



Jordan Metzler

is a Master of Architecture candidate at the University of Tennessee, Knoxville, where his work focuses on time, memory and their relationship to culture. His research examines how architecture operates under conditions of climatic and political instability, using photography, field documentation and writing as tools for architectural inquiry.

Born in Dornbirn, Austria, Metzler relocated with his family to West Virginia at a young age. He later earned a Bachelor of Science in Landscape Architecture from West Virginia University and practiced for two years as a landscape designer and planner. This background continues to inform his commitment to climate responsiveness, territorial thinking and social issues within the built environment.

As an Aydelott Award recipient, Metzler is conducting research across Mongolia, Bangladesh, Chile, and Germany to study conditions of communal flux, with a particular focus on the relationship between impermanence and permanence. This work investigates how architectural form, governance and daily life intersect in moments of political, environmental and cultural transition.

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Destinations

Ulaanbaatar Ger Districts

Vernacular | Collective Knowledge

Ulaanbaatar, Mongolia

Pre-modern origin; ongoing tradition

Nomadic Dwelling

Quinta Monroy Housing

ELEMENTAL | Alejandro Aravena

Iquique, Chile

2004

Incremental Social Housing

National Parliament House of Bangladesh

Louis I. Kahn

Dhaka, Bangladesh

1962–1982

Civic | Government

Tempelhof Airport

Ernst Sagebiel

Berlin, Germany

1936–1941 | 2010–present (public reuse)

Aviation Infrastructure | Post-Infrastructure Civic Landscape

Still Here:

Permanence as the Residue of Flux in Architecture

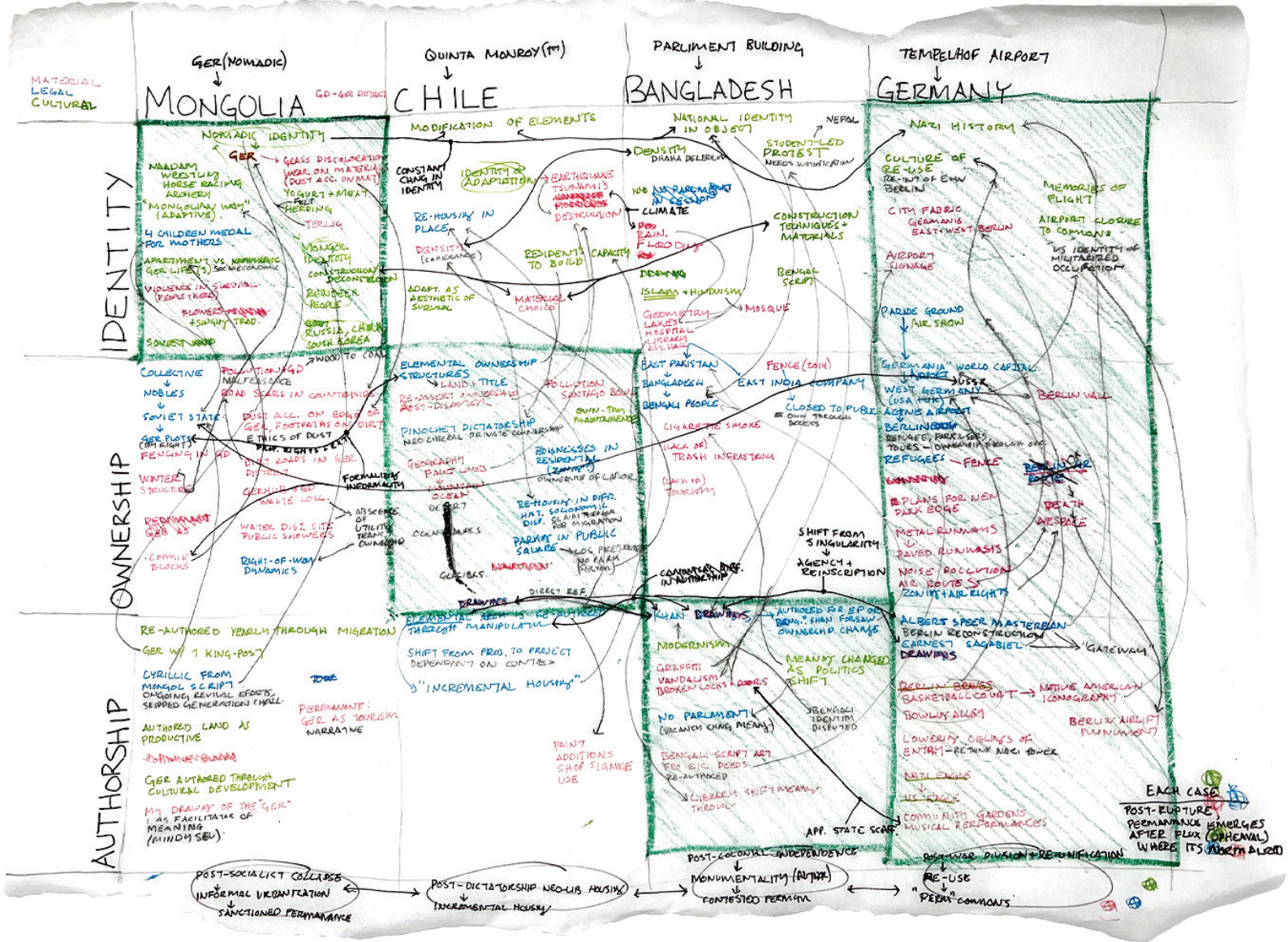


Fig. 1. 'Mind Map' Reflection: Comparative Matrix of Flux and Residue Across Case Studies

Preface

I have always trusted what remains more than what is new. After the Asheville floods, I found myself standing in strangers' living rooms, noticing the mud on baseboards, the pale watermark circling each room. The damage arranged itself into meaning. Flux leaves a record. You only have to look long enough for it to surface.

This became the quiet premise of my travel: **If flux is the normal condition, then permanence is not the opposite of change but the residue it leaves behind.**

Everywhere I went, architecture revealed itself through what had been added, patched or simply endured. I began to see three kinds of residue: **material**, in the scars and repairs that hold a structure together; **legal**, in the plots, contracts and rights that outlive the people who wrote them; **cultural**, in the rituals and habits that shape a place more than any drawing.

Across four sites, these residues gather into distinct themes: **identity** in Mongolia, **ownership** in Chile, **authorship** in Bangladesh. Berlin, the final essay, gathers the thread. A place where all three residues are visible at once and where the question becomes not what buildings are, but what they remember. In each case, the building becomes less a fixed object than a ledger of everything that has happened to it.

