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Wind's Incoherences: On listening to measure

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ABSTRACT | This paper theorizes “incoherence” as a mode of attuning to wind as an atmospheric process. In the oilfields of the Permian Basin (a geological region of West Texas/New Mexico, USA), I make listening devices from debris collected at refinery and well sites. These instruments figure a relation between the toxicity of oil and gas emissions and the rhythms of everyday life downwind, where exposure often evades regulatory legibility. The sound traces wind's patterns and evasions, foregrounding the ephemeral and fragmentary textures through which atmospheric relations are sensed and lived.

Keywords: Sonic ethnography; wind; patterns; measurement; listening.

Introduction

This project listens with wind in the oilfields of the Permian Basin, a geological region of West Texas and New Mexico shaped by extractive economies and exposures to oil and gas emissions. Moments of deciphering emissions data with activists, measuring atmospheric phenomena with institutions or simply listening to people talk about the weather surfaced unstable relations – mishearing and misinterpretation, denials and dismissals – of what might be counted as evidence or data needed to justify exposure or thresholds of toxicity. Using sonic ethnographic methods, I develop a concept of incoherence to explore atmospheric relation as pattern-making, and to show how wind interrupts legibility, narrative closure or measurable fact. With debris collected from rig sites, I made listening devices that trace wind's incoherences, recording their gestures as ways of figuring sensation. These devices evoke an ontopolitical problem of description and measurement as a commoning of concept, instead proposing forms that attend to instability.

Project

A sonic ethnography proposes means to listen-with phenomena as they occur.¹ It moves beyond assumptions that a recording device might pick up where attention left off. Instead, the recording device itself is questioned as an instrument of logics developed from 'the imperative to measure' (Serres 2018:ix).

Michel Serres theorizes this logic as the birth of physics. In his account, empiricism conflates 'the study of form with its relation to number (...)' (2018: ix). Sounding lines, for example, measure the depths of the sea, in units of fathoms. A lead weight is dropped from a boat and the line is measured. A fathom is the length of one arm, conforming a unit of measurement to the movement of an average body swimming. A sounding referred not to acoustic phenomena but to a navigable depth or inlet. Mechanization in the 19th century enabled echo sounding to electronically map the seafloor with sonar, wherein acoustic pulses are measured based on the time it takes for their return. Similarly, geophone technologies – used today to map geological strata – developed through practices of listening with volcanic vibrations. As Adam Bobbette writes of 19th century volcanologist Frank Perret's "volatile empiricisms," living in close proximity to eruptions fostered forms of measuring vibrations that included biting his bedpost, making devices to listen with rocks, and notating their motions.² These experiments changed "the significance of the body [...] as listening to vibrations in the earth became linked to new forms of drawing" (2022). The human, once shaped by its elemental milieu, is no longer 'made to the measure of the world' (Wynter 2015); rather, the world is made to its measures as technological inscriptions, classifications, and taxonomies.

As others have theorized,³ the limitations of a techno-utilitarian approach to environmental listening and monitoring in an era of ecocide urges reflexive attention to the sensory and affective dimensions of field recordings and their representations as data or archive. Emplacing these technologies in temporal connection with the elemental milieu they evolved to measure, I suggest that a problem of technoscientific abstraction lies less in "the forgetting of air" (Irigaray 1999) than a forgetting of sensation. I expand field recording practices

(phonography) with ethnographic approaches, using both figurative and documentary writing to evoke sound as sensation.

Sensation indexes what goes “unsounded” (Goodman 2019) and often remains “out of mind” (Zurita 2017). The intensity of a sunset, for example, or a whiff of rotten eggs, or the infrasonic vibrations of an earthquake indicate diffuse and atmospheric processes of oil and gas extraction. But their subtleties are often a node by which abstractions proliferate as failures of agreement. Elizabeth Povinelli notes the geontopolitics of such cases that, “changes in fog and wind are not usually registered in catastrophic events. They accumulate in a series of condensed and coordinated quasi-events. Most of these accumulate below technologically unmediated human modes of perception” (2016:136). This leaves out innumerable occurrences and means to sense patterns, like the diminishment of insects, but also ways of thinking about atmospheric processes in general – like the way a bee orbits a Clematis flower, or the heaviness of a raindrop, or textures of air in shifts of barometric pressure or humidity.

