30 Averted Vision

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Introduction: Art and Other Techniques of Knowing Otherwise

"Have you ever had the experience of looking at the stars at night, seeing a faint point of light out of the corner of your eye, and then having it disappear as soon as you look at it directly?" asked the presenter. A philosopher and historian of science, he was talking to art students and faculty in an art academy. It was a lecture on the economy of attention. A final discussion centered on a technique for observing dim objects in the night sky. Called "averted vision," it was already used by Aristotle in 325 BCE to make astronomical observations. The technique is based on the phenomenon of faint objects being perceivable only through peripheral vision. The phenomenon is explained by how the human eye works. The fovea, the center of our retina, is primarily made up of cells known as cones, which detect bright light and colors. The cells surrounding the center are largely rods, which have a higher sensitivity to light but detect only luminosity. Very faint light can be detected by our rods, but as soon as we move our focus, and our fovea full of cones, to look at it directly, we stop being able to detect it. "There are certain kinds of things that you only see when you look elsewhere," concluded the philosopher.

Being part of that particular audience, I realized how well the averted vision technique resonated with this group, serving as a very good metaphor for understanding how art functions as a knowledge practice. Being "indirect" might be artists' most fundamental mode of operation. Getting at something obliquely is our method of working. Art, along with the various philosophical traditions of "unknowing" – or knowing by rejecting reason and tuning into experience, presence, emergence – has always offered an alternative to a rational, scientific, and direct way of knowing. This is perhaps what makes art of interest today when scholars urgently call for ways of knowing *otherwise* in the planetary crisis. With a recognition that this crisis has roots in the modern mindset and its prerogatives of scientific development, technological advancement, and progress, interest in art as a knowledge practice has grown. Motivated by a need to reconsider the relevance of existing methods in both natural and social sciences, scholars from across STS, human geography, feminist technoscience, media theory, and other approaches have proposed developing methods that borrow from or employ the practice-based methods of art. Moreover, "artistic research," actively and creatively engaging with an object of investigation, is starting to be considered as something that can expose the limits of existing disciplines, revealing the "messiness" of any actual process of research, as well as its "performativity," understood as the fact that the very act of representing something contributes to bringing it into being. Artistic research implies that art and research can be one practice rather than two distinct ones, a practice that enables a critical reflection on the value, status, and significance of knowledge today.

There are many ways through which art can be relevant to climate change: from providing a reflection on social imaginaries of nature and their world-making power, to offering experiences

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of material embeddedness in environments, to generating visibilities of knowledge infrastructures and destabilizing them, to creating counter-narratives and speculative scenarios. But in this chapter, I limit my discussion to what art has to offer as a way of knowing that functions much like the averted vision technique. The established scientific methods, just like the cones in our retina, are capable of detecting only some things, while obscuring others. Art sensitizes us to the fact that there is more to be known beyond what can be captured instrumentally, quantified, described, or recorded, with the current scientific tools we have.

Just as science is entangled with histories of Enlightenment science, colonialism and capitalism, so too is art. In order to engage critically with the climate crisis – understood not simply as a physical phenomenon, but as a complex socially engendered set of processes rooted in those histories – art must engage with contemporary legacies of those logics. Artists have to consider what happens to art's agency, and its potential for innovation, subversion, connection, or critique if it is enacted from within a socio-economic system structured by those histories. If it carries a transformative and transgressive potential, creativity is attractive to both those for whom novelty represents a countering of the existing arrangements, and to those for whom it is simply more grounds for expansion, welcomed within a system that feeds on diversity. Can artistic interventions bring about new ways of being and doing, while escaping capture by contemporary forms of neoliberal capitalism, which can turn new ways of being into territories enclosed in markets?

The "averted vision" technique suggests an approach to meet these challenges. For the contemporary philosopher Jacques Rancière, when art acts obliquely, it can challenge the existing order. It has the capacity to alter the "distribution of the sensible" by altering, as averted vision does, what becomes perceivable. When art is too direct, when it consists of overtly political messaging, Rancière suggests, it loses its capacity to reorder, because it simply participates in the established discourses and institutions. When art works obliquely, it doesn't contest the world revealed and constructed by dominant ways of knowing. Rather, it develops an ensemble of tools that might enable us to reveal, or construct, another world on the margins.

