

Unreliable Visions: On the Art of Optimization and Loss

J.D. Schnepf

070

French movie critic Serge Daney once called into question the “truly blind confidence in the visible, the hegemony, gradually acquired, of the eye over the other senses.”¹ Daney’s observation is an astute one for two reasons. First, it calls out the metaphysical tradition whereby vision has come to assume a privileged place within the human sensorium for its capacity to render the world knowable. Second, it points out the irony of this tradition’s *blindness* to vision’s limitations. Elsewhere, Daney touches on the longstanding misconception that vision offers nothing short of a “direct engagement with the world.”² To consider how sight works without the aid of prosthetics—what Walter Benjamin called *der natürlichen Optik*—is to recognize that the eye itself offers no such direct engagement; in fact, the act of seeing depends on a series of mediations that translate light into electric signals. Refracting through the protective, translucent layers of the cornea, rays of light enter the eye. Moving through the adjustable aperture of the pupil, the regulated stream of light then strikes the lens, which focuses the rays further as they permeate the vitreous humor and move toward the retina. In the back of the eye, the retina’s photoreceptors—the rods and cones—convert the light-bound image into electrical signals that travel to the brain by way of the optic nerve. In constitution and function, then, the eye—its membranes and gels, sacs and fluids, muscle fibers and nerves—works less as a transparent window than as a mechanical camera, albeit one made up of a complex assemblage of biological matter. If pressed, we might describe the human optical system, sustained by its network of capillaries, as a camera made flesh.

The structural resemblances between eye and camera underscore the materiality of all manner of visualizations, whether biological or artificial in nature. Feminist critic Donna Haraway has extended this line of thinking to consider the implications of materiality when it comes to technological mediation. She points out that, as with the unaided eye, the “ideology of direct, devouring, generative, and

1 Quoted in Jean-Louis Comolli, “Machines of the Visible,” in *The Cinematic Apparatus*, ed. Teresa de Lauretis and Stephen Heath (New York: St. Martin’s Press, 1980), p. 126.

2 Serge Daney, “Serge Daney, Jean-Pierre Oudart: ‘Work, Reading, Pleasure,’” *Cahiers du Cinéma Volume 3 1969-1972 The Politics of Representation*, ed. Nick Browne (London: Routledge, 1996), p. 116.

unrestricted vision” furnishes the conditions whereby “technological mediations are simultaneously celebrated and presented as utterly transparent.”³ As Haraway puts it:

The “eyes” made available in modern technological sciences shatter any idea of passive vision; these prosthetic devices show us that all eyes, including our own organic ones, are active perceptual systems, building on translations and specific *ways* of seeing, that is, ways of life. There is no unmediated photograph or passive camera obscura in scientific accounts of bodies and machines; there are only highly specific visual possibilities, each with a wonderfully detailed, active, partial way of organizing worlds.⁴

Whether the optical device is organic or inorganic, then, Haraway handily dispatches with vision’s claims to simple transparency. Her reframing foregrounds that to minimize mediation is to fundamentally misunderstand the science of sight; all forms of vision are inevitably complex processes that bring the world into view in ways at once particular and partial.

Funded by state and corporate interests, the forms of vision that have come to dominate the twenty-first-century’s cultural landscape are indeed particular and partial—both in terms of their visualizing capacities and their political applications. Today, the hegemonic systems of global capital and empire conscript the visible to the cause of productivity. We shouldn’t be surprised then that technologies bringing to light the dimensions of life deemed productive are often recruited to systems of governance aiming to exert power over life through management. To facilitate this, visualizing technologies regularly reduce individuated forms of life to flows of information. For example, Lisa Parks has explained how the militarized drone, “equipped with electro-optical (EO) and infrared sensors that detect electromagnetic radiation” to bring human targets into focus, turns the otherwise “imperceptible radiation [of heat emanating from a living body] into data that can be made productive within an information economy.”⁵ Given cases such as this, we have reason to suspect, like Daney before us, that our “blind confidence in the visible” has been misplaced, that our reliance on vision has most certainly failed us.