Moreover, the equations of fluid dynamics – a branch of hydraulic physics – describe fluid and atmospheric processes (including breathing and cloud formation) or viscous properties of matter such as colloids (Ingold and Simonetti 2021) yet also enable the design and engineering of extractive infrastructures. My project instead aims to develop ways of sensing wind's evasions of calculation and modeling through the making and listening with acoustic devices that neither produce certainties of data nor evidence that reinforces systems of containment, compliance and monitoring undergirding extractive logics; rather, as listening tools, they mark and notate wind's interference patterns in sensory relation, attuning to infrastructure's poetics (Larkin 2013). Following experimental sound compositions and listening scores, they propose methods that aim reflexive attention at the ways technologies, sensory modalities, and atmospheric processes co-constitute eventfulness as a space of indeterminacy, chance, and improvisatory change.

It becomes “a challenge to name the experience of the ephemeral and in-between” (Voegelin 2021:162). Making devices that listen-with wind as it occurs is a mode of intervening in assumptions that wind is in the way of a recording of insects, or somehow represents the experience of smoke, or fog. It is a mode of figuration. Writing sound, or the shape and texture of wind, shows how a concept “matters-forth” from its occurrences (Povinelli 2016:137). Listening with wind emplaces an event as relation among technology, element, object, flesh, time, others and their possible motions and relations. Incoherence is a mode of uncommoning atmospheric relation against consensus through legible forms. It locates ‘time’ and ‘sensibility’ and ‘the relation of the sensible with the intelligible’ in an ‘irreducible ambiguity’ that attends to concentrations of power in its dynamism (Serres 2018:xiii).

Listening with wind's occurrences in a field of prairie grasses at the edge of a dog park in West Texas, downwind of the oilfields of the Permian Basin, offers ways to think with incoherence as evasion and exposure. Listening, wind is sensed multiply, not only as a distributed form of elemental attunement but also in its ‘durational complexities’: as intensity or pressures, attenuations or frequencies (Yusoff 2017). Or a wind changes – from something soft and situated to an accumulation of force, a storm, or the unbreathability of sour gas emissions from a refinery. Listening with wind is a way of knowing in and of sound (Feld and

Brennis 2020; Peterson 2021). An infrasonic force, wind is relational and ordinary yet thrumming below a threshold of human audibility, heard or sensed by more-than-humans, some but not all or equally. Wind is what gets edited out in field recordings for interfering with the tech or obscuring a desired sound.

Incoherence describes a pattern of relation and its iterations over time. It is less a failure to form than a form of motion. Through listening, incoherence composes the atmospheric as a vague terrain of vibration and sensation, of chemical or daydream, where the perceiver is of and not outside it. Incoherence nudges attention to the instability of forms of narration, suggesting that an ethnographic shape is always contingent, uneasy, contestable or subject to change.⁴ Words fail to give things shape; the recording fails to record sensation. I remember the bits that do not cohere into mattering and aren't part of the story I'm telling. "I," too, is unstable.

I want to stay close to the sound and the sound of writing. I reach into details; wet earth is a scent emitted in the coordinates at 30.5780° N, 103.9069° W on Feb 11, 2022 at 12:03pm; the Midland Air Station describes the weather as "fair," and "sunny," at 71 degrees F, and the Davis Mountains air station— a DIY anemometer and thermometer on the lawn of a city commissioner's off-grid house near the Observatory— says the temp is 65 degrees F. I understand the weather to be normal for this time of year, looking at a graph drawn by the man who built the weather station. Out of heat, a breeze begins at the tops of cottonwood trees, making the motion of wiping a counter, the sound of high static in thin branches. Stillness, and then at some distance from the east coming toward the grove of mesquite that begins lower, where a sign is propped next to a windmill saying Watch for Rattlesnakes. And across the bushes only one single branch is barely waving, as if I was the one blowing on it. Some motion in the background branches of the pinyon pines and the flies rising up from them point to a single hawk feather, a downy one, lodged in the top of the bush and that's what's wavering, making the most effort, as the lower leaves seem to be what's affected most by what otherwise feels like a still day of little wind, in a place with relatively few trees as vegetation.

