



THE SENSORIUM OF THE DRONE AND COMMUNITIES

Kathrin Maurer

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Conclusion

Mnemodrone is an art installation about a drone that stores personal memories and speaks with people about them. It contains the crux of what I want to say in this book: drones can embody a medium of futurity. Let me explain this. The word *mnemonic* refers to memory and relates to the Greek goddess Mnemosyne. Ancient Greek philosophers cultivated mnemotechnics as a strategy to memorize public speeches. The artwork *Mnemodrone* is also a prop for remembering—not speeches, but personal memories. In 2014, *Mnemodrone* sat (among other places) on the ground in a park in Brooklyn. Visitors gathered around it, as if around a storyteller (recalling the myth of storytelling as discussed with Jean Luc Nancy's concept of community in chapter 1), and shared their personal memories with the drone. They talked about their first loves, their childhoods, and other personal experiences. The drone listened patiently and stored all of these remembrances.¹ *Mnemodrone* embodies an archive, a database, and a storehouse of human experiences: it is a collective *lieu de mémoire*, that is, a subjective and affective form of memory based in a spatial setting.²

But *Mnemodrone* is not just an apparatus that stores, conserves, and seals the past in a time capsule. It also opens up a dimension of futurity. As Walter Benjamin suggests, a glance backward into the past can evoke a glimpse into the future.³ *Mnemodrone's* stored memories point toward future interactions, communities, and modes of human–machinic attachments. Humans and machines do not work against each other; rather, they embrace each other. *Mnemodrone* engages in dialogue, interacts, retells, and even makes new stories. It can do so because its memory data form the foundation of a database, which is then processed by an artificial intelligence (AI) machine learning program. The drone has learned to talk back. Through this AI



Figure C.1

Image from Emilio Vavarella and Daniel Belquer's postanthropocentric art project *Mnemodrone* (2014–). Mixed media, multiple locations. Photo courtesy the artists. © Emilio Vavarella and Daniel Belquer.

program, the drone can converse about personal memory, beauty, and existential questions of life and death. Such dialogues with the drone suggest meaningful interaction, since *Mnemodrone* produces the answers logically and (it seems) intuitively. It even seems to have an emotional and philosophical grasp of the world.

This ability of *Mnemodrone* to communicate, respond, and interact suggests the vision of community between machines and (drone) technology that this book has attempted to trace: a community where machines and humans form a relational and mutual assemblage that is not based on domination, instrumentalization, or hierarchies. This vision of community in *Mnemodrone* has a dimension of futurity because it suggests a model of social interaction and community-building. The collecting of past memories raises questions about how humans interact with a drone, what their concerns and ambiguities are, how they trust the drone, and how humans tend to anthropomorphize nonhuman agents. *Mnemodrone* gains this community-building power by performing as if it had human consciousness. It reflects the current possibilities of AI as an approximation of human consciousness,

and it foreshadows what might be possible in the near future. Emilio Vavarella and Daniel Belquer, the creators of *Mnemodrone*, describe the project as postanthropocentric because it engages with “machinocentric creativity” and AI, decentering the human in communicative, social, and aesthetic processes.⁴

This power of drone futuring is what this book has sought to unearth. Aesthetic drone sensoria and their respective imaginaries of communities can construct visions of the future. They can provide us with speculative scenarios regarding how humans might live with machines, and how we might relate to remote sensing technology beyond its rationalized and militaristic instrumentalization. This type of futuring has nothing to do with preemption. It is a modern type of futuring based on dynamism, change, and open-endedness. But I am not suggesting that drones follow a higher telos of history, striving for the perfectibility of technology. I simply dare to infuse the drone with a small dose of philosophical playfulness. Specifically in the realm of the arts, drones can make us reflect on our relationship with intelligent machines in new ways and can potentially shape our future in ways that will be beneficial for the planet.

This view of drones is unusual in the humanities. Typically, drones are regarded as technological devices that nullify the future by determining it before it even begins. They are rather premodern that way.⁵ The drone and its capacity for constant surveillance can predict future crimes. In combination with AI and predictive algorithms, the military drone can foresee terror operations and insurgencies.⁶ In these preemptive operations, the drone annihilates the future, because it seems to know what will happen in advance: technological determinism and essentialism. Intervening in the contingencies of life, predicting fates before they are enacted, is a dangerous business. In the film *Minority Report* (2002), cogs, machines, and humans detect premeditations of crimes, and this leads to the arrest of innocent people. These “offenders” have not (yet) committed crimes, and they might have been about to change their minds. The very essence of the future, namely its unpredictability and contingency, is calculated away. We all know that this type of preemption is no longer fiction: the drone may be *the* technology to execute preemptive war strikes or precrime actions. As a military drone pilot once admitted, “Sometimes I felt like a God hurling thunderbolts from afar.”⁷ Often, discourses that nestle the drone in a scopic regime of omnivoyance accentuate its Olympian powers.⁸ As Brian Massumi notes, impersonating the view of

the drone, “We, the preemptors, are the producers of your world. Get used to it.”⁹ A godlike creature, the drone can effortlessly cross the boundaries of space: it can be everywhere. The drone’s spatial mastery is deeply ingrained in the cultural and political narrative of the aerial view. From God’s eye to the panopticon to the drone, the aerial embodies the controlling eye.