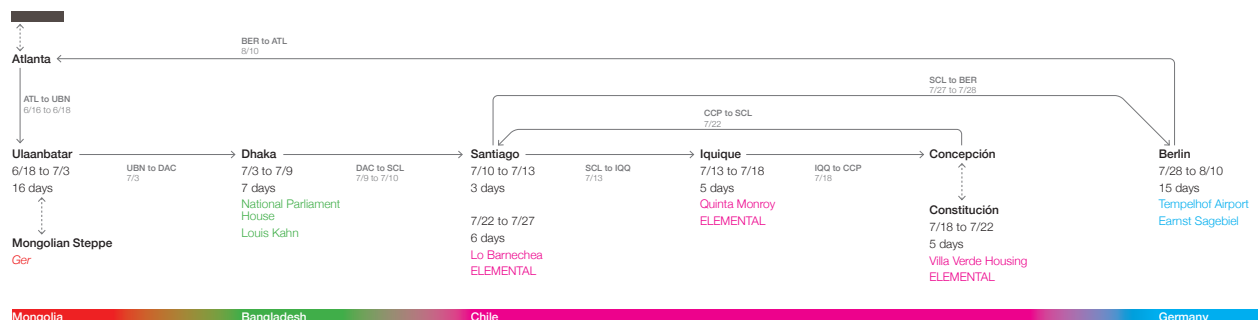


Fig. 2. Travel Itinerary across four countries



**Ger Districts of Ulaanbaatar:
Identity Shaped Through Climatic and Urban Flux**

My first visit to the Ger Districts of Ulaanbaatar happened on accident. The breeze pierced my shirt as I navigated the interconnected streets and courtyards that are abruptly interrupted by a large four lane road. Across the line was a world separate from the city. As I walked, the road became dirt and narrowed. The large apartment buildings replaced with high fences with dogs barking through the worn and chipped slats. Not city and not countryside. Behind the fences were an ensemble of gers¹ and makeshift buildings. The ger, once atop the rough grass in the endless nothingness of the Eurasian Steppe² was now behind fences sitting on a concrete pad. How did this mobile architecture become permanent? What is the identity of the ger district and how does it situate itself within nomadic and city culture? Identity in ger districts is a materialized response to climatic and urban flux.



Fig. 1. Ger District, Ulaanbaatar, Mongolia, ongoing tradition. A ger sits behind the fence.

Flux Pressures

Mongolia is a place defined by scarcity. Cultivation on the Eurasian Steppe is very difficult. Because of this nearly half of Mongolians today are nomadic as the scrubby grass can only support transient livestock grazing.³ And the harsh winds and even harsher winters made it impossible to stay in one place. Historically, the land Mongolian nomads occupied was not private, it was shared collective land.⁴ On June 29th, I made the long journey back from the countryside to the city writing, *"14 hour bus from Mörön to Ulaanbaatar through endless [sameness] of this country. Herds of sheep, goat, cow, yak and horse scatter the landscape."*



Fig. 2. Mongolian countryside. View looking out the window as we drove through the endlessness of the steppe.

It was infinite nothingness. Unsurprising that land was not apportioned or claimed. However, ownership was somewhat established through continual re-establishment of the place. Historically, families followed their herd moving around three to four times per year.⁵ The herd would typically return to the same place each time, and so the nomadic families began establishing a pattern of occupation. The act of assembly, dis-assembly and re-assembly of the ger punctuate the movements.

Through this continual act, communities began to form as families sharing valleys and ridges began to exchange resources and labor. Some of these families began moving only two times per year, building more permanent structures in the more protected and resourceful regions.



Fig. 3. Ulaanbaatar, Mongolia. Apartment block gets a jacket. Thick pieces of foam are attached to the outside of the building.

Eventually, these nomadic families had enough resources and people to establish permanent communities. These developed into towns, then cities. Eventually, Ulaanbaatar became a massive city. Private property was first established as Nobles began claiming ownership of Land. Then, the Mongolian People's Republic, under the Soviet Union began to divide and apportion land.⁶

Soviet sedentarization reorganized the entire spatial, economic and social logic in Mongolia. They began building apartment blocks in Ulaanbaatar, enacting slab urbanism.⁷ And they did not stop. From the 1920s to the 1980s, the Soviet-backed state created a planned geography: collective herding units, fixed schools, centralized health posts, seasonal migration routes regulated by the state and permanent administrative centers.⁸ Mobility became a managed operation designed by the state. Herding was still practiced, but within institutional frameworks that tied people to service nodes.

When the socialist system dissolved in the 1990s, so did the structure that supported herding: Veterinary services, welfare and collectivized winter shelters vanished, State purchasing of animal products collapsed and employment in rural centers evaporated.⁹ Instead of enabling a return to traditional nomadism, the collapse produced systemic vulnerability. On, June 28th I wrote, *"This life, the life of the nomadic herdsman, can only happen on the steppe. Out of harshness and brutality comes the need to move, to be mobile."*

Climate shocks and economic collapse created push factors driving people to cities, not back to the steppe. A series of severe *dzud*¹⁰ winters in the 1990s to 2000s caused massive livestock mortality.¹¹ Families who had attempted to re-enter herding after the collapse often lost everything. Urban migration became the only survival strategy.

Rural-to-urban migration generated unprecedented informal urbanization. Ulaanbaatar's population nearly tripled, not through industrialization but through climate refugees and economic displacement.¹² Many of these families came with the ger, paradoxically fixing mobile structures to small land plots. A hybrid condition, neither traditional nomadism nor classical urban living. Nomadism was transformed into a new kind of spatial improvisation forced by economic collapse and climate volatility.

When migrants arrived in Ulaanbaatar, they did not enter formal housing markets. Instead, the government responded by distributing 700 sq m plots on the urban periphery, allowing families to erect gers and fences.¹³ This expanding ger district created a patchwork of partially legal, partially informal settlement.

This created a unique condition. Plot allocation was a form of emergency urbanism. Not formal planning and not informal squatting. A legal acknowledgment of crisis. These legal residues crystallized, every granted plot leaves a permanent legal trace even if temporary structures move or change. This residue shaped future infrastructure investments, utility extensions, land values and political constituencies.



Fig. 4. Ulaanbaatar, Mongolia. The apartment blocks morph into the ger districts that climb up the hills that surround the city.

The Ger

I spent a week with a nomadic family near Khövsgöl Lake. The rhythm of entering their ger every morning became second nature. Ducking into the low doorway, making sure to not step on the doorframe. As I stand up inside, I move clockwise and find my way to a low stool where I sit. The ger is defined by its circular plan. Without a beginning or an end, the circle represents eternity and balance. To maintain order in an object with no edges, counterclockwise becomes the family's domain, where guests enter rotation opposite. The circle reduces heat loss by eliminating corners and minimizing surface area relative to volume. It also allows even distribution of wind loads. The entrance faces south to avoid the harsh northern winds and establish the cultural north-south orientation that organizes its interior life. This, combined with tension ring provides air circulation in the summer. In the winter the stove uses convection to circulate heat through the ger.