Exploring form as an antidote to 'exactitude' (Serres 2018:ix), I make sculptural listening devices for sounding wind's incoherences. Calling them 'sounding lines' — once used to measure ocean depth — they offer a conceptual hinge between sensation and technoscientific regimes. As devices that sound out patterns of movement, wind itself does not appear as a singular event but is rather, as poet Rosmarie Waldorp notes, "a site of occurrences" (2021). They resonate more than quantify, giving form not to fact but to ephemeral patterns and evasions. The tools are incomplete; they are site-specific archives of nothing, debris and traces of noise. They measure movement in their specificity but against result. They are difficult to photograph.

In the pauses of everyday life downwind of the oilfields, I began collecting rusted debris at oil sites and along ditches of endless highways. I trimmed mesquite to sculpt it into form. I tied hundreds of threads into knots along their branches and let the threads dangle. Then, I tied fragments into the string — artificial flowers blown up against the barbed wire at cemeteries, little green army men from Family Dollar, animal hair and rusted things from the parking lots of Dairy Queens and underneath a billboard that says "Thou Shalt Not Make Unto Thee Any Grave"; losing lottery tickets, to-do lists and diary pages. It passed the

time, or was a way of thinking about “oilfield trash,” something that was on the menu at a diner, a tray of tater tots and liquid cheese, a ground beef sauce and onions, served with sweet tea in mason jars. Oilfield trash is, like white trash, an epithet for workers living in its boom and bust economy.⁵ They are folded into the oilfield’s extractive logic as energy’s sacrifice zone.

Some of the rusted pieces I tied into the strings were heavy. I had to switch what rod held the rest of it. The mesquite couldn’t hold a pipe, for example. Only the sturdiest forms could manage a large accumulation of objects. I hung them in the park.

Each of the figures had a different resonance in the wind. The weight of what they carry determines a figure’s internal cohesion. The wind theorized itself in moments of sounding. They “sound out” the air, a fluid dynamics of atmospheric pressure, matter and motion. I recorded gestures they made on different days of different weather.

The recordings render turbulent encounters, sensations and affects of exposure as a mode of holding together incoherences in aleatory patterns of wind. Sound does the work of saying what the wind was doing that day. It is incidental to the duration of the recording. Mostly in the recordings is the sound of wind hitting the microphone, though sometimes you can hear the dog’s collar or my laughter, the scuff of shoes or the microphone pops from the wind.

Working from the recording device and its promises of fidelity, I listen with the ways wind traces its patterns. As ‘measurements,’ these tracings mimic the needle of a seismograph or dowsing pendulum, writing a spectrogram. I then use this as the basis of an interpretive score, performing from what the wind has said or made. I offer the evasive, misheard or miscalculated gesture as a listening score that dwells in opacity and irreproducibility of the event and what emerges from it. This is a method that is more than one and less than many; it is iterative, rather than definitive, it does not presume to know or even imagine a future, but argues for a process that sticks with a potential to go back, revise, start over, shift around, gather up or let go at variable scales and temporalities.

Wind occurs in minor events that are too quick to see as a whole – how it passes through grass and trees.

Thinking begins to drift.

Maybe they do not offer much to ethnographic staging, but as devices for thinking. A figure, a word moves something along – a syntax.