This essay examines how the works of artist Andreas Greiner participate in and grapple with our blind confidence in the visible by considering *Monument for the 308* (2016) (Figure 1) and *Dragonfly* (2017)—two pieces that explore how corporate structures mediate the relationship between visual technologies and life. Corporations are put front and center here: Aviagen, a maker of genetically modified chickens, supplies the dead animal matter for *308*, while Google, a generator of algorithms for the United States’ War on Terror, supplies the vital software for *Dragonfly*. Rather than offer a critique of corporations’ manipulation of life under capitalism, though, these works raise questions about the way they domesticate technological interventions for a mass audience. As a result, the contexts of global capital and empire lie beyond the periphery of Greiner’s art while the technologies put to work in these pieces give the impression that life is

Fig.1 *Monument for the 308* (2016). Installation view at the Denver Public Library, September 9, 2019-January 26, 2020



3 Donna Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” *Feminist Studies* 14.3 (1988), p. 581.

4 *Ibid.*, p. 583. Italics in original.

5 Lisa Parks, “Vertical Mediation and the U.S. Drone War in the Horn of Africa,” in *Life in the Age of Drone Warfare*, ed. Lisa Parks and Caren Kaplan (Durham: Duke University Press, 2017), p. 143.

immanently knowable through empathy. In this account, Greiner's art panders to and even encourages the blind confidence in the visible that Daney laments. But is this pandering an ironic jab at the viewer who revels in the empathetic high that results from all this techno-scientific trickery? In other words, does the artist's obfuscation of visual technology's recruitment into regimes of power mean he's in on the joke? By centering the technologies deployed by empire and capital while erasing the violence generated by these systems in our global present, these works unsteadily inhabit the juncture of criticism and consumerism.

Dark Fantasy

One of the keys to Andreas Greiner's work is the motif of life rendered en masse. This motif is perhaps most clearly expressed in his encounters with nonhuman life, so that is a good place to begin. Greiner has coauthored art with nonhuman life such as fly maggots, bioluminescent algae, broiler chickens, and bacterial cells. When considering smaller living things like maggots, the appellative of mass life might feel intuitive. The description of Greiner's work *Every Fly is a Piece of Art* (2012) (**Figure 2**), for example, begins by quantifying this species volumetrically ("40 litres of maggots") before approximating the number of individuals ("250 000 larvae"). This transposition of volume into units mirrors the transposition of larvae into flies. The transposition is visualized by a photograph of the undifferentiated

Fig. 2 *Every Fly is a Piece of Art* (2012). After hatching in the exhibition space, each fly leaves through the open window and receives a personalized farewell from a human voice calling it by an individualized human name. Installation view at the University of the Arts Berlin, 2012



writhing mass of maggots that introduces *Every Fly is a Piece of Art*, which gives way in later images to black flies dotting the white walls of the gallery space. The easy fluidity between the mass and the individuated creature illustrated by maggots hatching into flies suggests a tension, an indeterminacy latent within all species. Is there some ontological difference between those considered part of a mass body and those considered individuated creatures? Or is any human or nonhuman that finds itself in a crowd suddenly susceptible to massification, becoming mere matter to be conscripted into a corporate logic?

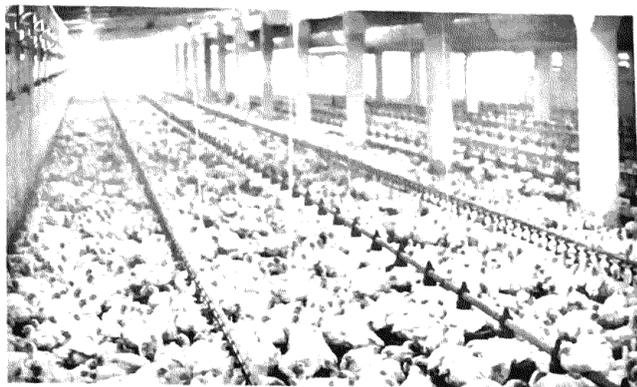
In his essay "The Animal That Therefore I Am (More to Follow)," philosopher Jacques Derrida provides some insight into the transposition of nonhuman life into matter.⁶ Derrida draws attention to the advent of material infrastructures that propagate and maintain the species divide between the human and the animal. He writes:

It is all too evident that in the course of the last two centuries these traditional forms of treatment of the animal have been turned upside down by the joint developments of zoological, ethnological, biological, and genetic forms of knowledge and the always inseparable techniques of intervention with respect to the object, the transformation of the actual object, its milieu, its world, namely, the living animal. This has occurred by means of farming and regimentalization at a demographic level unknown in the past, by means of genetic experimentation, the industrialization of what can be called the production for consumption of animal meat, artificial insemination on a massive scale, more and more audacious manipulations of the genome, the reduction of the animal not only to production and over-active production (hormones, genetic crossbreeding, cloning, and so on) of meat for consumption but also of all sorts of other end products, and all of that in the service of a certain being and the so-called human well-being of man.⁷

For Derrida, then, the transformation of the living animal and its world via the techniques of industrial farming and experimentation is a violent interspecies encounter that reduces nonhuman life into an object of production and consumption. Greiner echoed this sentiment in a 2017 interview: "There is a general disregard for certain animals, which we view as an objective mass—matter to be exploited to fit our needs."⁸ Indeed, with an eye to optimization, those invested in the extraction of animal capital for financial gain manage nonhuman life as commodified matter rather than as cared-for creatures.

