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The People's Cloud: A Sonospheric Investigation

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There's a universe of millions of people who are behind the scenes, programming and connecting, building connections and building computers that make all of this happen. But it's become a magical land.[1]

In Rebecca Solnit's collected memoirs of *A Field Guide to Getting Lost*, the ecologist Gary Paul Nabhan compares his children's perspective with adults upon encountering the Grand Canyon. Nabhan describes, "how much time adults spend scanning the landscape for picturesque panoramas and scenic overlooks. Whilst the kids were on their hands and knees, engaged with what was immediately before them, we adults travelled by abstraction".[2] Solnit notes how for a child, everything is immediate, instant and direct, "[w]hatever is absent is impossible, irretrievable, unreachable".[3] Everything is foreground. As humans become increasingly aware of the scale of phenomena in the universe, it begins to feel increasingly difficult to understand through observation that which is most immediately in front of us; we begin to abstract to make sense of the background and dismiss that which is in the foreground.

Cloud computing, the delivery of computing services—servers, storage, databases, networking, software, analytics, and more—over the Internet, operates simultaneously at the level of foreground and abstraction. A big, durable, well-functioning system, the Cloud encompasses "hardware and software, spectacular installations and imperceptible processes, synthetic objects and human personnel, rural and urban environments".[4] It is precisely this complexity that encourages a muting of the senses: physical yet abstracted; imperceptible yet spectacular. The Cloud is not reducible to a single frame; it is intangible in its entirety to any one person. Cloud infrastructure becomes foreground only when something goes wrong; a network carrier goes down due to power failure, or an undersea fibre optic cable is accidently cut by a boats anchor at sea.[5]

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[1] Winterson, in Parker, *The People's Cloud*
[2] Nabhan in Solnit, *A Field Guide to Getting Lost*, 39.
[3] Solnit, 39.
[4] Parks and Starosielski, *Signal Traffic*, 5.
[5] Johnston, "British Airways Cancels All Flights from Gatwick and Heathrow Due to IT Failure"; Brodkin, "Undersea Cable Damage Wipes out Most Internet Access in Tonga Islands".

73 Matt Parker, still from *The People's Cloud*

A study of media infrastructures is necessary to emphasise the materiality and physicality of hardware, localisation and distribution systems through which digital media signals—from the Cloud—are transmitted. Data centres, which act as central nodes, junctions, storage facilities and processing hubs of the Cloud exist "at the border between the dematerialized space of data and the resolutely physical buildings they occupy".[6] Technologies of the Cloud, epitomise this nexus crossover where "a consumer may think of 'cloud' as the cloud drive on his phone; [...] a software developer may use 'cloud' to mean 'software as a service' [...], while a network engineer may continue to use 'cloud' to mean a 'network of networks'".[7] This confusion over the abstract terminology of network infrastructures is what brings my research into the site of infrastructure itself, to recalibrate crosstalk between definitions of 'cloud' from position of user, software engineer, and infrastructure engineer.

As an artist, I am interested in listening. I listen to the infrastructures of the Cloud and work to foreground their abstraction as both a physical and cultural manifestation. The project *The People's Cloud*, is an exercise in Cloud receptivity.[8] I combine the visual 'reveal' of the underlying material infrastructure of the Cloud with a sensory multimodal approach that considers the relations between people, things and the space in which the Cloud operates. It is an approach towards studying Cloud infrastructures which is receptive to a whole suite of registers and resonances concerned with the feelings, moods and connections between bodies and things encountered in the Cloud. I call this form of practice-based research a sonospheric investigation. The sonospheric investigation is as much research methodology as it is a research disposition, an approach towards empathic, resonating encounters in the world. It engages with vibratory flows through a collection of attentive methods of listening that make up what I call the sonopalette; blending registers and offering mixed modes of representation; presencing and bringing into being, sounds, vibrations, noises and affective vibratory impulses. It offers an opportunity to attempt to listen to the organic, nonorganic, human, and nonhuman without removing that process from the multiple cultural vectors also at play, as

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[6] Hu, *A Prehistory of the Cloud*, 81.
[7] Hu, xxvi.
[8] Parker, *The People's Cloud*.

such acknowledging the inherent politics of listening. Attending to the sonic and sonospheric traces of the Cloud enables a recalibration between space, data and affect. Noise in the Cloud is my primary mode of research. This noise is both the acoustic by-product of Cloud infrastructure—industrial scale HVAC and power generation—and its social, representational, and at times more-than-representational resonance.

74 Matt Parker, still from *The People's Cloud*

Meteorological clouds are ephemeral forms that amass and disperse in the sky according to observable physical laws. Infrastructures of the Cloud are predicated by a cultural metaphor of cloud-like ephemerality, a directly political act to obfuscate their material reality. Data centres—the material sites of the Cloud—virtually graft the "enclosure of the Internet onto the physical spaces of daily life".[9] As an exponentially growing platform, they "loom on the landscape like depopulated afterimages of industrial-era factories, inhabited not by workers, inmates, or patients, but by the combined data doubles of all of them".[10] How might we challenge this invisible structure of power? We can understand the Cloud as a historical object, whose story is largely unwritten on both the past and future. We can listen to the Cloud through the testimony of space, aural architecture, oral discussion, and through the vibratory force of human, non-human, and more-than-human intra-relationships with the machine. We can listen sonospherically to the Cloud.

The People's Cloud exists as a collection of short-form documentary videos, where access was granted to interview a number of senior industry representatives from within the Cloud infrastructure industry; to listen to their stories, views and concerns, about an industry that impacts nearly everyone on the planet, but few, if any, understand. The project navigates both within and outside the Cloud's critical nodes and as such sits between documentary and art, and perhaps fits into neither neatly. *The People's Cloud (Original Soundtrack)*[11] is a combination of unedited field recordings, and heavily processed electroacoustic compositions, with all recorded material sourced on location across some of Europe's key Cloud infrastructure sites. The soundtrack acts both complementary and independently to the

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[9] Andrejevic, "Surveillance in the Digital Enclosure", 309.
[10] Andrejevic, 310.
[11] Parker, *The People's Cloud (Original Soundtrack)*.

documentary series, generating atmospheric presence throughout the videos but also presencing the spatial and experiential qualities of Cloud ecologies. It forms bridges between the mystical, imagined, black-boxed, natural, and technological environments resonating throughout the Cloud. The soundtrack removes human conversation from the work as heard in the documentary series, foregrounding the nonhuman energies of Cloud infrastructure; its soundscape, and the nodal connections between data, space and environment.

75 Matt Parker, still from *The People's Cloud*

This project began following a journey to a small data centre in the West Midlands of the UK with a small handheld sound recorder and a phone. The rush of air and white-noise as the air-sealed security doors opened was such an overwhelming and intense experience, and one which I have subsequently encountered many times in the production of this project. Recording this intensive, wired, whirring and claustrophobic box, I felt like maybe I could begin to sense, feel, and hear the material presence of the otherwise abstracted existence of the Cloud. Data centres, are the central and critical nodes of Internet infrastructure. They situate the Cloud within racks of countless semiconductors, fibre optic cables and magnetic storage platters. They foreground the abstraction of the Cloud and make it material.

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