Making the figures is something to do. A thought occurs unremarkably. What occurs is incidental. It occurs later, walking the dog, or while washing the dishes, or chatting about something else at the bar. Listening with the recordings, these encounters feel precious; my thoughts are my own, I’m convinced of that, no one is reading my dreams or trapping me in theirs. As such, they move toward incoherence to do different kinds of work in their iterations. The object is not a thing, as an arrival or claim, but a point of departure understood by the possible shape things can take. At the same time, they become technological, a way of measuring time.

Knotting thread on a mesquite branch, I becomes she. Writing the sound of wind makes thinking incoherent and ephemeral. At the same time it allows hers to “reach the ultra-sonorous” (Lispector 2012:37) a place where the senses do not converge around a figure called “I” but spread across a felt zone, a listening zone, a depersonalized zone of reference where figures come and go as dense expressions in a field, folded along seams of contact. A figure might be the cottonwoods that had begun to bloom in the yard, the way the wind took to them. Or the man who decried their existence as invasive, but tolerated their presence for the same reason: The only good thing about a cottonwood is the sound of the wind blowing through it. Along the wind belt that extended from mid-Canada to West Texas it sounded the same, so she felt “at home,” whenever there was a cottonwood and wind, the ultra-sonorous extending even past its seismic or acoustic mirror to hit somewhere in a dream about it, a pain in her shoulder, her own incoherence maybe.

“It’s a “she” that speaks in me” (2012:65).

And the wind blows, incoherent, shaping the forms and rhythms of living.

Links

The link to the photos of the instrument-objects:
<https://atrace2.cargo.site/sounding-lines-a-vague-machine-of-no>

The link to the sound recordings:
<https://atrace2.cargo.site/details-in-the-air-etc->

Notes

1. see Ballestero’s *Listening to the Underground*; Peterson and Brennan’s *A Sonic Ethnography*; Wright’s *Listening After Nature*; Feld and Brenneis’ *Doing Anthropology in Sound*; and Porcello and colleagues’ *The Reorganization of the Sensory World*.
2. The advent and development of technologies for purposes of fossil fuel extraction and mining, wartime surveillance and rescue operations, and eventual nuclear testing suggest that listening with infrasound is part of the project of colonialism and industrial expansion. The aspirations of a humanism that might be “made to the measure of the world,” in Wynter’s formulation, critiquing and extending Aimé Césaire’s concept, are here interrupted in Western technological desires to both measure and be measured by empirical means and their abstractions.
3. For critical discussions of listening in the Anthropocene and field recording, see Wright’s *Listening After Nature*; Peterson and Brennan’s *A Sonic Ethnography: Listening to and with Climate Change*; Englemann’s *More-than-Human Affinitive Listening* and *Wind’s Animacies*. On the limitations of environmental monitoring with sensors, see Gabrys’ *How to Do Things with Sensors* and *Sensors and Sensing Practices*; Calvillo’s *Political Airs*; Tironi’s *Regimes of Perceptibility*. On the limitations or affordances of vibration see Goodman’s *Unsound*; and Kahn’s critique of vibration as an ontological position in *On Vibrations*.

4. See also Jean-Luc Nancy's (2007:41) formulation of listening, self, and time as "rhythm": "We should linger here for a long while on rhythm: it is nothing other than the time of time, the vibration of time itself in the stroke of a present that presents it by separating it from itself, freeing it from its simple stanza to make it into scansion (rise, raising of the foot that beats) and cadence (fall, passage into the pause). Thus, rhythm separates the succession of the linearity of the sequence or length of time: it bends time to give it to time itself, and it is in this way that it folds and unfolds a 'self'".
5. The oil and gas industry collects its own ethnographic details in magazines and museums, extolling the virtues of work on the rig. More than a job, the oilfield becomes an identity, a home and a way of life. See: *Oilfield Trash: a Personal Reminiscence* (in PBOG).