It is true that drones can rule space, like wrathful gods. But they often also fail, and they can do many other things. My book has shown that drones do not always take an overview; their vision can be clouded, blurry, and uncertain. They are not always about distance but can create intimate and personal relational spaces. They can sense space volumetrically and atmospherically, which in turn proliferates new relations and connections to our sensorial earth environments. They also have a power to open up the future, making it permeable to visionary imaginaries of communities.

The chapters of this book have illustrated how the synesthetic aesthetic sensorium of the drone embodies an affective matrix that experiments with new visions of collectives and alternative forms of bonding between humans and machines. Part II, on the drone and the body, demonstrated how the drone sensorium, with its embodied and telepresent modes of sensing, creates entangled relations between the body and the drone, and how these drone technobodies suggest cyborg assemblages that overcome human-centered forms of communities. The drone no longer represents a detached surgical apparatus, but rather brings people together, creating intimacy and closeness.

But the drone sensorium does not only unfold its futuring powers in relation to the body. Part III, on drones and the earth, presented us with new ways to connect to the earth via the drone. The drone as eco-medium attaches us more closely to the earth by facilitating an attitude of care, relating us to the earth through the lens of the planetary and the Anthropocene. Thus the drone sensorium creates trajectories for postcarbon futures, making us reflect on the current state of our planet, its ecological condition, and the changes to its climate. Paul Cureton sees drone futuring as vital to save the planet: “UAS’ [unmanned aircraft systems’] public perception and the highlighting of drones as a social good, which can assist many areas of everyday life in the natural and built environment, will develop acceptance. . . . UAS will then also provide a powerful medium for monitoring climate, place, space and our lives.”¹⁰ I am not interested in deciding whether such drones are good or bad *per se*, but in what we can learn from their aesthetic imaginaries.

These earth drones do not separate us from the earth but enmesh us with its materiality.

In bringing us closer to the earth, the drone also engages us with what we see as nonhuman. Part IV, on the drone and the nonhuman, demonstrated that the aesthetic drone sensorium can imagine communities that integrate a zoological, nonhuman, swarmlike dimension. Here, the swarm is not seen a priori as the bestial dehumanized “other,” but offers a trajectory for thinking communities as multitudes.

Many of the diverse aesthetic imaginaries of drone communities that I have discussed in this book have utopian glimmers at their core. Some of them show communities where hierarchies between machines and humans are flattened, and where the drone and the human are thought together in a creative embracing assemblage. Some suggest planetary communities that seek to overcome the territorialization of the earth by exclusion, colonialism, and imperialism. I have traced community visions that connect to Jean-Luc Nancy’s and Rosi Braidotti’s ideas about communities, in which notions of identity, origin, and authenticity no longer dominate. I wanted to show that the multisensoriality of the drone can shape a template for imagining communities that are defined neither by the “collective singular”¹¹ nor by the violent exclusionary networks of predictive algorithms. The aesthetic drone imaginaries of communities that I have harvested from drone art reveal the life-affirming and vital potentials of the remote and machinic drone sensorium, and experiment with community visions that arise from thought surrounding difference, otherness, and posthumanism.

This futuring with the drone makes us rethink our relation to the drone’s remote sensing technology. The drones in this book are much more than flying objects with sensors and computers inside. The artworks I have discussed show that drones are epistemological engines: they shape the ways we think, interact with each other, and create worlds with technology. We can be closely entangled with drone technology; it can become like us. Following Benjamin once more, one might say that my book compares the drone to a natural “organ.” Benjamin noted that in the face of war, “society was not mature enough to make technology its organ.”¹² Wars are still being fought today, but, perhaps in light of our planetary vulnerability, we can begin to see technology as *one of us*. Benjamin connects his ideas about technology to the notion of “organ projection” developed in Ernst Kapp’s 1877 text *Elements of a Philosophy of Technology* (*Grundlinien einer Philosophie der*