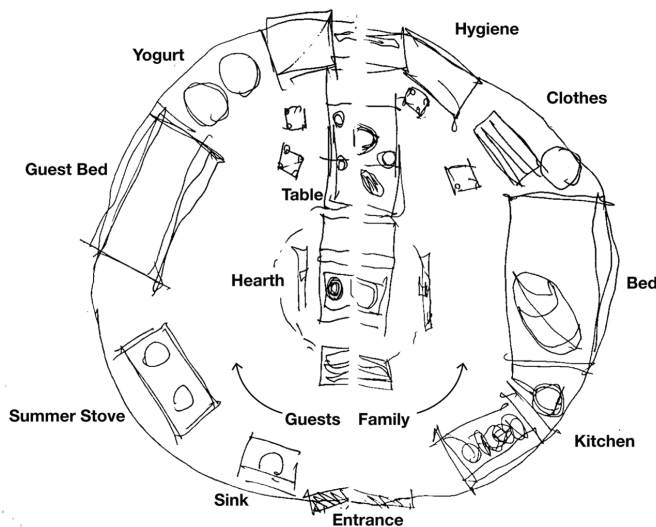


Fig. 5. Ger, Khövsgöl Lake, Mongolia. Plan of the family's ger.

The ger begins with a plinth. In the countryside this is a flat patch of grass. In ger districts it's a wooden deck or concrete pad. The structure is based on a compression ring and tension system:

The compression ring (*toono*) is a circular wooden ring at the apex that distributes loads radially. This supports the roof poles and defines the central opening for light and smoke.

Central support poles (*bagana*), support the toono. When two are used they are traditionally referred to as the "husband and wife" poles. They transfer vertical load from the toono directly to the ground. No one is to cross between these two poles as they flank the central hearth and carry symbolic and cultural meaning.

The roof poles (*uni*) are slender, tapered wooden rafters. Their lower ends sit on the lattice wall; their upper ends slot into the toono. They work in combined compression and bending, transferring loads outward.



Fig. 6. Ger, Khövsgöl Lake, Mongolia. The interior of the nomadic family's second ger, used primarily for milk processing. The toono rests on the bagana. The uni radiated from the compression ring. A missing central support pole and missing teeth in the roof poles reveal the structural redundancy of the ger.

The tension band (*khaan beldekh bus*) is a continuous woven strap wrapped around the top of the lattice¹⁴. It counteracts the outward thrust of the roof poles becoming the structural linchpin: without it, the ger collapses.

The lattice wall (*khana*) is a foldable, accordion or scissor-like wooden framework. The reciprocal joint in the wooden lattice is made from leather ties. The lattice unfolds into a circle. It functions as perimeter supports, resisting lateral forces and distributing vertical loads. Their geometry allows them to expand or contract to create various ger diameters. The size of gers are defined by the quantity of the lattice walls that make the perimeter (e.g. 5-wall ger).



Fig. 7. Ger District, Mongolia. View inside a ger maker's factory.



Fig. 8. Ger District, Mongolia. The unfurled lattice wall with camel leather joints.

The ger's tectonics are also defined by the interplay of soft and hard elements: hard frame (wood) defines structural geometry and the soft envelope (felt, canvas) defines environmental performance. The layers are added and removed based on the season. Their interaction produces a structure that is both monumental and portable.

The ger's soft exterior behaves like clothing: a layered, flexible envelope wrapped around a lightweight frame. Its felt and canvas cover operate like the *terlig*¹⁵, the pleated riding coat wraps the body: tied, cinched and adjusted with the seasons. Both house and garment share a textile intelligence rooted in nomadic life, where protection

comes from layers that can be packed, unfolded and adapted to climate and movement. The ger is, in this sense, a dressed architecture or a scaled-up garment.



Fig. 9. Ger District. Piles of felt in the ger factory. The felt still smells of sheep.



Fig. 10. Ger District. Insulated blankets are used in winter.

Segmental repetition is the primary tectonic principle. The entire structure can be dismantled by two people. Each component is dimensioned to be carried by pack animals (historically) or pickup trucks (today). Portability is the fundamental design constraint.

The assembly and subsequent disassembly is an event. The ger is assembled in a strict clockwise sequence moving from the center outward. After laying the floor ring out, the lattice walls are unfurled and tied end-to-end in a circle. The doorway sits between two walls facing south. From there the compression-tension shell is assembled.

Then, layers of felt insulation is laid on the roof and walls. In winter additional insulation is added with puffer-coat-like blankets typically featuring a camouflage pattern. Then the outer vapor-barrier plastic and canvas are attached and tied with straps or ropes. Finally the door is inserted into the frame. Some gers also have decorative interior lining that cover the lattice with traditional designs.

The ger needs two people to assemble, ideally three to four to lift the compression ring safely. A well practiced family can erect a standard 5-wall ger in about two hours. For smaller gers or with more people, it can be as fast as 30 minutes.



Fig. 11. Mongolian countryside. Two men begin applying layers of felt to the structure. Original photo by Travel Buddies Mongolia, 2023.



Fig. 12. Ger, Khövsgöl Lake, Mongolia. The ger, accompanied by a motorcycle: used to herd the yak, and the truck: which can move the entire ger.

Disassembly is even faster, about 30 minutes. It mirrors the assembly process: remove canvas skin and felt layers, untie straps, remove roof poles, lift down compression ring, remove central posts, untie tension band, collapse lattice walls and load all the components onto a truck or cart.

When the ger is dismantled, the land remains. A circular imprint on the earth. A darker ring from the stove ash. Scorched earth marks the center where the stove sat.

Today, the addition of plywood floors, plastic vapor-barrier and metal stoves improve energy performance and comfort. In the ger districts, fenced plots create semi-permanent settlement patterns, shifting the ger from nomadic to semi-urban domestic architecture. Some gers hybridize with permanent extensions: masonry vestibules, timber sheds and connected outhouses.

As the ger transitions from the open countryside into the urban fringe, it ceases to function as a standalone, self-sufficient dwelling and becomes one part in a larger compound typology. A typical ger plot in Ulaanbaatar is a small, enclosed precinct: a fenced perimeter defines the property line, inside the family arranges a series of functional outbuildings and open spaces. Most compounds include a kitchen shed, often improvised from timber or sheet metal; a coal or wood storage pile positioned near the gate for easy delivery; and occasionally an animal pen for goats or chickens. The ger is the primary heated interior, while the surrounding structures distribute tasks: cooking, storage and repair work across the plot. The spatial organization is therefore not circular like the ger itself, but a distributed ensemble.

This introduces a fundamental tension: the ger's circular logic, a mobile architecture defined by concentric symmetry meets the rectangular logic of fixed property lines imposed by the city. The space

in-between produces awkward leftover corners, voids, and slivers of space around the ger. Additions often take on rectilinear forms that graft onto the ger's curved envelope, producing a hybrid geometry that reflects neither pure nomadic nor urban logic. This clash of geometries is one of the defining spatial conditions of the ger district.

