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## COMMENTARY

# Breathing the City: Aerial Imaginations of the Urban in Northern India

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### Abstract

*How do airy materials constitute the urban? This is an anthropological question that has been of interest to me as I teach in a university campus in Northern India. Surrounded by agricultural fields and national highways, the campus is at least 60 km from the city of Delhi—infamous as the most polluted place in the world. My ability to notice how air pollution constituted Delhi peaked during a lecture with undergraduate students in late October 2019, when I was informed that they were being forced to sit in the bad air in my classroom because the student body's request to cancel classes on account of air pollution had been denied. This moment has remained etched in my memory as it led to a long conversation in class about what it means to live with air through breath. Since Shiv Nadar Institution of Eminence is a residential university, I wondered how air quality was constituting how students related to living on campus. In acknowledging the agentive quality of air, I use this vignette and the conversation that followed to think through how air simultaneously constitutes the urban/rural divide and dissolves it, thus reformulating our relationship to the urban.*

**Keywords:** Air; breath; urban/rural atmospheres; Delhi; India

### Introduction

Rethinking the urban as an ecological formation allows for conceptualizing cities as lived achievements that lay emphasis on fabrications between human and other-than-human forces (Barua and Sinha 2022). Urban atmospheres signify one such ecological formation, which “can simultaneously evoke both a body of air or even simply space, along with its prevailing affective characteristics” (Gandy 2016, 354). In other words, atmospheres are both encountered materially and created discursively, as an “all enveloping experience” (Ingold 2011, 134) in and through which people perceive while evading any form of human and technological capture. The air we live and breathe in continues to flow, drift, and swirl beyond any human-made boundary such as a city's limits. How then are urban atmospheres constituted? Stewart (2011) advocates for the need to be attuned to

atmospheres – to notice “how they constitute a compositional present, pushing circulating forces into form, texture and density so that can be felt, imagined, brought to bear or just born” (Stewart 2011, 2). This form of attunement has not only informed my research but informed my pedagogical practices as I have always thought that explaining anthropological atmospheric engagements to an undergraduate class is a difficult endeavor. It has been a process of making the taken-for-granted—the air we live and breathe in—apparent; a rendering center of what lurks around and through us, a taking seriously of the atmospheric as a medium that constitutes the social in various ways without necessarily being perceptible all the time. This is not simple to communicate in a pedagogical setting or easily translatable from a reading of anthropological texts on atmospheres.

A potential mode of meaningful engagement emerged serendipitously with 19 undergraduate students enrolled in the course *SOC 306: Sociology of Science* in October 2019. At that time my students were coming to terms with making sense of an atmospheric condition that had emerged as significant for them. Being attuned to student’s reactions and the location of campus led to a class discussion that drew on weather apps, Google maps, and the webpage of the central Indian government agency responsible for calibrating air pollution levels to reflect on the scientific quantification of air and how that constituted the urban. It emerged that fluid, fleeting, and always-in-motion air carries the city materially and discursively to spaces beyond it. Though not part of the coursework, the discussion added to the themes of the course that sought to address how scientific knowledge was constituted and came to imbue the social.

## Atmospheres in the Classroom

In October 2019, I arrived a bit early for a lecture with undergraduate students. As I waited for the class to fill up, I was informed by some students that the university student body president had reached out to university authorities requesting the cancellation of classes due to significant air pollution. It was explained to me that the request had been denied and the denial did not go down well with most students, as they believed that they were being forced to sit in dangerous air in my classroom.

Spread across a sprawling 286 acres and surrounded by a national highway on one side and expansive agricultural fields on the other, the university in question is located in western Uttar Pradesh<sup>1</sup>, making it a modern private institution located in a quintessentially rural area. Students can cover the distance between their hostel rooms and academic blocks to attend class in a ten-minute walk, as the campus is fully residential. This location positions the university at the very tip of the Delhi NCR<sup>2</sup> expanse, making the distance to

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<sup>1</sup> Uttar Pradesh is a state in the Indo-Gangetic plains in north India.

<sup>2</sup> NCR is an acronym for National Capital Region, which is a planning region centered on the city of Delhi. Delhi – NCR encompasses Delhi and several districts surrounding it from the states of Haryana, Uttar Pradesh and Rajasthan.

Delhi within a range of 60 km. Delhi, the capital city of India and regularly infamous as the most polluted city in the world since 2014 (WHO 2014), is at least an hour's drive from campus. The drive traverses a national highway surrounded by villages, agricultural fields, and two expressways before reaching the city's outskirts. Since 2014 there has been a steady increase of discourse in mainstream media and living room discussions in India about the detrimental state of air in the city, especially from October to February each year when air pollution is especially perceptible.

