Nora Wuttke:

»Air, Blood, Buildings«

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cache 04

RADICAL HEALTH

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INFRASTRUCTURES

AIR, BLOOD, BUILDINGS Air

A patient breathes rhythmically on an upper floor of the colonial main building. Through a mask, oxygen moves into their lungs, carbon dioxide moves out. A loved one, maybe a daughter or a husband by their bedside, probably tired and worried for their kin, is there to attend to the patient's needs day and night – feeding them, cleaning their body and clothes, administering medicines, and providing pastoral care, a kind word and reiterations of encouragement, as much for the patient's benefit as for their own.



Nora is a social anthropologist and architectural designer. In 2019/20, with pens and sketchbooks, she studied the Yangon General Hospital in Myanmar, where she had been project architect for the rejuvenation and new campus masterplan since 2015. Her fieldwork methodology is drawing. Her sketches – including the ones in this contribution – are left as artifacts from the field throughout the text. They create a metanarrative to the written words; complimentary, or in their own right, they are an invitation to read 'between the lines'.

Via hundreds of meters of thin metal pipes, oxygen floods the patient's lungs. The pipes climb along white ward walls, around and over cornices, down red bricks that have been in place since the turn of the last century, into the ground-level basement where the manifold is located.



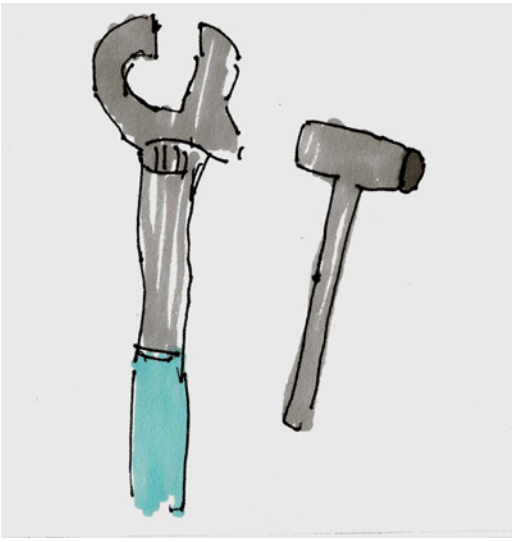
Here large oxygen bottles feed the system. They are delivered by young men on flatbed trucks. Every day, weekends and holidays included, the truck trudges through the Yangon traffic from the factory a few miles north. The lengths of the pipes vary with the patient's exact location – longer if they are on one of the two upper floors, shorter on the elevated ground floor. As the patient's breath moves in and out of their body unceasingly, the bottles feeding the manifold empty. The metal warms up and the cold dampness from the thermodynamic processes dissipates as the oxygen flows into the manifold feeding the patients' breaths on floors above.



As the tanks gradually empty, Hain Thura Kan, a worker from the oxygen department, or maybe one of his colleagues, sets off to check the manifolds in his care. The patients' breath is his day's metronome. Wrench in hand, Hein Thura Kan visits the different manifolds three times a day, at four-to-five-hour intervals in sync with the hospital's collective lung.



Clinking the wrench against the shoulder-high gas bottles, he checks their fullness. If they are empty, he loosens the bolt from the dry bottles and changes them for new cylinders, cold and damp from the condensed water on their surface. The thermodynamic process is his visceral cue. The clinging and banging, the touch of a hand sensing the temperature of the metal, a counting of empty and full cylinders, is a routinised intimacy, making sure everything is in order. Only the careful affective diligence with which Hein Thura Kan carries out his task betrays the awareness of its importance. Hein Thura Kan will never meet the patient, and the patient and their attendant would not pay an ounce of attention to the tall man with his wrench, hurrying from manifold to manifold in flip-flops, a T-shirt and high-tied *longyi*.[1]



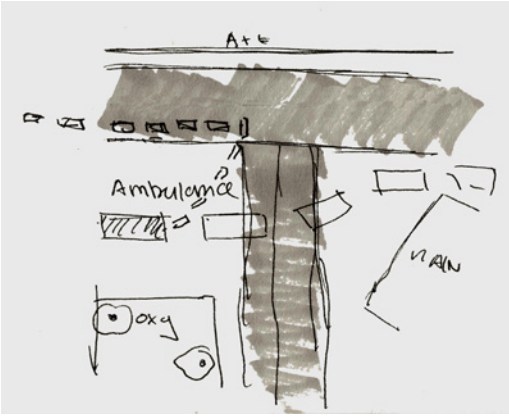


Patients' breath is the metronome that organises maintenance rounds and delivery routines. Breath synchronises Hein Thura Kan's and the other oxygen department workers' journeys to the manifolds, and the navigation of flatbed trucks through the gruesome Yangon traffic, while patients are unlikely to ever cross paths with the keepers of their breaths. Infrastructure mediates relationships.



