Breathable for Whom? Air Quality in the Geopolitical Arena

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(Preamble)

Hello, my name is Lucy. I am a philosophy graduate and yoga teacher. Here at the Royal College of Art, I have been researching the relationship that we humans have with the atmospheres we inhabit. In a nutshell, my thesis is about making the air we breathe personal and political using maps.

In the Royal College's degree show this week, I merely offer a breathing space. Visitors can rest on my late grandmother's bench and listen to a performance of 50 yogic breathing techniques. If you visit the installation today, I hope you get to experience your own breathing for the scientific miracle it is.

There is a clear link between my research and the artworks or 'heartworks' of Sofie Layton, our previous speaker. Sofie's cutaway sculpture of the human heart forms a kind of fretwork screen through which my own installation is visible. There is poetry between our practices. Both blood and air are lifelines in their own way, but air is of course less dense and can transcend our bodies, connecting us with atmosphere.

For my contribution to today's symposium, I would like to read you a repurposed passage from my MRes thesis. In the extract, I discuss the political problem of communicating air pollution data to a diverse populace of breathers. So the title of today's talk is: 'Breathability for Whom? Air Quality in the Geopolitical Arena'.

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Airspaces – atmospheres – can be weathered and differentiated according to air's 'breathability', which is a possible translation of Luce Irigaray's 'valeur respirable' – literally 'breathable value' (1983, 13). Breathability refers to how healthy or not air is to breathe. Often the term 'quality' – as in 'air quality' – is used to express the same idea. Yet I argue that 'quality' in this context acts as a euphemism to gloss over the lived and breathed effects of air pollution. There are three geopolitical points to raise here.

First, qualifications of the breathability of air are being made at a time when human lungs are constantly exposed to the material flows of transport, industry and other polluting activities. At the time of writing this talk, nine out of ten people worldwide are inhaling polluted air (WHO). So the inevitable 'acceleration of urban development' has already changed the 'aerial and atmospheric matter within which urban inhabitants must live', writes Human Geographer Peter Adey (2013, 299). Human activity is the main influencer of climate and environment. This is the defining condition of the anthropocene, our current geological era. Air quality indices therefore tend to start from a context of accepting that most of us are always already exposed to airborne contamination. In short, inhaling polluted air is normalised.

Second, in geographic regions with more pollution, authorities may strategically set their criteria for 'clean air' lower than recommendations from the World Health Organization (WHO) (Choy 2012, 32). Given that we are always already exposed to contamination, and have lived with industrialisation for decades, there is some leeway about what 'clean air' is like to breathe or what clean air breathes like. This brings us on to point three.

Third, when authorities decide upon air quality criteria, there is the question of acceptability or breathability for whom? For instance, do standards reflect pollution levels that adult lungs dwelling in elite urban zones and well-aired offices can withstand, or do they take into account more vulnerable lungs belonging to children, the elderly, and those of lower socioeconomic status (not to mention the growing and significant population with respiratory preconditions)? (See Kurt et al. 2016.)

These three grey areas – contamination as a given, intra-state standardisation of air's supposed breathability, and ambiguity about which breathers are being protected – mean that the category of air 'quality' becomes less objective than it initially appears at face value. Indeed, in the words of Anthropologist Tim Choy, indices of the breathability of air can and do act as an 'aesthetic technology' to 'manage the public perception of risk' (2012, 33).

It is not hard to see that governing bodies would, for reasons of maintaining popularity, resist releasing damning data on dangerously toxic air under their watch. The same can be said for private corporations. Let's take, for example, the Volkswagen scandal (epa.gov). The vehicle manufacturer, which was caught cheating emissions tests, knew too well the popularity stakes of clean air narratives. Leaders of governments and businesses are concerned about the state of their air because it reflects badly on them. So they redefine 'air quality' and institute it within their own political and commercial narratives of progress.

I have outlined three geopolitical motives that impact the public perception of air quality; now let us examine how indices are implemented in practice. I shall use the website of the London Air Quality Network as a local example. London Air is a top-down, centralised data platform provided by the Environmental Research Group at King's College London. The website provides 'information for the public, for policy makers, and for scientists' (London Air).

London Air is a techno-scientific index of air quality. That is, it uses specially calibrated technological instruments to conduct an indefinite scientific experiment. Tens of remote sensors, which are geographically distributed across urban areas, have been set up to monitor three pollutants: Nitrogen Dioxide (NO_2), Ozone (O_3), and Particles (PM10 and PM2.5).

Findings from these sensors are primarily evaluated according to pre-determined thresholds of breathability on a 13-point scale from 'Low (1-3)' to 'Very High (10)'. The findings from remote sensors are amalgamated to present one graspable 'forecast' or Air Pollution Index (API). Note that there is no 'Very Low' on this 13-point scale. Below this gradation, data is presumed to be off the scale and 'Limited' or non-existent, proof that the Nowcast expects air pollution to be always already detectable.

A use case for open-source data like London Air is that members of the public can navigate through urban spaces via routes which are less polluted on the day in question. This capability is especially important for those with respiratory conditions that are sensitive to pollution spikes.

Indeed, London Air's cartographic display of data are modelled on meteorological forecasts, creating a sense of familiarity for users who intuitively know how to interpret the information and can adapt plans in response, just like they would respond in 'agentic ways' towards weather (Vannini et al. 2012, 377). To paraphrase ethnographer Philip Vannini, as pollution moves, we move.

Although it is important to forewarn the public about pollution episodes, it does not solve the problem of air pollution, which will affect the most vulnerable. After all, many people do not have the choice to relocate: their homes and workplaces are in the contaminated zones and they cannot access the urban spaces where clean air has been invisibly commoditised. So, while indices of air pollution can and do draw public attention to unhealthy air and create that space for policy intervention, at the same time policy makers are still having to decide which bodies 'gain access to breathable air, to life, and which bodies do not', states Political Geographer Marjin Nieuwenhuis (2018, 80).

As Jussi Parikka puts it, 'informationally observed ways', atmospheric pollution 'cuts and divides insides and outsides, breathable and polluted spaces' (2017, 5). Air pollution maps graphically demarcate divisions between, and fluctuations within, assessments of air breathability, with existential implications for breathers. These weighty and weighted judgements implicitly condemn or affirm the regulation of polluting processes, attributable to those in power. On an individual scale, airspaces may be perceived as less or more breathable. Yet these perceptions occur within a global context in which air pollution is now accepted as the norm.

I would like to offer up the following questions for panel discussion:

Is air quality air's qualities?
For example, is air bad because it breathes badly?

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