References Cited

- Ballestero, Andrea.
2023. "Learning to Listen to the Underground" *Sensate Journal*.
<https://sensatejournal.com/learning-to-listen-to-the-underground-2/>.
- Bobbette, Adam.
2022. "DMJ – the Sound of Magma: Geographies of Infrasound, Vibrating Bodies, and Representing the Earth." Drawingmatter.org.
<https://drawingmatter.org/dmj-the-sound-of-magma>.
- Calvillo, Nerea.
2018. "Political Airs: From Monitoring to Attuned Sensing Air Pollution." *Social Studies of Science* 48 (3): 372–88.
- Engelmann, Sasha.
2024. "Wind's Animacies." *Media+Environment*. 6 (2).

2015. "More-Than-Human Affinitive Listening." *Dialogues in Human Geography* 5 (1): 76–79.
- Feld, Steven and Donald Brennis.
2020. "Doing Anthropology in Sound." *American Ethnologist*. 31 (4): 461–474.
- Gabrys, Jennifer.
2019a. *How to Do Things with Sensors*. Minneapolis: University Of Minnesota Press.

2019b. "Sensors and Sensing Practices: Reworking Experience across Entities, Environments, and Technologies." *Science, Technology, & Human Values* 44 (5): 723–36.
- Goodman, Steve.
2019. *Unsound: Undead*. Urbanomic.

- Ingold, Tim, and Christian Simonetti.
2021. "Introducing Solid Fluids." *Theory, Culture & Society*, 39(2), 3-29.
- Irigaray, Luce.
1999. *The Forgetting of Air in Martin Heidegger*. Texas: University of Texas Press.
- Kahn, Douglas.
2013. *Earth Sound Earth Signal: Energies and Earth Magnitude in the Arts*. Berkeley: University Of California Press.
- Larkin, Brian.
2013. "The Poetics and Politics of Infrastructure." *Annual Review of Anthropology*. Vol. 42:327-343.
- Lispector, Clarice.
1978 [2012]. *A Breath of Life*. New York, New Directions.
- PBOG.
2018. "Oilfield Trash: A Personal Reminiscence - Permian Basin Oil and Gas Magazine." *Permian Basin Oil and Gas Magazine*, pboilandgasmagazine.com/oilfield-trash-a-personal-reminiscence.
- Peterson, Marina.
2021. "Moving Between: Thinking through Helium." *Liquid Blackness* 5 (1): 119–25.
- Peterson, Marina and Vicki L. Brennan.
2020. "A Sonic Ethnography: Listening to and with Climate Change." *Resonance* 1 (4): 371–75.
- Porcello, Thomas, Louise Meintjes, Ana Maria Ochoa, and David W. Samuels.
2010. "The Reorganization of the Sensory World." *Annual Review of Anthropology* 39 (1): 51–66.
- Povinelli, Elizabeth.
2016. *Geontologies: A Requiem to Late Liberalism*. Duke University Press.
- Serres, Michel.
2018. *The Birth of Physics*. Rowman & Littlefield.
- Tironi, Martin.
2017. "Regimes of Perceptibility and Cosmopolitical Sensing: The Earth and the Ontological Politics of Sensor Technologies." *Science as Culture*, 27(1), 131–137.

- Voegelin, Salomé.
2021. *Sonic Possible Worlds: Hearing the Continuum of Sound*. New York: Bloomsbury Academic.
- Waldorp, Rosmarie.
2021. "Between the Covers Rosmarie Waldrop Interview." *Tin House*, tinhouse.com/transcript/between-the-covers-rosmarie-waldrop-interview.
- Wright, Mark Peter.
2022. *Listening after Nature: Field Recording, Ecology, Critical Practice*. New York, Bloomsbury Academic.
- Yusoff, Kathryn.
2017. "Indeterminate Subjects, Irreducible Worlds: Two Economies of Indeterminacy." *Body and Society* 23 (3):75-101.
- Zurita, Maria de Lourdes Melo, Paul George Munro and Donna Houston.
2017. "Un-Earthing the Subterranean Anthropocene." *Area*, 50 (3): 298–305.

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