AIR, BLOOD, BUILDINGS Blood

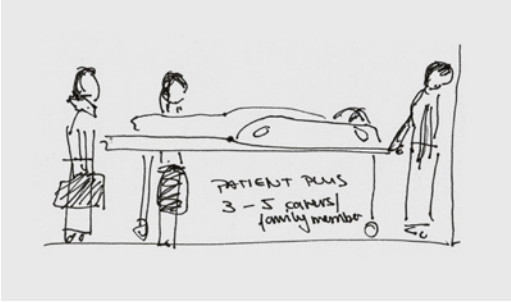
An ambulance waits at the back of the Accident and Emergency Department (A&E), just outside the Oxygen Store, between the Main Building's West Wing and the Radiology and Laboratory Building in the thick of the main campus. A team of A&E workers, maybe a nurse as well, arrive with a patient on a gurney. Their flustered but calmly cooperating family members, with bags of necessities for a hospital stay, follow alongside. Maybe the patient is unconscious; sometimes a moan can be heard. A traffic accident victim, most likely.



Maybe they have multiple traumas and have already undergone surgery, maybe on their abdomen, at the operating theatre in the A&E. It is likely that they have been under anaesthesia and came up for this transfer in order to go under again upon arrival at the Neurosurgery Operation Theatre (OT). I have been told by neurosurgeons that other specialists are afraid of head injuries, so it is they who get in last and will keep the patient for recovery.



For some reason, which neither I nor one of the hospital's anaesthetists have understood, the neurosurgery team refuses to operate in the A&E's OTs. They insist on transferring patients, making them go in and out of anesthesia – in contrast, cardiac surgeons do operate in the A&E's theatres if necessary; but they are also just next door as opposed to a ten minute walk and across a hazardous road, as is the case with the neurosurgery department. The question is really whether it is necessary to uphold antiquated understandings of specialities translated into hospital spaces.



As I am musing about hospital space allocation, the ambulance with the patient makes its way across the busy and unforgiving hot or wet (depending on season) four-lane one-way road that divides the main campus from the extension site where neurosurgery is located with its two OTs and 150 bedded wards. If the ambulance were available when called by the A&E team, it now might get stuck in traffic while surmounting the fifty meters it must cover on one of the city's busiest east-west arteries. On arrival, the patient is headed for operating theatre two, which is allocated for emergency cases – one level up, accessible with a lift at the other end of the building of the main entrance and the operating suite. The lift was installed in the last fifteen years only. The neurosurgery team has only two OTs – too little for their case load, I am told. This lack of space puts pressure on the speed at which surgeons operate. Paired with a high case load, the patient is operated on much faster than is typical in less pressured settings. Lack of space leads to shorter surgery times which means more bleeding – more bleeding requires more blood transfusions.



Transfusions come from the Blood Issue Room in the Main Building on the main campus across the hazardous road. The surgery team usually orders enough blood for any given surgery; however, in case of unforeseen circumstances, a worker is sent to fetch transfusions during surgery. This can take up to 45 minutes while the anaesthetised patient and the surgery team wait. Should the patient need a CT scan or other imaging services, they must track

back to the main campus. The department's CT broke recently and has not been replaced. Once again, an ambulance is called to take the patient. This time, from the extension site to the main campus, the ambulance must circle the entire city block due to the one-way system around the hospital. Traffic jams are not uncommon. The pathway infrastructures and spatial configurations, stretched over two sites, have a direct effect on clinical services and patient care, as does the context of the hospital within the city. Embedded in an urban environment, roads, ambulances, and hands carrying blood relate and rupture at the same time.

