

The God's Eye and The Buffalo's Breath: Seeing and Hearing Web-Based Sound Maps

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Abstract

Online sound maps have been uploaded for nearly a decade and a half and they continue to proliferate. This paper questions the specific abstractions that are projected through these online map technologies, the “little white lies” that they tell. It explores how the ‘view from above’ that these maps impel us to adopt involves a charged perspective, one that is framed in a particular institutional mesh of delivery and access, that is energised by the suspicion that it involves a ‘watching machine’ that has long been plugged into a ‘war machine.’ Paradoxically, the very height that this view depends upon obscures the urban vertical, that reaches below ground as well as above and which might be a dimension of increasing importance.

When the base layer of the online map is re-assembled for a sonic geography, something strange can happen: the apparently inherent abstractions of the ‘view from above’ can be partially disrupted: the drifting eye-ball can find itself a body, the slippery, icy gaze can be roughened by friction, the high can be brought low, relations can be established between stuff and people and animals and weather – the God's Eye can be misted by the buffalo's breath. What was once invisible can be rendered audible perhaps because sound might always already be a cartography. And yet, that cartographic potential still seems – as it does in the visual register – to avert itself from the elevations and declinations of the vertical.

Keywords:

“The following Generations, who were not so fond of the Study of Cartography as their Forebears had been, saw that that vast map was Useless, and not without some Pitilessness was it, that they delivered it up to the Inclemencies of Sun and Winters”

Jorge Luis Borges, *On Exactitude In Science*.

“Head down, the transparency of the ether, long-distance vision,”

Paul Virilio, *War and Cinema*.

“The landscape begins to look more like a three-dimensional map than a rustic garden. Aerial photography and air transportation bring into view the surface features of this shifting world of perspectives. The rational structures of buildings disappear into irrational disguises and are pitched into optical illusions. The world seen from the air is abstract and illusive,”

Robert Smithson “Aerial Art”

1. The Route Ahead

Maps abstract, of course they do. That is their function¹. This paper is about the specific abstractions that are projected through the online map. It seeks to explore how the ‘view from

1. “A good map tells a multitude of little white lies; it suppresses truth to help the user see what needs to be seen. Reality is three-dimensional, rich in detail, and far too factual to allow a complete yet uncluttered two-dimensional graphic scale model. Indeed, a map that did not generalize would be useless. But the value of a map depends on how well its generalized geometry and generalized content reflect a chosen aspect of reality”, Mark Monmonier *How To Lie With Maps* (Chicago: University of Chicago Press, 1996), p. 25

above'that these maps impel us to adopt involves a charged perspective, one that is framed in a particular institutional mesh of delivery and access, that is energised by the suspicion that it involves a 'watching machine' that has long been plugged into a 'war machine' and that, paradoxically, the very height that this view depends upon obscures the urban vertical, a dimension of increasing importance.

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2. Mapping The Sound Maps

There are pegs that are perforated and pegs enclosing dots, there are circles in blue and red and green, there are triangles, there are inert markers and ones that animate with a throb or a spin or which open and close as your mouse draws closer, there is an arcane symbology of graphic forms, representations of the ear's pinna, of silhouetted recordists, of closed-capsule headphones, of musical notes, of wave forms. Activating an icon might trigger a preloaded recording or cue access to a live stream; your speakers might receive a very short burst of a signal or the auditory complexities might be given the space to unfold over a lengthier duration; sounds can be deployed with sequential strictness or the user can be left to set off several simultaneously; the sound might enter the world nude or be adorned with a text that is either brusquely explanatory or more decoratively discursive; there might be a photograph.

2. "Buffalo Breath" is the label for a node on an online sound map I created during the Viso Come Territorio residency in Southern Italy. This map was generously enabled through Peter Cusack's favouritesounds.org. My map was written about in Salome Voegelin's *Sonic Possible Worlds* (London: Bloomsbury, 2014), pp. 30 – 36

These online sound maps reflect a continuum of creative conditions that span from sole authorship through editorial moderation to the most open and spontaneous models of crowd-sourcing; some maps are discrete expressions of time-bounded projects while others represent the accumulation of many year's worth of collaborative enterprise. The web map can locate its boundaries within a circumscribed territory or range far and wide; it can distinguish itself through a concentration on specific thematic concerns or adopt a more ecumenical approach; it can encourage remixing or be more protective of the purity of its holdings.