Clouds and Indirect Knowledge

I came to these issues through a series of art projects that I developed on the topic of clouds. The projects included developing devices for cloud making or cloud collecting and organizing events around sending them into the atmosphere, creating a crowdsourced collage of the sky over an entire city, tasting clouds, and recreating historical clouds based on their chemical composition. Clouds are interesting objects to think *about*, as well as to think *with*, because they have been connecting knowledge, representation, control, and governance for thousands of years. They have been another tool that is akin to averted vision, that "offers access to truth by way of a simultaneous veiling and unveiling," as scholars Peters and Piechocki (2021) recently argued. Since ancient times, clouds were seen as a challenge to knowledge. Lacking a stable form, they were understood as provisional and uncertain by ancient philosophers and poets. As such, they were a challenge to enumeration and to representation-based governance.

Over 2,000 years ago, the Greek playwright Aristophanes said that clouds can turn "into anything they want," and therefore, they could only be the object of a speculative, poetic language. Cloud-like imagery has been associated with the various traditions of "unknowing," from the *via negativa* which insists that God, understood as a "dazzling darkness," is indescribable and has to be referred to only in terms of what he is not, to the Cloud of Unknowing, the fourteenth-century mystic text which suggests that the way to know God is not through knowledge and intellect but through contemplative immersion, stripped of all thought. In these ways and more,

clouds have been reminding us since antiquity that there is always more going on than what humans can comprehend using reason. A cloudy – speculative, poetic, or artistic – approach can convey something of those additional "goings on," without losing its multivalency and ambiguity. Additionally, it does so in a way that avoids the trap of itself becoming the erasing or obscuring force.

For Rancière, the focus on obliqueness of art came from examining nineteenth-century struggles and utopias that ended up contributing to or turning into the totalitarianisms that they were opposing. Art too, he suggests, can be too often caught up in patterns that circulate the same practices it purports to critique, ending up as "media images that denounce the media, spectacular installations that denounce the spectacle" (Rancière, 2007). But subtle gestures in the peripheral vision, a using-otherwise of senses, a multiplicity of small ruptures, small shifts, builds a practice that can "refuse the blackmail of radical subversion" (ibid). Such small-scale, oblique art interventions are also important for a feminist STS scholar Donna Haraway. She describes them as part of a "modest project" of "a little re-tooling," in contrast to the construction of a grand utopia (Haraway, 2004).

But there is yet another reason why the oblique workings of artistic methods are embraced today. They are seen as one of the potential responses to the demands for epistemologies that are adequate to a world that consists of incalculable entanglements and is therefore "ontologically opposed to definitive capture" (Neimanis, Åsberg, and Hayes, 2015). In other words, art might be one type of response to the various calls for knowledge "without mastery," without directionality, or without "knowing-in-advance." Among such approaches are media ecology thinkers that follow Michele Serres' "errant materialism" to articulate notions of turbulent, circumstantial way of thinking, human geographers speculating on new methods that "cause thinking to take place in ways that are not always given in advance" (McCormack, 2015), or eco feminist writers calling for knowing that rejects "master rationality" and respects limits (Plumwood, 2009). Here atmospheric thinking or thinking-with-clouds can again be helpful, to reflect on the legacy of the logics that humans have developed for managing uncertainty, on limits of knowledge and control.

Clouds and Uncertainty

Clouds were of special interest to Descartes, a French philosopher and mathematician who is widely considered to be one of the fathers of the Enlightenment or the Age of Reason. According to Descartes, if meteorology would enable humans to understand the physics of clouds, then everything else that was mysterious, marvelous, or unknowable could also be explained by science. But a lesson we learnt from clouds in the last half century – through the chaos and complexity sciences – is the opposite: it is not just the clouds but the whole world that is provisional and uncertain. Far from being something that operates mechanically, a theatre of scenographic techniques, as Descartes suggested, nature is inherently mysterious and unknowable.