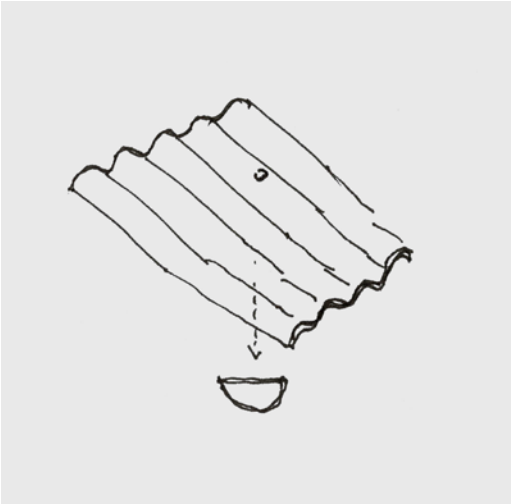


AIR, BLOOD, BUILDINGS Buildings

It is the younger members of U Than Thein Gyi's team that spend their time climbing the roofs once the seasonal rains stop. Throughout the rainy season, when U Than Thein Gyi, the head of the building maintenance department, arrives at his office at 9 a.m., he finds new reports filed by ward sisters with repair requests on his desk. Most tell of leaks in roofs. Behind the desk a large A0 vinyl print of my former team's masterplan is pinned on the wall – a symbol of planning and reminder of the 'bigger picture' so easily lost in the nitty gritty of tending to the leaking and creaking campus structures.



Daily, his team ventures out to mark the reported leaks so they can be fixed when it is safe to climb the roofs. Nurses know this process; buckets are put in OTs and wards to avoid flooding until the leak is attended to. Most of U Than Thein Gyi's team's time is spent fixing roofs as soon as the rains stop, checking for the causes of leaks – a seedling that took root in the gutter or slid its fingers in the crevices between bricks, cracking the building hull, roof sheets loosened by wind, general material decay.



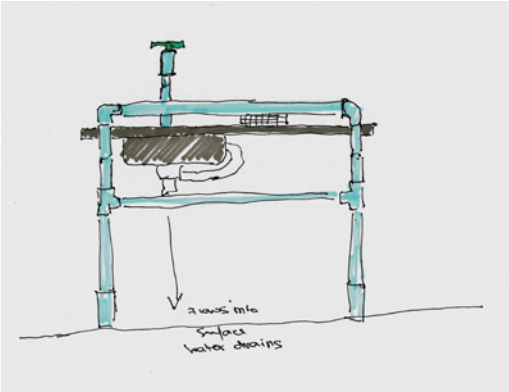
Another major part of this team's job is the maintenance of doors and windows: heavily used hinges decay through wear and tear. A door can only be opened so many times before it breaks but is an essential means of control – fire control, infection control, privacy.



Mold, which thrives in air conditioning units, needs to be removed and leaking pipes fixed. Mosses flourish in the humid environment around leaking pipes, sprouting in bright greens, climbing walls alongside the pipes, damaging the façade, making it prone to breach. One might ask, why all this leaking? The poorer the materials, the more repair and care is necessary. The poorer the construction, the more it leaks.



When COVID-19 hit, it was this team that sprang into action first. They put up light partitions, modifying the spaces for improved infection control. *Ad hoc* hand wash basins appeared. They were the vanguard on the battlefield of infectious disease, adapting the infrastructure to hold the virus at bay.



Materials decay, seasons cycle through the year, and nature slides its fingers into any crevice possible if not held at bay, dictating maintenance patterns and daily routines. The buildings are vessels for healthcare. They are part of patient care. But they can only extend their care if someone tends to them. The hospital is a place where built and natural environment are painstakingly orchestrated, where buildings and people are in careful synergy.

AIR, BLOOD, BUILDINGS Writing with Buildings

These three short ethnographic vignettes demonstrate the multiplicity of the hospital – or to borrow the terminology from Fanny Chabrol and Janina Kehr, *The Hospital Multiple.*[2] The hospital multiple is a place where humans and non-humans, services and spaces, built and natural environments, are in constant motion – walls breathe, blood and people shuttle back and forth while nature and time continuously encroach on the hospital's built environment, and the maintenance team is on the forefront of infection control. Patients', pipes', and pathways' daily existence overlap, entangle, and form visible and invisible synergies. The hospital buildings emplace all this. Here I am in Clifford Geertz's good company when I point out that place matters.[3] Infrastructure facilitates care; hence the three previous sections have been written with the hospital buildings. Writing with buildings helps us escape perspective. In her 2017 book *Five Ways to Make Architecture Political*, social anthropologist Albena Yaneva speaks about perspectivism when analyzing architectural projects.[4] While Yaneva focuses on architecture and the design of buildings, her argument is valuable for the continued existence of buildings and analysis of the life that unfolds within and between the structures. In the case of a hospital, analysis tends to be from the point of view of someone in particular: the patients, a disease, the nurses, the doctors, the cleaning staff, and everyone that looks after a building. However, analysing a building from the point of view of certain or even several individuals or groups only ever paints a partial picture. Yaneva proposes to witness what a building does with those who interact with it on a daily basis in a multiplicity of events in order to "escape perspective".[5] Writing with buildings is exactly that: an escape from perspectivism towards multiplicity analogous to the process of drawing, which places us into a landscape in which we participate. Buildings offer the ethnographer multiplicity in seeing, thinking, and writing. I am developing (in the sense that a photograph is developed) the hospital multiple conceptually from Annemarie Mol's *Body Multiple*.[6] Leaning

