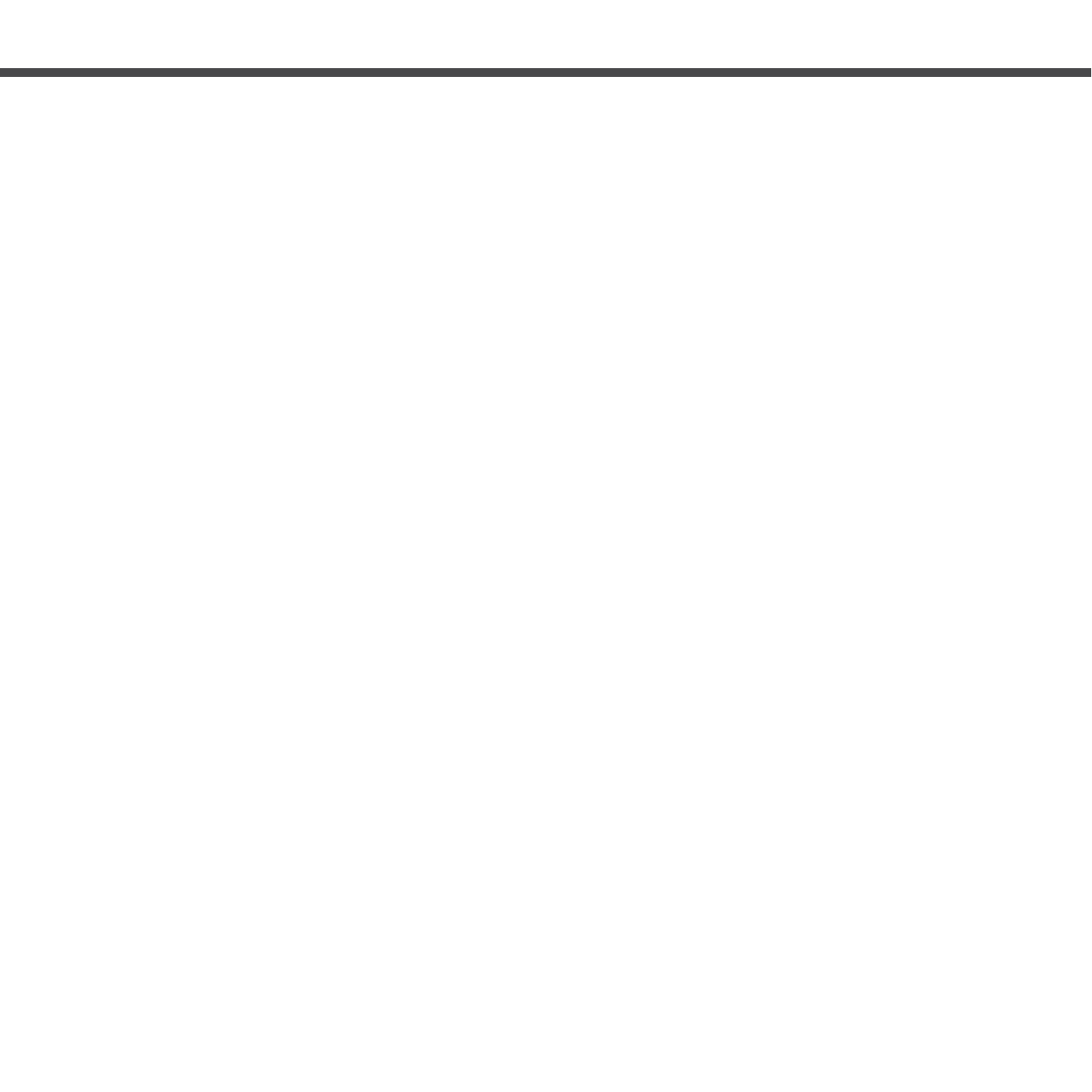
[php](http://turnscrew.tumblr.com/)

<http://turnscrew.tumblr.com/>



## STATEMENT

*My Drone Brings People Together* (2010–) presents interdisciplinary, community-driven, aerial photography and video using custom-made unmanned aerial vehicles and commercial quadcopters. Drones are often seen as tools for military force and surveillance. Our project shifts this paradigm; we use drone technology to engage and serve the public through community-university partnerships—from documenting county fairs, festivals, and parades, to surveying ecological initiatives and construction sites, to Pollock-like painting. This art effort has also bridged disciplinary silos, drawing together artists and engineers through artistic application of highly technical devices.





THANKS TO FOLKS WHO MADE THIS PROJECT POSSIBLE:

**CONRAD GLEBER**

[conradgleber.com](http://conradgleber.com)

Conrad Gleber has had a long and distinguished career as both an artist and an educator in art and new media design. He earned an MFA at the School of the Art Institute of Chicago and a PhD in educational research at Florida State University. He teaches digital studio and seminar courses on the critical issues of art and design. Currently, he is a Professor and the Director of the Digital Arts & Media Design Program at La Salle University. He currently exhibits digital artworks and sound and video installations. This year the Spencer Foundation provided support to produce media performances using the oral histories and recollections of Cuban educators involved in the revolution.

**MICHELLE GRAVES**

[gravesmichelle.com](http://gravesmichelle.com)

Michelle Graves is an interdisciplinary artist who uses stream of conscious text, anatomy, and technology as concept and material. Graves has exhibited her work nationally and internationally since 1997. She is currently the Program Director and an instructor at Digital Bootcamp, Chicago and teaches Photoshop for Motion Graphics at Columbia College Chicago.

**CHRIS MANZIONE**

[www.christophermanzione.com](http://www.christophermanzione.com)

Christopher Manzione's work questions an object's origin and presence in a world of ubiquitous digital and network technologies. He is currently an Assistant Professor at Stevens Institute of Technology in the Visual Arts and Technology Department.

**MAT RAPAPORT**

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Mat Rappaport is an internationally exhibited new media and installation artist, curator, and educator. He is currently an Associate Professor at Columbia College Chicago, a board member of the New Media Caucus and a founding member of vIb3 (Video in the Built Environment). He currently lives and works in Chicago.

**GAIL RUBINI**

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Gail Rubini, Professor Emeritus of Art, Design is an artist and designer working in the field of new media and teaching the practice of printing and publishing in interactive media. She has particular interest in collaborative projects in science visualization and public installation artworks. Her recent publication designs include Scan2go, AR2View, Art2Make and Art2Drone.



# ART<sup>2</sup> DRONE

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