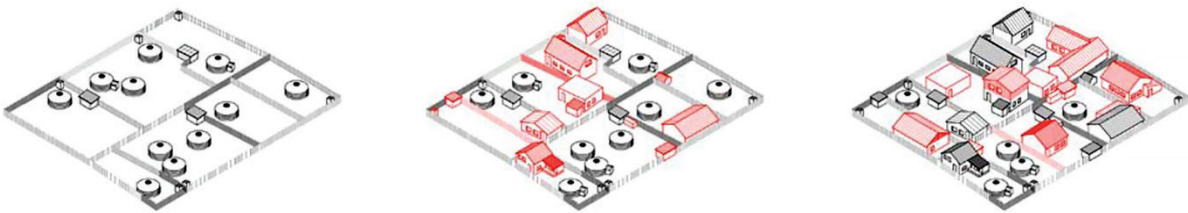


Fig. 13. Ger District, Mongolia. Transformation process of the districts. Diagram by Rural Urban Framework.

Through these transformations, the ger becomes one component in a compound system. It is no longer defined solely by its mobility but by its relationship to the fenced plot, the outbuildings, the slope of the site and the improvised infrastructures that accumulate over time. What emerges is a family of structures whose arrangement records the pressures of urbanization, economic flux and climatic necessity.

Because of its modular nature and cycle of assembly, parts can be replaced on their own schedule. Canvas wears the fastest, as UV exposure, wind and pollution discolor and degrade material. Moths and moisture infiltrate the felt over time. It is typically replaced every three to five years. In urban contexts, it can be as frequent as every two years as pollution and moisture can be trapped without the cyclical assembly and disassembly. Over a long period of time, the roof poles can bend under snow loads and the lattice joints can dry, crack and loosen.

In the countryside, few objects accompany the family and their ger.¹⁶ It was empty. It was quiet. And it was in this quiet that time was made visible. The ongoing maintenance of the canvas transformed the shell into a patchwork of vinyl patches and duct tape. In the

countryside, dirt paths accumulate and carve the land. The harsh climate accelerates the process. Every day on the countryside was the same: Milk the yak in the morning and send them out to graze. Make yogurt. Make Aaruul¹⁷. The yak return. The sun sets. The wear of the materials loved by daily use. The image of the ger imprinted on my mind.

The sedentary ger accumulates. It grows. Dust accumulates around the perimeter. The daily residue of ash and soot from raw coal burning in the winter. The area within the fence becomes a hard layer of compacted dirt. Lack of nutrients and pollution prevent a tree. The dirt roads degrade into valleys, a Prius scrapes the bottom of their car against the ridgeline of the road.



Fig. 14. Ger District, Mongolia. Inside the fence, an ensemble of gers, buildings, cars, equipment and shipping containers complicate the interior spatial logic.

Flux Acting on Form

Dust is the constant agent. It accumulates around the edges. It works itself into the lattice joints. The constant wind is broken by the ger, fraying the canvas as it washes over. Every year brings a dryer summer and a colder winter. More insulation is needed.

In the countryside, coal or wood is typically burned, staining the ger's mouth. But in the ger districts, it permeates the city. Most people in the ger districts still burn raw coal. Today over half of Ulaanbaatar residents live in ger districts, most of them burning raw coal in the winter. Ulaanbaatar is also the coldest capital in the world. Together, this makes the city one of the most polluted cities in the winter.¹⁸ The ger districts surround the city, coating the city in a layer of soot and smoke. Bad air quality discolors the white canvas, becoming black at the chimney.

Although Ulaanbaatar gives nomads land in the city by right, they don't accommodate their arrival. Most areas lack right-of-ways with plots sitting right next to each other. Roads are often developed as neighbors set aside some of their plot to circulation. The lack of rights-of-ways also make the establishment of utilities extremely difficult.¹⁹ Without water lines, many residents get their water from kiosks and shower at public baths. Every plot needs its own privy dug without a sewage system and trash must be brought to collection sites.

The ger is incredibly affordable. Unsurprising that nomads keep it when moving to the city. I visited a ger maker in the ger district making artisanal gers for about four million MNT (about \$1,000 USD). A used one can cost the price of a month of rent in the apartment blocks. The ger districts have their own taxis, businesses and economies. These conditions creates a socio-economic divide between people living in ger districts with those living in apartment blocks.

On June 20th I visited *Narantuul*²⁰, “[I] discovered a string of storage containers filled with ger assemblages. Felt, wood structure, tarps, foam, lattice, rope, stoves.” Economic development and increased access is slowly replacing traditional materials. Some materials, like horse and camel hair straps, were replaced by nylon cord and composite straps a long time ago. Others, like solar powered stoves, are more recent. In the districts, wood doors are replaced with sturdy metal. Informal markets introduced these nontraditional materials.

Incremental outbuildings create villages within the small 700 sq m plots. On June 19th, I visited a family in the ger district. The mother of four had moved into the ger district after her children moved to the city for university. Without a big family, managing her herd on the steppe became unmanageable. Within the decorative metal fence was the ger where they lived. Next to it was a wooden building that houses the kitchen and sewing room for making *terlig* and other traditional Mongolian clothing. Beside that was a small shed that was used for sheep wool processing. In-between was a cacophony of small buddings, pallets, barrels and re-used parts. Here, everything is fixed or repurposed. Repairs are an act of care. Mongolia is still difficult to reach and isolated from larger trade routes.



Fig. 15. Ger District, Mongolia. The mother's daughter shows me the different types of traditional clothing, including the a purple and gold *Terlig*.

Identity as Residue

On July 4th, I reflected on my time in Mongolia:

"My guide would often refer to the Mongolian ability to adapt and improvise as the 'Mongolian Way'. This I know is true. Stemming from the Mongol Empire, their ability to always be on the move and make do with what's at hand is something I have seen time and time again. The question of how Mongolians maintain their culture as society changes is answered here. They had suffered a generation of cultural suppression during socialist times under Russia. They have lost a generation knowing the Mongolian script in favor of Cyrillic.²¹ But even in the apartment blocks far from the countryside, I see evidence of this Mongolian Way."

It is true Mongolians are incredibly resourceful and adaptable. Like the ger, they can exist in many contexts. But it is their intimate understanding gained through repetition that makes this possible. The daily sweeping of dust, tending to the stove and seasonal re-layering become a ritual of maintenance. The care of the toono, bananga and tension band become a cultural practice. Identity is accumulated through repetitive coping with flux.

In *The White Album*, Joan Didion writes, *"A place belongs forever to whoever claims it hardest, remembers it most obsessively, wrenches it from itself, shapes it, renders it, loves it so radically that he remakes it in his image."²²*

Here Didion acknowledges identity is a claim enacted through repeated remaking. In Mongolia, families remake space in their own image through daily negotiation with instability. The ger becomes the embodiment of Mongolian identity, as it collects soot on the periphery of the city that does not claim it.

Synthesis

The ger and its surrounding plot illustrate what Tim Ingold describes as dwelling as a continuing process rather than a completed form.²³ A ger is never finished; it is always being repaired and relayered. Over time it can be replaced entirely. Its meaning and stability come from these ongoing acts of maintenance rather than from any fixed architectural state.