As more students came to class, I asked if they all in fact felt the same way, and when I received a unanimous response of disgruntlement, I knew that the conversation in the 90-minute lecture would be about why such a request had been made and what the displeasure with the response to the request meant. As the conversation progressed it emerged that an engagement with airy materials made possible an assessment of how the urban flowed into the university space.

## **Aerial Imaginations of the Urban**

My first question to the class was how did they know that the state of air was bad? Many students admitted they hadn't really thought about this, but on more probing, they responded that sources of information included the news and weather apps. I asked them which news channel shared air quality data for the region that the university campus was situated in, and the class became quiet. To make my point, I projected from my laptop the livestream of a popular Indian news channel and together we waited for the weather forecast. While we waited, I also searched for weather reports of at least two other popular Indian news channels, making sure one was a Hindi<sup>3</sup> news channel. All three news channels shared maximum and minimum temperatures along with air quality index (AQI) levels for cities across India. The Air Quality Index<sup>4</sup> is a weighted average that ties in the level of pollutants in the air with effects on human health.

This struck a chord; students quickly registered that AQI levels were only available for urban spaces, which was not where the university is located. Some students then started looking at their phones and opening their weather apps. I asked them to scroll down to see the source of and place for AQI levels. Depending on which types of apps students used, I got varying replies. Apps that were based on centralized agency air quality data—

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<sup>3</sup> Hindi is the language that is pre-dominantly spoken in the Northern part of India.

<sup>4</sup> The range of "healthy" (green on the scale) to "severe" (red on the scale) AQI levels is fixed by the national government and varies globally. This calibration considers the state of air in a country, trends of air pollution, and the design of realistic policy goals for improving air quality.

Sameer<sup>5</sup> or SAFAR-AIR<sup>6</sup>—only had data for cities. Even in apps that relied on private sources for data such as aqicn.org or plumelabs.com, a visit to the homepage revealed that there were no air quality monitoring stations in the vicinity of the university, and most air quality databases provided information for only cities globally. In fact, the aqicn.org web page states that the source for the data for Indian cities is the Central Pollution Control Board (CPCB) and the India Meteorological Department (IMD), both of which are under jurisdiction of the government of India. To make sure the apps were fetching correct data, I projected the CPCB and IMD webpages and scrolled through. The fact that air quality data was only available for cities in India made students re-think the basis on which the air quality of the room in which they were sitting was being established.

As confusion mounted, two students proclaimed that if the air quality in Delhi was exceedingly bad, as evidenced in mobile apps and on the news, it must be bad on campus, too. Without disregarding the fact that the state of air in the classroom and beyond was not necessarily healthy, I wondered with the class what such a statement meant – *since the air quality in Delhi was bad it must be bad on campus, too*. To interrogate this, I projected a Google maps view of the distance between Delhi and the university, which was 60 km (marking India Gate in Delhi, a centrally located popular monument) and selected the air quality layer (see Figure 1).

As we followed the route three things emerged. First, the amount of air quality data increased as one got closer to the city and it progressively got worse. In the figure orange is the color for the range of “poor” or “unhealthy” AQI and red for “very poor” or “very unhealthy.” Second, AQI data only existed wherever there was a CPCB air quality monitoring station; and third, even within the city of Delhi, the AQI varied as one travelled further beyond India Gate.

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<sup>5</sup> In India, the Central Pollution Control Board under the Ministry of Environment, Forest, and Climate Change manages a nation-wide program of ambient air quality monitoring stations known as the National Air Quality Monitoring Program (NAMP). NAMP consists of 793 operating stations covering 344 cities/towns in 29 states and 6 Union Territories of the country, so that no rural spaces are covered under the network. “Sameer” is the name of the app that provides data for the NAMP.

<sup>6</sup> The Ministry of Earth Sciences in India has its own program for monitoring air quality that covers four cities in India – Delhi, Pune, Mumbai, and Ahmedabad. “SAFAR-AIR” is the name of the app that provides data for the four cities.