The management of animal life as food substance, for example, is standard practice in industrial agriculture. The adoption of large-scale farming practices—sometimes known as factory farming—requires that animal products be prepared for the market with maximum efficiency (Figure 3). Achieving this outcome often entails intervening in the inner workings of animal life or the ecology of which it is a part. Internal interventions might include genetic modifications. Animals

Fig. 3 Broilers densely packed in a rearing shed



6 Jacques Derrida, "The Animal That Therefore I Am (More to Follow)," trans. David Wills, *Critical Inquiry* 28 (2002), pp. 369–418.

7 *Ibid.*, p. 394.

8 "Talking Broiler Chicken, Germ Maps and Maggots with Andreas Greiner," *We Make Money Not Art* (blog), January 9, 2017, <https://we-make-money-not-art.com/talking-broiler-chicken-germ-maps-and-maggots-with-andreas-greiner/>

may be dosed with growth hormones or bred for docility. Ecologically, an industrial farm might concentrate a large number of animals in a confined space to maximize productivity; it might acquire advanced technologies like carcass chilling machinery or automated deboning equipment to maximize yield while speeding up the tempo of mass slaughter. Feeding might be carefully regulated, while animal waste might be siphoned into artificial lagoons. These specific operations convert the animal into mass life. Indeed, the loss of the human hand to automation in agricultural labor in the name of optimization bears an eerie symmetry to the loss of the animal to deindividuation. The machine abstracts individuated life until it resembles nothing so much as a mass of meat to be dispatched at high speed. Through these technological interventions, the animal body is massified while its other qualities are lost; it becomes no more than a profitable substance designed for human consumption.

308s and Heartbreak

Despite our familiarity with these processes, it is difficult to overstate the degree to which the Ross 308 broiler chicken has been pummeled into consumptive biological matter through audacious human interventions. Corporate manuals designed to sell the 308 to industrial farms readily describe this living animal in terms of its ability to meet what they describe as quantitative “performance objectives.”⁹ Charts in these manuals describe objectives such as minimizing feed consumption and maximizing the average daily weight gain of each bird to lower overall production costs. Bar graphs relay to prospective buyers such metrics as “eviscerated %,” a measure of a bird’s “eviscerated carcass (without neck, abdominal fat and internal organs) as a percentage of live weight.”¹⁰ As these transformations from life to information suggest, the industrialized breeding of livestock means that, from generation to generation, every cell of every animal has been genetically optimized to maximize the meat yield from every eviscerated carcass of every 308 sold. The existence of the Ross 308 reveals the unromanitized, postindustrial animal.

Andreas Greiner’s sculptural work *Monument for the 308* seeks to represent this common broiler chicken even as it engages with those forms of technologically assisted interspecies penetration of life under capitalism. Greiner describes his piece as a “monumental sculpture [that] resembles a dinosaur in a natural history museum. Only this animal, a common broiler chicken of the type Ross 308, is not extinct like its prehistoric ancestor the *Archaeopteryx*.”¹¹ Giving a sculpture the appearance of a fossilized skeleton is no easy task. The material construction of *Monument for the 308* required mediating optical devices, including a high-definition CT scanner and a 3D printer, to reproduce the skeletal structure of the chicken at twenty times the size of the original. CT, or computed tomography, scanning works as a virtual dissection might—visibly rending the body’s interior into pieces without cutting it open. To perform a CT scan, X-rays made up of high-energy electromagnetic radiation penetrate the object from various angles to produce a series of high-resolution cross-sections revealing what’s hidden inside. When the series of skeletal images

9 *Ross 308/Ross 308 FF Broiler: Performance Objectives*, Aviagen 2019: 1-14.

10 *Ibid.*, p. 11.