Michel Serres helps clarify how these acts accumulate into residue. For Serres, to leave a mark: dust, soot, wear, repair, is to stake a claim.²⁴ The ger districts claim the city with a plume of smoke. The districts are defined by the sediment of repeated adjustments: patched felt, rusted stove pipes, warped fences, ash piles. These residues are evidence of occupation, authorship and survival.

Michel de Certeau further situates the district within the realm of everyday practice, where place is produced by the routines that unfold within it.²⁵ Paths worn through snow, the tying and untying of ropes. These small, habitual gestures create a spatial order that no masterplan dictates.

Together, these frames clarify the central argument: the ger becomes architecture not because it stands still, but because it is continually remade. Permanence emerges not despite flux, but through it.

Conclusion

The ger districts of Ulaanbaatar reveal that permanence is not the opposite of flux but its accumulation. What appears as a fragile, portable dwelling becomes durable precisely because it is constantly remade. Dust settling on a fence line, smoke darkening rafters, felt thickened for winter. Each is a record of adaptation, an inscription

of identity that does not rely on symbolism but on unglamorous, persistent work.

In the city's fringe, where no master plan can keep pace with migration, the ger endures not as a relic of nomadism but as an active technology of survival. The ger becomes permanent by refusing to behave like a permanent object.

To analyze these districts is therefore to see architecture as a practice mediated by climate, economics and care. The residues that cling to its surfaces are not signs of decay; they are evidence it exists. In this way, the ger offers a counter-model to conventional architectural permanence: an argument that endurance emerges through movement, not stasis, and that identity is written most clearly in the traces left by repeated acts of dwelling.

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- 1 The *ger* is internationally known as the yurt, from the Russian *yurta*.
 - 2 Dulguun Tsogbadrakh, *Authentic Mongolia* (Little Nomad Publishing, 2025), 96. The author describes the vast horizontal line between sky and earth. A palette of cloudless blue sky and green grass.
 - 3 Lynn Brown, "The Changing Face of Mongolia," BBC, 2024, www.bbc.com/travel/article/20241101-the-changing-face-of-mongolia. 40 percent of Mongolians are nomadic.
 - 4 Joshua Bolchover, *Becoming Urban: The Mongolian City of Nomads* (ORO Editions, 2023), 33-34.
 - 5 Tsogbadrakh, *Authentic Mongolia*, 105-106.
 - 6 Bolchover, *Becoming Urban: The Mongolian City of Nomads*, 33-39. The author describes the shift from noble rule to soviet collectivization and privatization.
 - 7 Slab urbanism refers to the mass construction of large concrete apartment blocks, using industrialized methods to rapidly solve post-war housing shortages, symbolizing a functional and modernist vision for communal living.
 - 8 Bolchover, *Becoming Urban: The Mongolian City of Nomads*, 37.
 - 9 Bolchover, *Becoming Urban: The Mongolian City of Nomads*, 37. The author describes the negative effects after the disappearance of *negdels*, or agricultural cooperatives in the Mongolian People's Republic.
 - 10 A *dzud* is a periodic disaster in Mongolia in which large numbers of livestock die due to starvation, being unable to graze due to particularly severe climatic conditions.
 - 11 Bolchover, *Becoming Urban: The Mongolian City of Nomads*, 38. Between 1999 and 2001, over 11 million animals died.
 - 12 Joshua Bolchover, *Becoming Urban: The Mongolian City of Nomads*, 9. Ulaanbaatar saw a 280 percent rise between 1989 and 2020.
 - 13 Bolchover, *Becoming Urban: The Mongolian City of Nomads*, 39. In 2002, the government granted every citizen a 700 sq m plot by right.
 - 14 Historically, the strap was made from horse or camel hair.
 - 15 *Terlig* is a type of traditional Mongolian clothing, specifically a long coat that was designed to be practical for an equestrian lifestyle.
 - 16 The author describes Mongolian minimalism as an instinctive choice rooted in eco-friendly and clean living.
 - 17 *Aaruul* is a traditional Mongolian snack made from boiled yogurt.
 - 18 Tsogbadrakh, *Authentic Mongolia*.
 - 19 Bolchover, *Becoming Urban: The Mongolian City of Nomads*, 53-63. The author describes the problems in spatial logistics in the ger districts.
 - 20 Narantuul is the largest informal market in Ulaanbaatar. It is also a popular destinations for tourists. Among tourist it's know as a "black market" only because it is untaxed.
 - 21 Tsogbadrakh, *Authentic Mongolia*, 143-44. The author describes the shift from Mongolian script to Cyrillic. However, as of 2025, there are efforts to revive Mongolian script, becoming one of the official scripts in government documents, alongside Cyrillic.
 - 22 Joan Didion, *The White Album* (FSG Adult, 1979).
 - 23 Tim Ingold, *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill* (Routledge, 2000).
 - 24 Michel Serres, *Malfeasance* (Stanford University Press, 2010).
 - 25 Michel de Certeau, *The Practice of Everyday Life* (University of California Press, 1984).



**Quinta Monroy Housing:
Ownership Performed Through Incremental Permanence**

I had already been in Iquique for a few days. The cold breeze rolled through the coast and up the coastal cliff. From the sky you can see it all. *"The whole city is nestled between the Pacific Ocean and the steep sandy plateau. The city is incredibly dense, homes stacked side by side moving down the mountain morphing into apartment buildings and high rises along beach."* I describe the view paragliding over the city on July 16th. Sitting in the middle was Quinta Monroy. The next day, I would visit, *"The housing development could be easily missed, sitting down an alleyway, it forms a quaint courtyard."*

I did miss it. Passed it a couple times before I discovered it tucked away. Built in 2004, by now it had become completely integrated into the fabric. Legible only as a part of the whole. This was half a house? What was once a gap has been filled. Walls, windows, balconies, stairs and paint create tapestry where there was once nothing.

In what ways do architectural decisions determine who can claim, control or access space in the future? In the ger districts, plots were allocated and fences were constructed to assert ownership. But their stability is based on care. Ownership is built through incremental acts of claiming and modifying space.

Policy in Flux

Chile is the longest and thinnest country in the world: sandwiched between the Pacific Ocean and the Andes Mountains, starting in the desert down to the glaciers in Patagonia near the southern tip. Volcanic eruptions, earthquakes and tsunamis loom. The result is a landscape in constant change. Geographic isolation and steep topography affect settlement patterns and make formal urban infrastructure costly and difficult. Uneven land distribution and urbanization contribute to high demand for housing particularly for low-income populations.¹ Because of this, Chile has a deep history of informal urbanism and



Fig. 1. ELEMENTAL, Quinta Monroy Housing, Iquique, Chile, 2004. Quinta Monroy is defined by a varied material palette and undulating facade.



Fig. 2. Iquique, Chile. Typical urban fabric of the city, a collection of building materials complete the collage of the city.

self-built communities, particularly in response to housing shortages and economic disparities.

Informal settlements are defined by unstable occupation. Many low-income households occupy land without legal recognition. Unclear property rights create tension between state regulators and residents. This legal and social ambiguity suspend places in flux.