In the time that has elapsed since my earliest encounters with online sound maps nearly a decade and a half ago things have changed and things have remained the same. Icons have been shuffled and bits have got deeper but the articulations between the form of content and the form of expression and the forces these forms mediate remain surprisingly stable. This stability attracts more attention to itself because it has endured in the face of both a relatively substantial proliferation of different web sound maps and a concomitant shift in climactic conditions online that is measurable in technologies, user numbers and user behaviour³. The pleasures of engaging with an online sound map have similarly held their own for me and hours can easily be lost in jumping from peg to triangle to circle to dot to icon.

I have refrained from identifying specific sound maps because I want to focus on a shared quality that persists throughout them all, almost without exception.

3. Universal Textures

While the screens may be different in size and sharpness, what they display draws out a remarkable similarity, the earth tiled in universal textures, patched like mosaic tesserae⁴.

3. Online maps in general have expanded in number and significance. Sebastien Caquard claims that "maps have recently become the main interface for accessing data over the internet" in his article "Cartography I: Mapping narrative cartography" in *Progress in Human Geography* 37 (1), 2013, p. 139

4. Clement Valla's 2012 project "The Universal Texture" brings to the surface a compelling haul of distorted screengrabs that reveal in dripping detail the submarine algorithmic operations involved in rendering Google Earth's relief projections of landscape and architecture. See <http://rhizome.org/editorial/2012/jul/31/universal-texture/>

Everything is arranged in simpler shapes and softer hues: the seas look washed out, the wilds seem cultivated, the cities' streets aligned to the straight and narrow; everything is flat, every incline smoothed, every depression filled: there are no clouds.

Google might have seemed a good place to start and yet its ubiquity is a particular one. A colossal presence that casts a shadow to match, falling as much on the distinctiveness of the company's 'don't be evil' support for folding bikes and employees' one day a week research projects as it does on questions of national tax avoidance, monopolisation and monetisation of searchable knowledge, capitulation with Chinese data laws and the Street View scandals of the initially unpixelated faces and the netting of shoals of data swimming free from domestic wireless hotspots.

Whether Google, Microsoft's Bing Maps, MetaMap, Meipi, Géoportail or OpenStreetMap, the entry-level base layers ultimately deliver a complex blend of cartographic material derived from remote sensing systems and aerial photography and do so within an institutional environment that that "favours free trade, an open market and privately funded research and development (R&D). It requires a well-funded military-industrial complex that develops defence technology."⁵ Whatever creative adaptations are made to these base-layers, "it is important to recognize that they do so within a production environment where their emancipatory potential is always constrained by institutional forces that govern the production, storage and provision of geo-spatial data"⁶.

However intoxicating the resources made available through Geographical Information Systems (GIS) such as web sound maps, these institutional forces and institutional environments that structure their delivery demand more sober scrutiny. Parallel attention needs also to be devoted to the mechanisms of access. *The Economist* magazine's 1995 claim that "half the world's population has never made a phone call" may no longer be credible – if ever indeed it was⁷ – yet the distribution and cost of high speed internet remains far from equal. Jason Farman's 2010 article, for example, distinguished DSL in Japan as 6 cents per 100 Kilo-bytes per second – a price that amounted to 0.002 of the average monthly salary – from the cost for the same data transfer rates in Kenya at twice the average monthly salary.⁸

5. Micky Lee, "A Political Economic Critique of Google Maps and Google Earth", *Information, Communication and Society*, 13 (6), 2010, p. 910

6. SuneelJethani and Dale Leorke "Ideology, obsolescence and preservation in digital mapping and locative art", *The International Communication Gazette* 75 (5 – 6), 2013 p. 488

7. <http://answers.google.com/answers/main?cmd=threadview&id=20411>

8. Jason Farman, "Mapping The Digital Empire: Google Earth and the process of postmodern cartography", *New Media and Society* 12 (6), 2010, p. 869.

If the distribution of uploaded nodes on the online sound maps makes these disparities of digital access palpitate, this inequality shouldn't disguise the distortions that are encoded into the base layer itself. The base maps are never faithful analogues of geomorphology nor indexical renditions of the built environment: they are the multitude of little white lies (and some larger untruths) that Mark Monmonier told us about; they inflect a 'politics of ontology'⁹ that Martin Dodge and Robin Kitchen attribute to online cartography.

I want to zoom out from these uncomfortably sharp details of delivery, access and ontological constitutions and consider instead how the apparatus of the standard web map interpellates its user. In what follows, I'll scale back and appreciate how the conventional interface hails us with a specific perceptual subjectivity that I'll call the God's Eye View: hovering, weightless, with neither shadow nor friction, looking down¹⁰.