11 “Monument for the 308: Andreas Greiner, Berlin, 2016,” *Andreas Greiner Digital Portfolio*.

is generated around a single axis of rotation, a three-dimensional rendering of the body's interior structures is obtained. According to media scholar Lisa Cartwright, the physiological distress produced in early medical applications of the X-ray's radiation "threaten[ed] to perform a quite literal disintegration of the body."¹² That is to say, the invisible damage that radiation visits on the body of the 308 to produce the aestheticized sculpture links this technology of vision to the technology of dismemberment performed on the postindustrial animal. These processes of automated evisceration draw a disquieting parallel between the technological interventions that produce Greiner's 308 and those that produce meat. In both cases, technologically assisted disintegration must occur before the animal is considered fit for public consumption.

Digitally deriving the 308's skeletal dimensions is the first step in creating the information that guides the 3D printer. Blown up to twenty times the size of the original bird, the design model fed to the printer is the basis for reconstructing the dead carcass in the three dimensions the X-ray image stripped away. By making the bird's bones appear much larger than life, the 3D printer produces something like a zoom effect. This effect, as Bruno Latour describes it, creates "the illusion of unhindered movement" between one scale and another.¹³ But this is no straightforward magnification. Latour cautions that a difference in scale does not imply movement along a single spatial continuum but rather a collection of many different technological operations. And as Daney has said of the vision generated by technological mediation: "The visual is neither the double nor the outrageous, false or inaccurate misrepresentation of something else; the visual *is* something else, something which is not neutral, which has *its* own laws, effects and exigencies."¹⁴

075

In our case, the shift in scale from the slight proportions of the chicken's carcass to the enormity of Greiner's artificial skeleton is accomplished by a series of relatively erratic transformations that slough off information at every turn, creating a sculpture with little of the original intact. In capturing the precise skeletal dimensions of the 308, the prosthetic eye of the CT scanner loses anatomical information about the animal's muscles and tendons, as well as its feathers and skin. Color is lost; texture is too. In the process of expanding the bird's body, even the skeletal dimensions—the one thing the CT Scan retained—are lost. Procedurally speaking, then, the technological mediations performed on the 308 in transforming it into a sculpture constitute a form of human intervention much like that imposed on the 308's DNA, its hormones, its conditions of life and death.

We can return at this point to Greiner's earlier allusion to extinction to note that the sculpture's massive skeletal form is a familiar representation of species that, like the *Archaeopteryx*, are now lost to the world. As Greiner reminds us, the 308 has been "bred in staggering numbers" and thus is in no danger of disappearing anytime soon. So what does it mean to render the Ross 308 in this form? Given the infrastructures of industrial farming that organize the life and death of the 308, we might consider this creature on a different scale. What is most interesting about the sculpture's manifestation of the body of the single broiler chicken is that the Ross 308—a product of human intervention—has only ever existed *as* mass life. That is

12 Lisa Cartwright, *Screening the Body* (Minneapolis: University of Minnesota Press, 1995), p. 108.

13 Bruno Latour, "Anti-Zoom," in *Olafur Eliasson: Contact* (Paris: Flammarion, 2015): pp. 121–124.

14 Serge Daney, *op. cit.*, pp. 115–116. Italics in original.

to say, the 308 is bioengineered to be reproduced without inconsistencies across its entire mass body. The ratio of carcass to breast meat and breast meat to thigh meat is statistically consistent from singular body to singular body and, consequently, within the mass life of the 308 as well. The sculptural rendering of the standing skeletal form we have come to associate with depictions of extinct species thus demonstrates for the viewer that an individuated 308 not only does not exist but has never existed from the moment of the 308 model's inception.

Lost in the World

In *Becoming Undone*, Elizabeth Grosz claims that “art, like technology or like science, links living bodies to the earth, not wholesale but through the connections it makes between specific qualities—the attractiveness of leaves to various showy birds, the shininess of objects that appear to bower birds—and specific bodies and body parts.”¹⁵ She goes on:

But unlike technology or science, which aim to extract useful principles, principles which can be used to attain specific aims or goals—regularity, predictability, order, and organization—the arts redirect these forces of practical regularity through intensification to produce something no longer regular, ordered, or predictable, but an intensity, a force, a sensation, which actively alters the very forces of the body itself, something appealing, irregular, unpredictable.¹⁶

It should be noted that Grosz's gloss of technology and science's effort to extract principles in order to “attain specific aims or goals” must be considered within the context of late capitalism, where living bodies and the earth intermingle in a crucible of extractive corporate violence. Grossly inequitable, these relations too often are marked by violence toward and exploitation of nonhuman species in the furtherance of human ends. For Grosz, art redirects some of these forces, routing them away from violent extraction and toward the generation of something “appealing, irregular, unpredictable.” As we saw with *Monument for the 308*, however, rendering the skeletal structure of the factory farm chicken appealing—as Grosz would have it—brings its own set of problems. Although art that applies interventionist technologies to the nonhuman can offer a critique of the corporate compulsion to meddle with life, the drama of the sculpture's monumentality obfuscates the complexities of the system of industrial agriculture that produces and reproduces the mass animal.