onto Mol's scholarship, I am extending her proposition from practices done to bodies to practices and materiality with buildings. Through careful attention to events, activities, and practices (what we do with the hospital buildings), the hospital multiple appears – the hospital that in turn produces the body multiple, extended now from patients' bodies to everybody in the hospital. Multiple as in more than one, but still one hospital – understanding the hospital in this way it emerges as a place for healing, working, researching, teaching, living, dying and waiting at the same time.

AIR, BLOOD, BUILDINGS Practice

Writing with buildings, with the hospital's places and infrastructure, puts realities of daily life into sharp focus – not as an abstract category, the hospital in its generic form, but the hospital as a place, lived and complicated. Multiple scales emerge, from the specific detail to the hospital campus as a whole, a campus with many departments, spaces in between, and a long history in a bustling Southeast Asian metropolis. Emplaced and specific. As much as "no one lives in the world in general",[7] there is no hospital in general – however much ideas of best practice and standardized processes would lead us to believe in such a thing. Much of the daily tactics making a hospital work originate in the exactness of place. Being preoccupied with standardisation and best practice – mostly driven by capitalist interests – overlooks the realities of the hospital's daily life. At the same time, we (anthropologists at least) know that daily tactics and improvisation are the reality for many, if not all, hospitals.[8] Therefore, an ethnographic lens is pertinent, beyond academic acrobatics. Drawing on my ethnography and inspired by scholarship of people such as Anna Tsing, Ann Laura Stoler, and Yael Navaro-Yashin, I propose that, at the hospital, the distinction between human and non-human life collapses.[9] Infrastructures and the built environment mediate the functioning of the hospital. Here I understand mediation as relational, in the case of the breathing walls; as rupturing, where the road severs the flow of people and blood; or as indeed quite messy, where nature continuously encroaches onto the built environment. When thinking of the hospital, a space for healthcare, I propose to think, design, and plan with its multiplicity in mind; with its human and non-human entanglements; with functionality mediated and related by infrastructures. Ultimately, this implies thinking and making a hospital – the hospital multiple – through the category of practice. In this intervention, I have started radically rethinking infrastructure and the human at the hospital. One is dependent on the other. Walls breathe and blood flows between buildings – buildings that are taken care of by individuals. Buildings that mediate. Writing with buildings, writing the pipes into the ethnography, is part of this rethinking.

Notes

1 *Longyi* is a traditional leg dress for men and women in Myanmar (also called *htamain* for women). Usually worn at floor length, workers and manual labourers tend to tie them higher for convenience.
2 Fanny Chabrol, Janina Kehr: "The Hospital Multiple: Introduction", Somatosphere, http://somatosphere.net/2020/hospital-multiple-introduction.html (2020).
3 Clifford Geertz: "Afterword", in: Steven Feld, Keith H. Basso (eds.): *Senses of Place, School of American Research Advanced Seminar Series*, Santa Fe, New Mexico: School of American Research Press (1996).
4 Albena Yaneva: *Five Ways to Make Architecture Political*, New York: Bloomsbury (2017).
5 Albena Yaneva: *Five Ways to Make Architecture Political*, New York: Bloomsbury (2017), p. 7.
6 Annemarie Mol: *The Body Multiple: Ontology in Medical Practice*, Durham: Duke University Press (2002).
7 Clifford Geertz: "Afterword", in: Steven Feld, Keith H. Basso (eds.): *Senses of Place, School of American Research Advanced Seminar Series*, Santa Fe, New Mexico: School of American Research Press (1996), p. 262.
8 Ian Lichtenstein: *Everyday Adaptability in Ghanaian Hospitals,* MAT 6 (2019), pp. 142–151; Julie Livingston: *Improvising Medicine: an African Oncology Ward in an Emerging Cancer Epidemic*, Durham: Duke University Press (2012).
9 Anna Lowenhaupt Tsing: *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, New Jersey: Princeton University Press (2015); Ann L. Stoler (ed.): *Imperial Debris: On Ruins and Ruination*, Durham, London: Duke University Press (2013); Yael Navaro-Yashin: *Affective Spaces, Melancholic Objects: Ruination and the Production of Anthropological Knowledge*, Journal of the Royal Anthropological Institute (2009), pp. 1–18.