This shift in thinking was set in motion in 1963, when mathematician and meteorologist Edward Lorenz, having developed an early numerical simulation of weather, realized that in the atmospheric system, a very small difference in initial conditions can cascade into large changes, rendering it fundamentally unpredictable. Lorenz' insight challenged Descartes' mechanistic clockwork universe and had a profound effect on all domains concerned with prediction and anticipation of the future, fundamentally changing notions of action, agency, and control. The revolutionary thought was this: since uncertainty cannot be prevented, it should be factored into all the futures and managed. This new way of approaching the future led to developments of computationally supported mathematics of probability, as well as to the invention of techniques of "scenario planning" by Hermann Kahn at the Rand Corporation think tank. These techniques

went beyond mathematics of chance, and relied on intuition, and flexibility and adaptability of a creative mind. "What these strategists sought to develop," writes political scientist Melinda Cooper, "was a mathematically rigorous method that nevertheless built on the non-quantitative and emotive dimension of our relation to the future" (2010). One of the insights tied to recognizing the indeterminacy of the world was that envisioning particular futures contributes to bringing them into being. That is, the future became pliable; it could be imagined to be a "blank slate," open to creative intervention.

This insight was the basis of two competing conclusions. On one hand, uncertainty started to appear as the technique of entrepreneurial creativity, promoted by proponents of the new market-based modernity. It led to the assumption that one is free to manufacture the world of one's choosing, regardless of planetary material constraints. Against this, the various feminist post-humanist approaches have been developing understandings of uncertainty that relinquishes control of the future and embraces not-knowing-in-advance, which relies on immersive and situated sensing of the world here and now. It is critical to distinguish between these two types of responses to uncertainty. One leverages the incalculable for the "creative destruction" of neoliberal economics, while the other can "welcome the unknown, the surprise, the other" without trying to control it (Bergoffen, 2003). This distinction is all the more important because atmospheric heat will be a massive primary source of uncertainty in the coming decades. In other words, understanding and reframing the understandings of uncertainty we have inherited from the last century is crucial to human ability to respond to the climate crisis.

Conclusion

In principle, all practices of research, including creative activity, require opening up to not knowing where one is going. "The goal of the research process is to produce results that by definition cannot be produced in a goal-directed way. The unknown is something that cannot be approached straightforwardly precisely because one does not know what is to be approached," writes philosopher of science Hans-Jörg Reinberger (1994). But how to intentionally build in the "room for surprise" into one's experimental system? How can we open ourselves to what we do not yet know? One mode of being that recognizes and responds to the inherent indeterminacy of the world, that tests and responds to what unfolds, is an attitude of play.

The novelist E. L. Doctorow once said that writing a novel is like driving a car at night: you can see only as far as your headlights, but you can make the whole trip that way. I, for one, completely identify with such a process of art-making (or research). My projects which used atmospheric balloons were perhaps an especially good model of a process of setting something in motion, following it, and engaging with what unfolds. I am not the only one who adopts this way of working: a number of scholars have been developing research methods based on engagements with atmospheric processes and materialities under the umbrella term of "atmospheric theory." Examples range from Sasha Engelmann and Derek McCormack's essay "Sensing atmospheres" (2018) to Ben Anderson and James Ash's extensions of affect theory to think about the diffuse and collective nature of affective life (2015). In addition, I encourage you to look at the art and research projects listed in the "Further Viewing" section below. In many of the interventions listed there, the most interesting things that happen emerge not by design but through negotiation of the thousand small contingencies that shape the project's materialization. Through an attempt at doing one thing – an often playful, absurd proposition – they accomplish something quite different that only in hindsight can be even identified. Art is at its best when it is a complex tangle of relations out of which "things come out" (Marres, 2016) or can be "worked out" (Butler, 2021), a process of constant improvisation.

Whether it is setting off a balloon, creating a ballet of trash trucks, or attempting to grow animal muscle in a petri dish, one of the common threads between the models of art-as-research referred to in the Further Viewing section is an attitude of play. Play might be one way to stay astray, in constant improvisation, to avoid the trap of directionality. Play might also be a way to do research not only *about* nature but *like* nature. "Play captures a lot of what goes on in the world," writes Donna Haraway.