The floating, high altitude perspective is not devoid of lyrical resonance¹¹. Staring out of the cockpit permitted Antoine Saint-Exupery an observation post for ambiguous reverie: "from up there the earth had looked bare and dead; but as the plane loses altitude, it robs itself in colours"¹². On a later journey he was afforded "a dark night, with only occasional scattered lights glittering like stars on the plain. Each one, in that ocean of shadows, was a sign of the miracle of consciousness... But among these living stars, how many closed windows, how many extinct stars, how many sleeping men"¹³. On still another flight, through the different glass of Christmas Eve, the crew of Apollo 8 recorded their fourth orbit of the moon with the 'earthrise' photograph that "was said to have been a key part of the start of the new environmental awareness movement"¹⁴ and to have been "imbued with a politics that subordinated the 'notional boundaries of sovereign power in favor of swirling clouds that do not respect the lines configured by human conquest or legislation'"¹⁵.

9. "As such, the politics of ontology relating to the selective interests of capitalist accumulation or militaristic agendas that underpin the ontological constitution of state-produced maps lies beyond the map itself. What, for example, is the ontological constitution of Google Maps? It clearly has one and it certainly arose from some debate within the company between GI experts, database specialists, interface designers, and business managers, along with the various contracted data suppliers, concerning what about the world should be mapped and how it should be presented", Martin Dodge and Robin Kitchen "Crowd-Sourced Cartography: Mapping Experience And Knowledge", *Environment and Planning A*, 2013: 45, pp. 19 – 36

10. For a philosophical perspective on the "God's Eye View" see Hilary Puttnam "Realism With A Human Face" in ed. James Conant, *Realism With A Human Face* (Cambridge, Mass.: Harvard University Press, 1992)

11. Roland Barthes claimed that the literary instantiation of this panorama from on high begins with Victor Hugo's *Notre Dame De Paris*, where "The bird's-eye-view, which each visitor to the Tower can assume in an instant for his own, gives us the world to read and not only to perceive...to perceive Paris from above is infallibly to imagine a history..." *The Eiffel Tower and Other Mythologies*, (New York: Farrar, Strauss and Giroux, Inc., 1979), p. 11

12. Antoine Saint-Exupery, *Southern Mail/ Night Flight* (London: Penguin, 2000) p. 21

13. 'Prologue' to *Wind, Sand and Stars* (London: Penguin, 2000) p. 9

14. Farman, op cit. p. 869

15. Sheila Janasoff cited in RoopaliPhadke "Defending Place in the Google Earth Age", *Ethics, Place & Environment: A Journal of Philosophy & Geography* 13: 3, 2010, p. 267

It is not unexpected that the philosopher Paul Virilio manages to unearth gloomier renditions of the aerial view from both Saint-Ex¹⁶ and a peering astronaut.¹⁷ Not unexpected, because for Virilio, the airborne vantage, the one which articulates us when we log onto a web map, would be part and parcel of the “infiltration of the military’s movements into daily life,”¹⁸ understood as an internalised perspective that is engineered by a ‘watching machine’ that is twinned to the ‘war machine. “[F]rom the original watch-tower through the anchored balloon to the reconnaissance aircraft and remote-sensing satellites, one and the same function has been indefinitely repeated, the eye’s function being the function of a weapon”.¹⁹

While the top-down view has other origins – religious panoramas, Hugo’s Paris, Nadar’s balloon photography, Barthes’ Eiffel Tower – this military-image nexus identified by Virilio is neither a metaphor nor a coincidence but a literal consequence of the history of remote-sensing technologies and the abrogation of state budgets to defence spending. It is an uncomfortable connection that, for me at least, is tightened with each news package that includes helicopter surveillance footage, each fictional account that has the darkened war room lit by screens glowing with live satellite links.