The Ross 308 is a manifestation of the relation between automation and massification that reduces life to flows of information as it optimizes profits. For some, the fact that the Ross 308 is a form of animal life keeps the ethics of this corporate abstraction and quantification at bay. But having seen these processes at work, we should not be surprised that similar ones are applied to human life as well. In recent years, machine-learning algorithms have introduced the possibility of expanding automation into the visual realm. Algorithms have been trained on object recognition data sets, such as ImageNet, that include image categories devoted to the classification of humans. In this way, images of individual persons get categorized and converted into flows of information that will equip algorithms for tasks as mundane

¹⁵ Elizabeth Grosz, *Becoming Undone: Darwinian Reflections on Life, Politics, and Art* (Durham: Duke University Press, 2011), p. 171.

¹⁶ *Ibid.*, p. 171.

as facial recognition at the airport gate or as lethal as targeting suspected terrorists. In the case of algorithms for human targeting, we should note that the reduction of a person to a category required by the algorithm's process of visual recognition is a case of corporate mediation intended to automate operations, amass individuals into types, and in so doing, optimize death.

Greiner's piece *Dragonfly* is a consumer-drone-based installation developed in collaboration with Jan Philipp Balthasar Müller. Like *Monument for the 308*, it intensifies machine-assisted industrial intervention by redoubling technological mediation in the process of producing the work itself. Where *Monument for the 308* relied on scanners and copiers, *Dragonfly* turns to drone cameras and recursive algorithms. Yet despite the technological systems at work, the loss of systemic complexity is palpable: although *Dragonfly* relies on algorithms, it doesn't critique their historical connection to militarized drone strikes conducted abroad in the name of empire. Set up in the gallery space, the artwork is unassuming. It consists of a small consumer quadcopter drone as well as a monitor and a computer processor outfitted with Google's algorithmic DeepDream software (Figure 4). Hovering about the room, the drone trains its camera on the gallery walls, the potted palm, and the occasional person passing by. The live video feed from the drone appears on a large flat monitor mounted nearby on a gallery wall (Figure 5). The image is hardly recogniz-

Fig. 4 *Dragonfly* (2017). Installation view of "7 Trans-Phonies" at Tokyo Wonder Site Shibuya. April 22-July 9, 2017



Fig. 5 *Dragonfly* (2017). The algorithmically altered live video feed from the drone appears on a large flat monitor mounted nearby. Installation view at Tokyo Wonder Site Shibuya, 2017

able, though, having undergone significant algorithmic alteration thanks to DeepDream. On the monitor, one sees what might best be described as a psychedelic forest hallucination: the fronds of the palm appear to pulse with a morphing menagerie of colorful fauna that sprout and then retreat with every move of the camera. This effect results from the work of digital laborers who painstakingly trained DeepDream to classify images with a catalogue of wildlife. Once an image is classified, DeepDream adjusts what it "sees" to resemble the image in the catalogue. Thus, a palm

frond's slight resemblance to a parrot results in an avian figure suddenly emerging on the screen. Museumgoers' experience of this visual hallucination brings to mind Grosz's contention that art draws together specific bodies and specific qualities such as "the attractiveness of leaves to various showy birds."

But the significance of *Dragonfly* derives from more than what's on the screen. In fact, the extravagant visuals of the pulsating algorithmic images are tempered by the stark minimalism of the installation's setup. These two aspects taken together suggest that *Dragonfly* may well advance two contradictory positions with respect to empire, the artwork's unacknowledged subject. It's true that *Dragonfly* addresses human intervention in the nonhuman world by performing its own series of visual mediations—first, through the drone's assemblage of camera and communication network, and second, through the neural algorithm that processes the captured images.