Technik).¹³ Kapp claims that all technical artifacts are extensions of human organs (hammer as fist, binocular as eye). This relationship between a technical object and an organ speaks to an anthropological conception of technology: technology develops in sync with the human and its anthropomorphic body. But instead of reading this organ theory as a narrative of human mastery over technology, I consider Benjamin's and Kapp's organ metaphor as an invitation to understand technology as a type of organism, a vital cybernetic system that regulates itself and is closely entwined with human and nonhuman environments. This perspective on technology also recalls Yuk Hui's ecology of machines, which diminishes the ontological distance between the environment of technological objects and the subject.¹⁴ In this book, I have also considered drone technology as an organ-assemblage, seeing the human and the technological as milieus that are no longer divided by ontological difference but closely intertwined.¹⁵

But to see the drone as an organ and excavate its potential futuring power is to play with fire, even when one remains within the realms of aesthetics, fiction, the imaginary, and speculative fantasy. Drones come from a violent family, and many of the scenarios one can imagine with them are bleak. That is also why this book has devoted many passages to the drones' dark side. Although the violent (and dystopian) drone imaginaries that I have discussed in relation to facial recognition and embodied sensing do not adhere to the scopic regime, they can still execute violence, precisely because of their decentralized and networked configuration. In these imaginaries, the drone loses its alternative power of futuring and instead shapes dystopic and dehumanized imaginaries of communities.

The realm of aesthetics is a privileged one in which to confront these paradoxicalities of the drone and the duality of its vital/deadly imaginaries of technosensual communities. Art does not care about contradictions. We should bear that in mind when we interpret and discuss drones. As Melvin Kranzberg notes, "Technology is neither good nor bad; nor is it neutral."¹⁶ My readings of drone artworks do not engage in a normative discourse about what we ought to do. Rather, the aesthetic imaginaries of the drone function as prisms through which we can learn about technology and its discursive powers. They should inspire us to rethink drones, to see them critically as well as to find their constructive potentials. We do not always have to resolve the contradictions of technology and categorize it as good

or bad. Aesthetics offers a platform on which we can approach the Faustian tensions of the drone. Whether they are from heaven or hell, or from in-between, or from nothing, the point is to extract knowledge from these drone artworks about our relationships with technology. These aesthetic drone imaginaries are seismographs of future applications of technologies. It is time for all of us—not just artists and humanities scholars—to begin to decipher their epistemological palimpsests.

Afterword

My general undertaking to engage with the drone must also be seen within a larger framework: my efforts to show that the humanities are an important player in the field of technology studies. The humanities have a long tradition of researching technology. There is research on aesthetic representations of technology in visual arts and literature, as well as whole fields, such as the history of technology, the philosophy of technology, cultural studies, media studies, design, and the digital humanities. This list is by no means exhaustive, and in this afterword I am not able to map out these different traditions. But there is perhaps one common denominator that connects some of the different humanities approaches to technology: the idea of *techné*.

Techné contains the Greek linguistic root *tek*, which can mean to build, do carpentry, make something from wood, or construct. In Homer's *Iliad*, *techné* is connected to the skill of ship construction, to Hector's craft and dexterity with an ax in the process of building a boat. The Greek Sophists also have an interest in the notion of *techné*, which is understood very much in light of the technification of daily life, and which occupies a place in rhetoric, art, politics, medicine, music, and military strategy. Aristotle defines *techné* as the craft to create and to generate something that did not exist before. Thus *techné* is different than nature (*physis*), which according to Aristotle has movement in itself and is self-acting. In contrast, *techné* is the product of the human, the engineer or the artist; it is the product of the human capacity to bring something forth into the world.

Martin Heidegger takes up the notion of *techné* in his 1954 essay "The Question Concerning Technology" ("Die Frage nach der Technik"). He states that "the essence of technology is by no means anything technological."¹ Similarly to Aristotle, Heidegger understands *techné* as a human activity to bring something forth into the world. Indeed, Heidegger closely interrelates

the field of art with technology because both entail the human capacity to create something imaginary. Heidegger says, “Techné belongs to bringing-forth, to poesis, it is something poetic.”² Like poetry, techné creates possible worlds and potential actualities. Techné is like a language with which we can understand, project, and shape the world hermeneutically.

For Heidegger, technology as techné is not about an apparatus with which we can fix problems. Technology is not an instrument. For Heidegger, homo faber—the making human as the progress-oriented, rational, and calculating engineer—is blind. Max Frisch’s 1957 novel *Homo Faber*, a work surely influenced by Heidegger’s musings on technology, shows the collapse of Walter Faber’s world. Not only does Faber’s airplane have to make an emergency landing but he also—by chance and unknowingly—falls in love with his own daughter, Sabeth. Faber eventually meets Hannah, his estranged former lover and the mother of his daughter. During all this, he learns about his own blindness to the world, which is rooted in his rational and instrumental conception of technology.