The notion of a God’s Eye View has come to be rendered in the “popular imagination [as] myopic and sometimes malign”²⁰ and as a short-hand for our panoptic surveillance society. This conventional definition ignores other interpretative genealogies such as the one developed by David Lyon, where to come under heaven’s sight did not necessarily mean admonishment. Yet the high-altitude perspective that is stubbornly there for me whenever I click onto a web-based sound map begins with the secular “view from above” that Michel De Certeau also encountered on the 110th Floor of the World Trade Centre. This is a view that, at first at least, renders space abstract, diminishes its complexity, for “[o]ne’s body is no longer clasped by the streets.... Nor possessed, whether as player or played, by the rumble of so many differences. The city’s agitation is momentarily arrested by vision. The gigantic mass

16. “All I can see on the vertical is curios from another age, beneath clear untrembling glass. I lean over crystal frames in a museum; I tower above a great sparkling pane, the great pane of my cockpit. Below are men – protozoa on microscope slide ... I am an icy scientist, and for me their war is a laboratory experiment”, Antoine Saint Exupery, “Pilote de Guerre”, cited in Paul Virilio *War and Cinema: The Logistics of Perception* (London: Verso), p. 75

17. “What I felt personally was like going back to, or having a vision of, the village where you were born. *You don’t want to live there any more* because you’ve grown up and moved away and now you’d rather live the life of the city. But it moves you as ‘Mother Earth’; *you just know you wouldn’t want to go back and live with her*” Paul Virilio *Open Sky* (London: Verso, 1997) p. 97

18. Paul Virilio *Popular Defense and Ecological Struggles* (New York: Semiotext(e), 1990) p. 233

19. Virilio *War and Cinema* p. 3

20. David Lyon “Surveillance and the Eye of God” *Studies in Christian Ethics* 27 (1), 2014, p. 25

is immobilised before the eyes [and the] ordinary practitioners of the city live ‘down below’, below the thresholds at which visibility begins”.²¹

4. Vertical City

This view from above is a strange thing. It depends on altitude, on height, on the axis of the vertical but it paradoxically obscures that very dimension from its lofty scope. It is like Marshall McLuhan’s parable of the fish that can know nothing of the water it swims in – the view from on high is ignorant of its own height. This blind spot in the web map means that we are turned aside from navigating anything that takes place at any elevation from the surface of the earth, both above and below contour zero.

This optical deflection might be important because whether or not we physically ascend the city’s upper levels to look down ourselves, the view from above has become a generalised perspective, a perspective which coordinates ‘verticality’ as the key axis of the urban environment. The emphasis on verticality, at least according to Henri Lefebvre, tends to produce homogeneity: to the extent that an edifice is constructed with upward momentum, it abstracts from the local specificity of the territory at its base. “Verticality, and the independence of volumes with respect to the original land and its peculiarities are, precisely, produced”.²²

It is not just that verticality represents the *espace conçu* through which the technocrats negotiate the territory that we go on to inhabit but that the vertical continuum is where things happen. And they happen in zones excluded from the top-down orientation of the web map. The deep underground of the city, its meshwork of utilities and transport systems, lost rivers, demolished buildings, storage facilities, domestic and industrial waste, the dead, government bunkers, the subterranean lives depicted in the documentary *Dark Days*²³. The heights of urban prestige, those “placards of prosperity and success” identified by Alfred

21. Michel de Certeau *The Practice of Everyday Life* (Berkeley and Los Angeles, University of California Press, 1987) pp. 91–93

22. Henri Lefebvre *The Production of Space* (Oxford: Blackwells, 1991) p. 337

23. *Dark Days*, dir. Marc Singer, Picture Farm, 2000.

Bosson, one of the pioneers of skyscraper design;²⁴ the “crystal palaces” and “crystal edifices” that, though “beautiful and lofty”, Dostoevsky saw in *Notes From Underground* as the architectural equivalent of the “the full triumph of Baal, the ultimate organisation of the anthill”²⁵.

In his brilliant book *Explore Everything: Place-Hacking The City*, Bradley L. Garrett lets us accompany him into the invisible reaches of the deep and the high, unearthing the sense that “[w]hile the horizontal sprawl tangibly affects us, we often feel out of touch with the vertical sprawl because tall buildings are built for the bankers, businessmen, advertisers, marketers, media, and increasingly, ‘tech people’ – precisely the groups that create and maintain the spectacle ... Increasingly the vertical city is about security from the insecurities of street level.”²⁶

5. Gone To Ground

Certain environmental sound practices have burrowed into the vertical or scaled its heights but given the vast swathes of city space that are constructed above and below ground level, it is remarkable how little auditory attention has been devoted to these zones of activity. The problematic notion of the ‘acoustic horizon’ has certainly been extended but at the expense of a parallel exploration of the perpendicular axis. The orientation of the top-down sound map itself exaggerates this impression since it represents the icons, dots or pegs as if they were strung out on an atopographic plane, aligned on an endless salt-flat stretched to a blistered infinity. Overlays that visually represent terrain through polygon shading can be switched on or off but the sound symbols hover on unperturbed, neither shifting in their scale, nor tilting in accord with any gravity; floating as we, the user, float above them, encouraged to maintain our high altitude perspective.