Yet it doesn't address the militarized work these mediations perform in the world beyond. To be sure, upon initial consideration, the drone's playful display in the art gallery seem to bear little relation to the drone's militarized function as a weapon of imperialism capable of sighting and killing with impunity. It is significant, though, that in the American context, drone technology was originally funded through the Department of Defense's secretive Defense Advanced Research Projects Agency (DARPA),¹⁷ a circumstance of history that links the military's early patronage of drone technology to the later development of that technology into smaller and nimbler iterations that could be mass-produced and marketed to consumers.

Moreover, the drone's entanglement with Google's recent foray into neural algorithm development first occurred under the auspices of military research. In 2018, media reports surfaced that Google was working alongside the Pentagon to develop an artificial intelligence program known as Project Maven (**Figure 6**). In many ways, Maven worked much like DeepDream: both are neural algorithms trained on a fixed database of images. But Maven was trained to distinguish human targets from the objects around them. If drone technology strives to remove human labor from the process of flying in combat, Project Maven extends the ambition of automation through the entire chain of operations to the process of targeting.¹⁸ In this

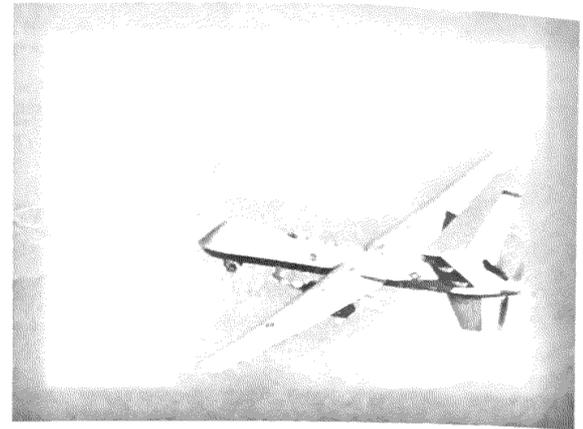


Fig. 6 An U.S. Air Force MQ-9A Reaper unmanned aerial vehicle flies a combat mission over southern Afghanistan, 2008

respect, Google's efforts are motivated by the same liberal fantasy that propelled the development of the Ross 308: the possibility of completely automated killing. As it happened, the company's Project Maven proved so unpopular among its employees that the program was dismantled. In the context of Google's membership in the military-industrial complex, then, the visual phantasms generated by the same company's DeepDream technology for *Dragonfly* appear as domesticated portrayals of empire's lethal visual technologies. In this sense, the hallucinatory visions that bubble up on the screen in the gallery read as obfuscations of the technological union of drone and algorithm that doles out death in the ongoing War on Terror. Instead of unspooling the history of violent interventions that the pairing of drone and algorithm are capable of unleashing beyond the gallery's walls, the piece's austere aesthetic remains silent on the subject.

The art of Andreas Greiner relies on technological interventions into life, first developed in the private sphere to shore up global regimes of power. In the case of *Monument for the 308*, the invasive imaging technology of the CT scanner mimics the agricultural industry's mandate to penetrate deep into the interior of animal life to optimize profit. Moreover, the physical enlargement of the carcass made possible by the 3D printer echoes the agricultural industry's hyperbolic amplifications of the chicken's rate of reproduction at the same time that it abstracts the infrastructures of

17 Jennifer Rhee, *The Robotic Imaginary: The Human & The Price of Dehumanized Labor* (Minneapolis: Minnesota University Press, 2018), p. 7.

18 Tony Romm and Drew Harwell, "Google CEO quietly met with military leaders at the Pentagon, seeking to smooth tensions over drone AI," *The Washington Post* (October 2018), <https://www.washingtonpost.com/technology/2018/10/05/google-ceo-met-with-military-leaders-penta>.

mass farming to a solitary sculpture in a gallery. In *Dragonfly*, Google's Deep-Dream algorithm couples with a consumer drone to generate a domesticated version of the Pentagon's dream of marrying algorithm to drone in a digital assemblage that automates the process of killing human beings. Unlike the global networks of labor and technology that make militarized drone warfare possible, *Dragonfly*, like *308*, reduces the complex materiality of this system to the dimensions of a single room for the pleasure and consumption of the museum-going public. Art that repurposes these biological interventions, these visual technologies, these human and nonhuman lives for aesthetic ends seems intended to address the corporate nexus of automation, massification, and death we encounter every day, whether at the supermarket or on the nightly news. If the link to the powers that be seems to be lost, the picture not quite complete, then a generous–Daneysian–interpretation of these works will see the missing pieces as providing an impetus for our confidence in the visible to be firmly and necessarily shaken.