Heidegger likewise does not see technology as a tool with which to master the world. Rather, his idea of techné makes technology into a philosophical-poetic activity that gives us access to the truth of being. Via techné, Heidegger aims to uncover a premodern understanding of technology, which for him should open a way to engage with his ontology of being and his critique of metaphysics. This is very much the point at which I separate from Heidegger, who essentializes techné as a vehicle for his conception of truth. In doing so, he problematically romanticizes preindustrial technology, fostering a nostalgic critique of civilization.

Nevertheless, I believe that Heidegger’s ideas about techné can be productive for us to think about why technology is a humanities subject. Heidegger’s philosophy demonstrates that technology, like art, has the capacity to project fictional worlds. The computer program of an engineer, like the pen or brush of an artist, can project hypothetical “as-if-like” worlds. The humanities, with their analytical skills, can observe these technological imaginaries, interpret them, frame them, and translate them. We as humanists have the power of the imagination to discuss technology under the auspices of counterfactuality: What could and should technology be like? And we have the ability to detect narratives about technology: Are we engaged in a technological love story, or a tragedy? Take the Greek god Prometheus, for example, whose narrative seems to be a technological romance. He gave

fire to humans; he embodies innovation, optimism, emancipation, and progress. But the romance has a flip side: with the gruesome punishments he had to endure, Prometheus certainly paid a price for his technological optimism. Prometheus as the avatar of the self-made man is also a tragic figure, symbolizing alienation, the rift between nature and humanity, and the incessant, self-destructive Faustian drive to compete. I believe a key competence of the humanities is to analyze such narratives about technology, to think about alternate plots (comedy, farce, or melodrama, for example), and to reflect on them critically in light of our current lifeworlds. Indeed, I believe this competence is truly needed in a world that often deploys for-profit technofix solutions to societal problems.

There are a couple aspects of techné that I consider important to the field of humanistic technology studies: culture techniques (*Kulturtechniken*), aesthetics, and critique. Techné as poesis implies a close entwinement between culture and technology. This relationship has often been characterized as antagonistic and alienating: culture is threatened by technology, and technology is not part of culture because it is simply not beautiful enough. However, in recent decades the humanities have discussed the interdependence of culture and technology by pointing to the notion of culture techniques. Inspired by the semantics of *agriculture*—*cultura* as the tilling of a field—culture techniques are concepts for handling life situations (making fire, language, maps, images).³

Technology as techné shares family resemblances with the arts, poetry, and fiction. Technology, however, also plays an important role in a neighboring discipline, namely aesthetics. This is the branch of philosophy that deals with questions of beauty and taste, as well as (and most importantly here) with the nature of sensual knowledge. The concept of aesthetics as sensual knowledge can be traced from Aristotle down to Alexander Gottlieb von Baumgarten, Christian Wolff, and Immanuel Kant. The school around the German philosopher Gernot Böhme has revitalized this idea of aesthetics as sensual knowledge, specifically in light of technology.⁴ Technological inventions demand their own technosensualities and experiences, which is the key topic of this book on drones.

One must be aware, however, that the idea of aesthetics as an epistemic discipline of sensual knowledge also limits the autonomy of art. Theories about sensing and aesthetic judgment are not art. Art does not need a discipline; it does not have to adhere to sense-making rules. It is precisely

this freedom that makes art so special. Art offers the conditions in which to observe the world differently, that is, noninstrumentally, affectively, and nondiscursively. This power of art is absolutely vital when we engage with technology in the humanities. Artistic interpretations of technology (whether in sci-fi novels, experimental film, or visual art) can reflect technology's vulnerability, uncertainty, and fallibility. In artists' work, representations of technology evoke dissensus: artworks can negotiate, criticize, ironize, queer, celebrate, and make technology strange.

This view of critique requires me to engage with technology by moving beyond established thought traditions and exploring new ways of thinking about technology and humans. Is techné something of which only humans are capable? Is there a way of reading techné in a posthuman context? Artificial intelligence, autonomous machines, smart technologies, and algorithms are capable of poesis: they are able to make the world, and to create meaning. I consider it of the utmost importance that humanists—as experts in deciphering and analyzing the production of meaning—should engage with these new abilities of machines, which produce new forms of intelligence. We need not only to reevaluate homo faber but also to embrace thinking about technology in new materialist constellations. We need to evaluate our human control seat amid technology in light of cyborgs, machinic sensing, smart algorithms, humanoid robots—and of course, drones.