Fig. 3. Constitución, Chile. The coastline sits on one of the most seismically active zones in the world. Here, the water washes over the steep geology.

Quinta Monroy was one of these “informal slums” in the center of Iquique. There, Ernesto Monroy, acquired the site. As the city grew, Ernesto began allowing lower income residents to move in. They installed temporary housing. Over time, families subdivided their lots and expanded the neighborhood. When Elemental visited the site, the conditions were dire. Over half of the spaces had no light or ventilation. There was no running water or sewer system. Each family had a 30 sq m dwelling made from the reuse of shipping materials from the port.²



Fig. 4. Iquique, Chile. The view inside the informal settlement was congested and susceptible to seismic destruction. Photo by ELEMENTAL.

In 1998, Ernesto Monroy passed. And a Kafkaesque maze of judicial disputes over regulation, holdings and rental contracts ensued. Although none of the residents were heirs to Ernesto, they pleaded with the National Assets Ministry to receive property rights in the face of eviction. A place they built, loved and cared for ripped away. The long and frustrating battle created distrust and conflict amongst families. In 2000, the state-run *Programa Chile Barrio* was able to register and purchase the estate with the aim of creating a housing project that benefits all of the current occupants. Elemental was already looking on a typology that was something in between building and house.³

When they were awarded the project, they began with two restrictions they outline in *"Incremental Housing and Participatory Design Manual"*:

1. *"We accept the initial size of the house (36 sq m) as a way of staying within the budgetary framework for an eventual bidding process."*

2. *"We accept the incremental nature of the dwellings, using the incomplete condition of the constructions in our favor as a means to meet the costs; incompleteness was also a way to include programmatic diversity and personal expressiveness in a niche that otherwise for reason of cost was historically destined to monotony."*⁴

Aravena and Iacobelli suggest any middle-class family can live reasonably in a house 70 to 80 sq m.⁵ But what if there are insufficient savings or access to a mortgage to afford this standard? Real estate markets and public policies developed two solutions: reduce or displace. By building a smaller home or displacing residents to areas far away where land is cheap they are able to build with less money. When the building is reduced to just 30 sq m how can families grow? They compensate by expanding their homes, increasing risks of structural stability and leading to overcrowding. They write, *"A family has little power to compensate for the distance and displacement"*.

These restrictions became a new typology: *incremental housing* or *half a good house*. Instead of considering the size as a small house, what if it was simply half of a good house. Quinta Monroy became the prototype. Residents receive half of a structurally complete home, with a space next to it, equal in size, where residents can modify over time. It effectively channeled the resident's building capacity as they were already familiar with construction techniques from creating their original makeshift homes. Elemental's unique design mediates between immediate need and long term adaptability.

In Santiago, I visited the Museum of Human Rights and Memory (2007, Estudio America). It was heavy. Inside the perforated copper skin, the invisible is quietly revealed. The Chilean people suffered seventeen years under the US-backed Pinochet military dictatorship.⁶

During this time Chilean people suffered aggressive political suppression, numerous human rights violations and mass murder. After the end of the Pinochet dictatorship in 1990, Chile undertook one of the most aggressive neoliberal housing overhauls in the world. Instead of the state designing and building public housing, the government adopted a voucher-based subsidy model: a system that subsidized access to housing, not the housing itself. Families received partial subsidies and were expected to secure the rest through loans or savings.⁷

This shift reshaped the entire housing landscape. Private developers competed for subsidies, producing units at the lowest possible cost and on the cheapest available peripheral land. As a result, the state met its numerical housing goals, but the built product was small, standardized and spatially divorced from infrastructure, services and work.

Under this model, housing became less of a public service and more of a consumer object: a starter shell rather than a finished dwelling. Residents were expected to complete, expand and improve their homes themselves. By the time Elemental entered the scene at Quinta Monroy, self-building was the default architecture of economic flux. Their half-house model didn't create self-building; it formalized a system already produced by decades of neoliberal policy and economic precarity.

Self-building in Chile is not only an economic mechanism; it's a social one. Families often build in phases coordinated with relatives, neighbors and contractors. These patterns make architectural completion less a single event and more a long negotiation with circumstance.

Because Iquique sits in a major seismic zone, residents expand carefully: concrete block for the first floor, light timber for upper floors, added columns and improvised rebar cages. The incremental house becomes a record of how families navigate both aspiration and seismic

obligation. Elemental's structural frame does not prevent modification; it anticipates it, providing a safe backbone for expansion under conditions of risk.

Quinta Monroy became the first prototype in a series of incremental housing projects. Later iterations, from Monterrey in Mexico to Villa Verde and Los Presidentes in Chile, refined the balance between structure and void. The project's influence contextualizes Quinta Monroy not as an isolated experiment but as the genesis of a broader shift toward participatory housing. To understand how this architecture operates, we must look at the precise spatial logic of the 'half-house' itself.

Half a House

Each family received a 36 sq m home with a vacant space directly adjacent.⁸ But what half do you build? The half that residents are least likely to construct. The infrastructural organs: kitchen, bathroom, stair, structural bays and utility. This is the hard infrastructure of the home that sets a standard of habitability.

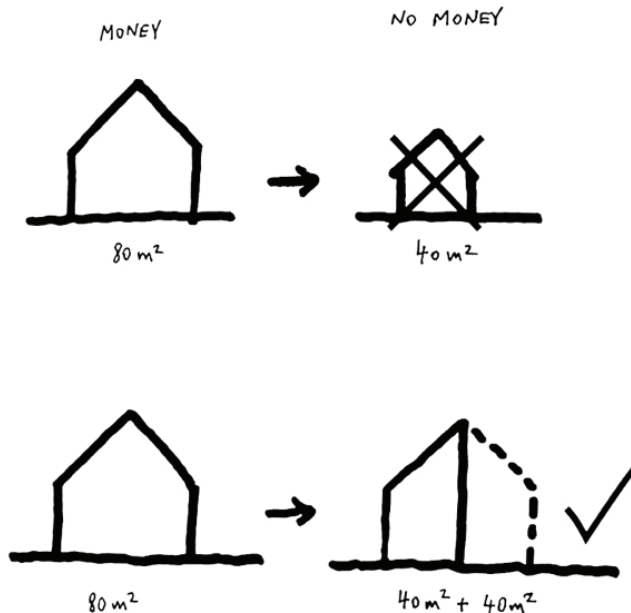


Fig. 5. ELEMENTAL, Quinta Monroy Housing, Iquique, Chile, 2004. The half a house concept and its potential to rethink affordable construction. Diagram by ELEMENTAL.