> There is a kind of raw opportunism in biology and chemistry, where things work stochastically to form emergent systematicities. It's not a matter of direct functionality. We need to develop practices for thinking about those forms of activity that are not caught by functionality, those which propose the possible-but-not-yet, or that which is not-yet but still open.
>
> (Haraway, 2019)

Today, as climates are on the move, as ecologies are disrupted and reshaped, as co-existence is transformed by planetary heat, surprise needs to be embraced without recycling destructive modes of being. By being open to not-knowing, we can allow ourselves to engage with the emergent materialities of the world that are, to repeat Haraway, "not caught by functionality."

Perhaps the most prominent impact of play, as seen in the artistic projects discussed in this chapter, lies in the ability to disrupt and transform sites, institutions, and practices involved in knowledge practices and their governance – whether that is in a biotechnology lab, museum, or municipal agency. Some of the oblique effects of such projects have to do with the formation of new publics that do not map onto existing social groupings. *The art intervention then becomes a platform and a stage on which a public, knowledge, and their relations emerge in different forms*. The projects become mediators that politicize sites and institutions of technoscience – and alternative ways of knowing – and the practices of making them public. Dimitris Papadopoulos (2018) describes what is further necessary for such new publics to take hold. He says they can be built by engagement with materialities and nonhuman forces, and are ways of connecting and building a world that can be then integrated with organization and work of existing social movements to achieve "thick justice" or justice that is "done" with matter rather than mere discourse (Papadopoulos, 2018). This aspect, of communal collectivity, is where I can circle back to the lecture on attention that I started this chapter with. Next to the "averted vision" technique that artists might immediately connect with, there was another attention practice that the philosopher discussed. It is maybe not as attention-catching as averted vision but just as importantly a mode of operation that art, socially-engaged art that generates the aspects of communal collectivity discussed above. It was a practice of *paying attention together*, a practice of creating a shared internality. Practices of averted vision, when performed collectively, becomes yet another way of knowing. It is perhaps more radical for how simple yet transformative it can be.

Further Viewing

Open-weather, led by Sophie Dyer and Sasha Engelmann,

> is a feminist experiment in imaging and imagining the Earth and its weather systems using DIY community tools. … Open-weather encompasses a series of how-to guides, critical frameworks and public workshops on the reception of satellite images using free or inexpensive amateur radio technologies.
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> (Centre for Research Architecture, 2023)

Mierle Laderman Ukeles has been an artist-in-residence at the New York Department of Sanitation since 1977. Her performances, such as *Touch Sanitation*, in which she shook hands with each of the 8,500 sanitation workers in New York City, or *Social Mirror*, in which she covered a garbage truck with a mirrored surface, brought the city's waste management system into public visibility in a way it never before has been, and that invited the NYC citizens to consider the questions related to waste and material circulation (Brooklyn Museum, 2023; Ronald Feldman Gallery, 2023).

The Natural History Museum, a project initiated the group Not An Alternative, describes itself as a "traveling, pop-up museum that highlights the socio-political forces that shape nature [but are excluded from traditional natural history museums]" (Natural History Museum, 2023). The Natural History Museum (NHM) focuses on the institution of the museum, arguing that it has a unique position of shaping and disseminating cultural narratives. In many of its projects, NHM says it publicly "interprets environmental history according to new coordinates – connecting local threats and movements to protect the environment, public health, and local cultures to the history of museums, the legacy of colonialism, and to ongoing concerns about cultural and environmental heritage" (Natural History Museum, 2023).

Oron Catts and Ionat Zurr's *Disembodied Cuisine* (2003) was an early bioart investigation of a lab-grown meat. It required particular institutional arrangements that provided access for the artists to the necessary labs, equipment, technologies, and expertise. Catts and Zurr developed their project through a lab at SymbioticA (2000), an art school and artistic research centre that they were instrumental in establishing at the University of Western Australia. It advises Masters and PhD candidates who focus on biological arts as well as offering research residencies for artists, designers, and other researchers. At the time of writing this chapter, SymbioticA was facing an uncertain future generated not by the inherent uncertainty of the world, but by potential funding cuts (SymbioticA, 2023).

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