It is as almost as if sight has won again and the weighty visual inheritance of the map has conspired – even when it has been repurposed towards the heard world – to flatten

24. Dennis Sharp and Peter Wyde ‘Alfred Bosson and the American Skyscraper’ in *Architectural Association Quarterly*, Jan–June 1982, Vol. 13, No. 2–3, p. 27

25. See Angus Carlyle “Beneath Ground” in eds. Nick Barley and Ally Ireson, *City Levels* (London: Birkhauser, 2000) pp. 96-115

26. Bradley L. Garrett *Explore Everything: Place-Hacking The City* (London, Verso: 2013), p. 222

sound into a grid of surface and source. And yet, as I said in the introduction to this essay, when sound infiltrates the online map, the God's Eye view – elsewhere that “omnipotent, instantaneous, disembodied, all-possessing eye”²⁷ – starts to become distracted, to lose its certainties.

Part of the reason for this is that screens pock-marked with craters of recorded sound contradict any implication of lofty height to be derived from the geomap interface itself; these acoustic hotspots counter with what is evidentially terrestrial, with the distinct huggger-muggger of De Certeau's ‘down below.’ Moreover, it is harder for a sense of disembodiment to blithely persist when recordings themselves intrinsically account for a human presence; ideally, it should be the soft but perceptible vibrations from the recordist's breath or the rubbing fabric of their clothes but at the very least we might hear the receding and careful backward paces of someone ‘cabling off’ a microphone. Further still, sound maps, especially those which are crowd-sourced or collaborative, raise the subjective and fragmentary in tension with any ontological constitution towards the all-encompassing and objective that may otherwise radiate outwards from an online map.

6. The Onto-Sonic-Cartographic?

Levi R. Bryant has recently opened up a promising line of inquiry into what he calls the onto-cartographic, inviting a recalibration of map-making towards “‘stuff’ or ‘physicality’ or ‘material agencies’”, that is guided by the conviction that “we can't fully understand why social ecologies take the form they do without taking into account the role played by non-human agencies in constructing these assemblages”²⁸. The potential to map the forces exerted by climatic change, disease, animal migrations and extinctions, resource depletion and pollution and concrete economic relations sounds as laudable as his notions of ‘modal maps’(that project possible futures) and vector maps (that chart the destinies of social ecologies assemblages left to their own devices). Yet it is disappointing that Bryant's maps turn out to be

27. Simon Sadler *The Situationist City* (London: MIT Press, 1999) p. 25

28. Levi R. Bryant *Onto-Cartography: An Ontology of Machines and Media* (Edinburgh University Press, 2014), p. 253

what you and I would call books – inspiring, catalytic, books, but books nonetheless. Equally frustrating is the sense left as you turn the very last page that Bryant’s statement of his speculative realist enterprise has involved such an extensive polishing of his methodological glasses that time has run out for any chance to look through them and attempt anything of an application.

Environmental sound practices are already close to invoking this onto-cartographic. They may not obsessively engage with the hidden vertical – which may be little more than my own obsession – but they do reveal the stuff of life and non-life, the dynamic interactions of human and non-human, of the organic and inorganic as the temporal reels out. The online sound map is one agency through which the invisible forces of the city are brought down to earth and into hearing range but there are other tactical interventions at our disposal. Performative sound-walking with or without popping balloons, a singing voice or an ambient voice. Dialogic listening spurred by the imperatives of activist intent or by the desire to triangulate the sonic ways of knowing place. Affective attentiveness to what goes on behind the windows and walls, to the domestic beyond the architectural façade; intensified sensitivity to magnetic fluxes, to the internal vibrancy of matter, to shifts in heat, in wetness and wind, to the racket of the cicada and the buffalo’s breath, to the dangerous (however visibly innocuous) and to the precarious (in whatever the language it speaks).

Maybe this isn’t the onto-cartographic, but, at the risk of the self-congratulatory, it also absolutely does not involve any “disembodied master subject ... seeing everything from nowhere”²⁹. Our years of sonic exploration might ultimately constitute a collective counter-mapping that makes audible that which struggles to be seen as visible.

29. Donna Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature*, (London: Free Association Books, 1991) p. 189