December 2004



June 2006



Fig. 6. ELEMENTAL, Quinta Monroy Housing, Iquique, Chile, 2004. Within two years of construction, the exterior and interior has been transformed by residents as they customize their space to their need. Photo by Elemental

EL PRIMER CASO DE ELEMENTAL: ELEMENTAL'S FIRST CASE

36 m²
 si la primera mitad de la casa costó
 if the first half of the house cost was
 US\$7,500

+

36 m²
 y la segunda mitad
 and the second half
 US\$1,000

72 m²
 el valor final supera los
 the final value is more than
 US\$20,000

=

Fig. 7. ELEMENTAL, Quinta Monroy Housing, Iquique, Chile, 2004. Additional value added by the residents building capacity. Photos by ELEMENTAL.

This spatial pairing is political. By building half, Elemental can navigate the strict fixed subsidy and shift the remaining value potential to the residents. However, the void is not neutral: It sets the terms for future authorship. It determines the boundary of expansion, but not its content.

The architecture is defined by a reinforced concrete frame with shear walls designed to meet Chile's seismic loads. This is important. Disasters often cause catastrophic structure failures in informal settlements. The threat is ever present. Walking through the city, I was constantly reminded of the devil in the ocean. Signs identifying evacuation routes, businesses erect signs marking historic disasters and tsunami mitigation systems looming over the coast. The robust frame capable of bearing future loads and future disasters.

The same structural clarity that protects also constrains. The grid defines where walls can attach, where expansions can occur and how stairs land. Every addition is tethered to Elemental's predetermined system. The freedom of the void is thus a channeled freedom. What appears open-ended is structurally and dimensionally choreographed.

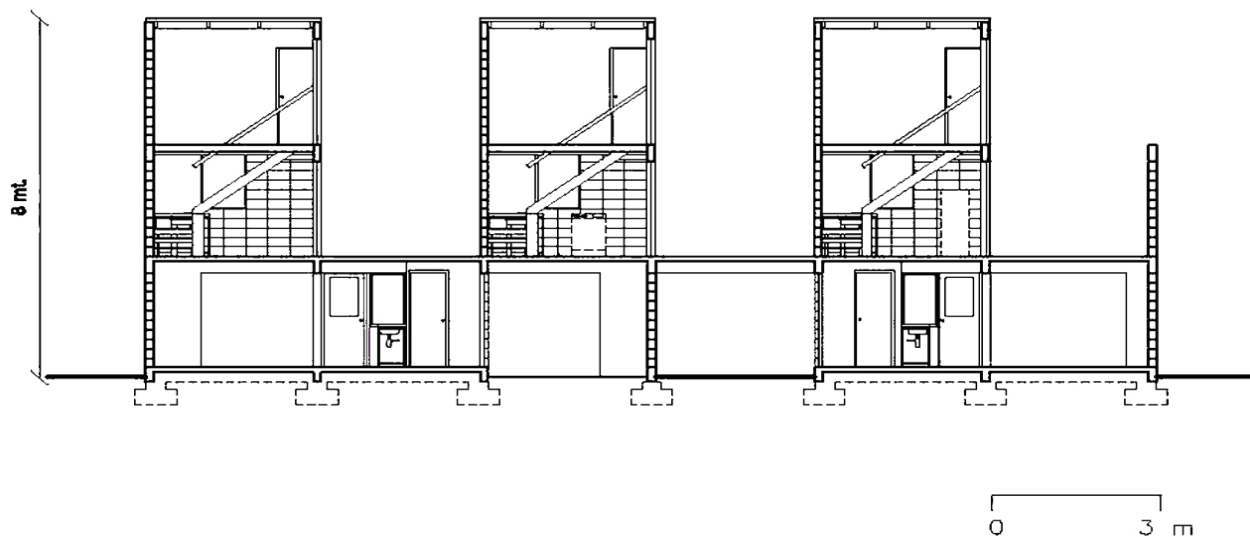


Fig. 8. *ELEMENTAL*, Quinta Monroy Housing, Iquique, Chile, 2004. The rhythm between building and gap over a plinth define the geometry of the space as well as future additions. Drawing by *ELEMENTAL*.

I walk off the main street and down an alley that branches into a central courtyard. A small community. In a meeting with Victor Oddo of Elemental, he described it like a classroom. Every classroom has about twenty students and everyone knows each other. This produces a collective spatial identity. The courtyards foster shared oversight that residents collectively define. However, now the courtyard had become a parking lot. Cars covered in tarps collect dust where children could play. The circulation also embeds a temporal logic: stairs are located to anticipate future upper floors; entrances align with potential commercial transformations; facades face inward, encouraging social cohesion.



Fig. 9. ELEMENTAL, Quinta Monroy Housing, Iquique, Chile, 2004. The courtyard filled with cars and pop-up tents.

This circulation pattern is a political instrument. It balances individual authorship with collective visibility. It prevents the complete privatization of space and anchors the project to a shared urban life. In this sense, circulation is the armature through which ownership becomes legible.

Elemental built with reinforced concrete, engineered timber, stucco, and prefabricated components: the most durable and expensive elements of the dwelling. Residents typically build their half using lighter, cheaper, more variable materials: masonry block, timber studs, corrugated metal, reused windows, salvaged panels. The result is a two-material system where architect-built structure and resident-built infill age differently and signal different forms of permanence.



Fig. 10. ELEMENTAL, Quinta Monroy Housing, Iquique, Chile, 2004. Exposed wall framing expose the layered history of the site.

But this duality also surfaces economic inequalities. Families with higher incomes infilled faster, using more durable materials and professional labor. Others expanded incrementally, room by room, using what could be acquired at the port or scavenged from construction sites. The architecture makes visible the uneven rhythms of economic flux.

Quinta Monroy must be understood as a time-based architecture:

Phase 0 (as built): concrete frame; finished half; serviced core

Phase 1 (first wave of expansion): simple infill walls; window and door openings cut into the void; first commercial fronts emerge

Phase 2 (5–10 years): upper floors added; balconies and shading devices; painted facades diverge into individualized identities

Phase 3 (long-term divergence): some units stabilize into fully formed dwellings; others remain in a suspended state of incompleteness; weathering, staining and repairs become a readable history of use

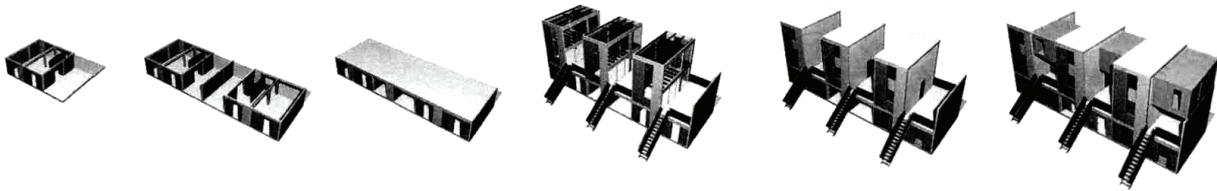


Fig. 11. ELEMENTAL, Quinta Monroy Housing, Iquique, Chile, 2004. The site begins with a concrete plinth and the half-house module. Over time residents fill in the gap. Diagram by ELEMENTAL.