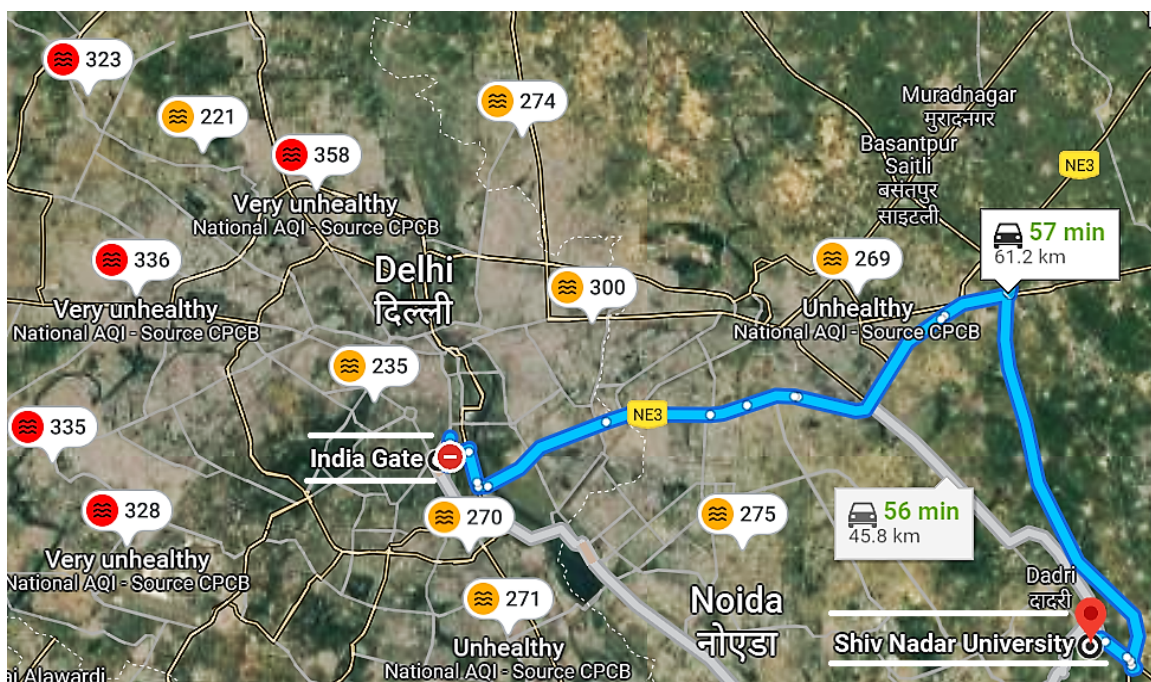


Figure 1. Google map view with layer of air quality selected (that displays AQI levels) of distance from the university to India Gate, Delhi (May 2023)

This visualization forced students to think through not only how the air quality data was accrued—almost primarily in urban spaces—but also to problematize how even within the city the air quality data varied. Many students had been to Delhi and shared how they had perceptibly noticed that the state of the air got worse as they got closer to the city, which meant that the data for Delhi may not be accurate for the state of air on campus. This led to a discussion of how the air from Delhi must move towards areas around the city such as the university campus and also be impacted by the air from surrounding areas as air is always fluid and in movement, and the air quality did vary. Bachelard (2011) takes the movement and dynamics of air as a way to analyze what he terms “aerial imagination”: to demonstrate the sociality and different modalities of shared air or how connectedness is made, understood, and endured. The classroom discussion brought out that not only did the air of Delhi drift into the university space and vice versa, but with it the air carried the city (materially and discursively) into the university space that was surrounded by agricultural fields and a national highway, thus re-constituting how we imagine and can make sense of our relatedness to the urban.

### Attuning Breath

The city as a lived achievement calls for attunement to how social formations between human and more-than-human forces—such as urban atmospheres—modulate to subsist, intensify, and dissolve. These forces are material, affectual, and sensory, and being attuned to their manifestations is a means to attend to “people’s shared senses. Intensity [is] the

air they breathed" (Stewart 2011, 3). Residents of Delhi experience the city by breathing air made toxic not only by local sources but transboundary particles, such as sand carried from the Gulf, which could potentially flow into the university campus and my classroom (IANS 2017). Realizing how air transports the urban is made possible in paying attention to how discourse of the state of the air in Delhi has snowballed in electronic and print media since 2014 and how air pollution levels are scientifically quantified.

Thinking of the city through urban atmospheres is not simply a call to imagine the urban through air, but a move to carefully consider entities such as airy materials that don't seem obvious in how the city is conceptualized. Or, to think about the materializations of urban atmospheres that encode an agentic quality that allows them to drift in, through, and beyond a city to disperse into adjoining spaces that allow for a re-thinking of how the urban-rural is retained as a malleable and permeable divide. Pedagogically this means being attuned to dynamic atmospherics and noticing how entangled matter (like airy materials) make meaning in a compositional worlding. The unexpected classroom experience is a specific mode of interaction that allowed the urban to come alive through how air mattered, by being alert and open to noticing how material practices compose and carry the city, as all of us in the classroom in 2019 were caught together, as we attuned ourselves to how we may be breathing Delhi, beyond the city. Since then, I have actively sought instances in classroom discussions to tie in specific events on campus that inform students' lives more immediately and allow them to feel and think with course material. These opportunities do not always present themselves, but being perceptive of what can be gained from such instances of engagement allows more possibilities to emerge. In fact, repeating the exchange discussed here in future classrooms has aided in bringing home urban-rural dynamics as students are able to quickly relate to the spatial position of their campus and the discourse of air pollution in Delhi.

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