This temporal layering; the sedimentation of labor, aspiration and economic reality; is the architectural expression of permanence in the project. It is not the initial concrete frame that becomes permanent, but the cumulative residue of incremental acts over time.

The project's openness also produces vulnerability. Poorly constructed additions show cracks and water infiltration. Lightweight upper floors shift under seismic events. Improvised waterproofing ages quickly. Formal and informal expansion collide. These failures are part of the architecture.

Moreover, the half-house model does not distribute architectural agency equally. Some families reach "completion" rapidly; others struggle to occupy the void at all. What was intended as democratized authorship becomes, in practice, a gradient of architectural inequality.

Quinta Monroy can be understood through its successors. South of Santiago, on the edge of the small coastal town of Constitución, lies Villa Verde Housing. On July 20th I wrote, *“This morning, I went to Villa Verde. The scale was larger than Quinta Monroy. It also closer resembled the pictures immediately following construction.”* In Quinta Monroy, I could barely see it out of its context. Patched, painted and expanded beyond recognition. But here, Villa Verde was surprisingly intact.

Part of this difference comes from context. Constitución is smaller, slower and more rural; Villa Verde sits at the periphery. The residents, primarily timber workers and their families, share a more uniform socioeconomic profile than those in Quinta Monroy.⁹ But the architecture itself also sets different terms. Villa Verde uses a timber structural system rather than reinforced concrete, and its pitched-roof determines the ways residents can expand. After the 2010 earthquake, Elemental provided more prescriptive templates for additions and more detailed guidance for safe expansion.¹⁰ As a result, the modifications are more consistent, the facade variations are fewer, and the visual field is less diverse. Flux still produces permanence, but here it is shaped by a tighter frame.



Fig. 12. ELEMENTAL, Villa Verde, Constitución, Chile, 2010. One of the units under construction, the exterior façade removed exposing the timber frame.



Fig. 13. A market attaches to the existing structure.

If Villa Verde reveals how incremental housing behaves in a rural, cohesive community, Los Presidentes shows what happens when the same logic is deployed at metropolitan density. I visited the project immediately after construction, before any resident additions had taken place. The cleanliness of the concrete, the uniformity of the modules and the absence of change gave the entire block a blank clarity, as if the architecture were holding its breath before the city began to act upon it.

Located in the southeastern periphery of Santiago, Los Presidentes relies on a density far greater than either Villa Verde or Quinta Monroy. Elemental achieved a car-free interior courtyard by compressing circulation to the site edges and stacking duplex units around a central void. This stacked duplex section, one unit rising upward, another extending outward, creates two distinct pathways for future expansion. Up along the roofline or out toward the courtyard. The section itself becomes the generator of incremental identity. Where Quinta Monroy's expansions read as accretions on the exterior, here the architecture internalizes the logic: vertical rising units produce taller silhouettes, while horizontal extensions push into the shared courtyard. This density produces a different kind of social field. The central space becomes a true communal surface.

Los Presidentes reveals another dimension of incremental housing: when deployed at high density, the architecture becomes less about façade variation and more about sectional negotiation. The stacked duplex form sets the parameters for future authorship while the courtyard spatializes collective life.



Fig. 14. ELEMENTAL, Los Presidentes, Santiago, Chile, 2025. Two days after construction. The courtyard is car-free being replaced by bike racks and outdoor exercise equipment.



Fig. 15. ELEMENTAL, Los Presidentes, Santiago, Chile, 2025. The untouched monolithic form days after completion



Fig. 16. ELEMENTAL, Los Presidentes, Santiago, Chile, 2025. Across the linear park, also a part of the project, sits a low-income neighborhood suffering overpopulation and lack of access to greenspace. Two problems the project hopes to solve.

Flux Acting on Form

Neo-liberal housing reforms post-Pinochet led to economic volatility. Irregular incomes among the most vulnerable led to an uneven and informal expansion. Catastrophic disasters continually forced residents to rebuild and patch existing structures. Without money, sweat becomes capital. Market driven construction costs led to improvisation with found material.

Latent potential for growth means families can grow and expand. New levels and rooms allow for multi-generational households, strengthening residents feeling of ownership over place. Economies flourish as residents develop shops, restaurants and services on the first floor. The restructuring of space mirrors the changes in social and communal life.

Like a quilt or collage, change is the constant in Quinta Monroy. As material markets change, the improvised material palette reveal the material flux. Evidence of care. And the solid framework Elemental provides is happy to receive it. On July 20th, I visited Villa Verde, *"Some first floors were converted to porches, vestibules and sometimes stores and restaurants."* Misaligned windows are evidence of unplanned infill. New floors change the rhythm of the façade and suggest a growing community within. Balconies project. Residents re-author their home with fresh coats of paint. Looking at it today, it is hard to imagine the rhythm of building and void that preceded it.

Ownership as Residue

On July 25th, I wrote, *"Elemental would prefer to give decisions of finishes to the residents. This sense of authorship creates the tapestry we see throughout the city as residents continuously customize."* Through modification, residents stabilize their right to

claim. Construction is more than a spatial tool, it's a social claim to space.

In Chile's incremental housing system, families technically receive legal title at the moment of delivery, yet full civic legibility emerges after. A voucher allocates a 36 sq m starter unit, but the house is not yet recognizable as a stable urban object. Only through expansion does the dwelling acquire the material permanence that municipalities can map, service and register.

In this way, legal recognition and urban visibility are not granted fully at the outset; they sediment over time. Built permanence precedes institutional permanence. The state acknowledges stability only once families have constructed enough of it. Legal ownership becomes a residue of material investment. Residents construct their way into legality, converting sweat equity into civic visibility.

Synthesis

John Turner's claim that "housing is a verb" provides the first frame: a house succeeds when it enables its inhabitants to transform it.¹¹ Quinta Monroy makes this operational by delivering a structure whose primary function is to be completed by its residents.

Hernando de Soto helps explain the legal dimension: titles and subsidies establish the baseline for ownership, but value is only activated once families materially consolidate their homes.¹² Legal recognition follows built permanence, not the reverse.

Keller Easterling's concept of "infrastructure space" clarifies the project's form.¹³ The half-house is a calibrated framework, party walls, stairs, structural bays, designed to organize future expansion. It is less an object than an operating system.

Michel Serres names the territorial logic at work: to alter something is to claim it.¹⁴ Every infill and extension becomes a residue of possession.

Together, these theorists reveal Quinta Monroy as a platform where legal rights, material actions and social investments accumulate into permanence.

Conclusion

At Quinta Monroy, permanence is not something delivered by the architect; it is something performed over time. The project endures because families thicken it until it reflects their needs. Ownership does not arrive in the moment of subsidy or title. It materializes slowly, through walls filled in, floors poured, balconies enclosed, and facades rewritten by a hundred hands.

What Elemental built was not a finished house but a scaffold for permanence: an architecture that accepts economic flux as a given and channels it into form. In this sense, Quinta Monroy is neither a departure from informal self-building nor a correction of it. It is a formal recognition of the way permanence actually emerges in conditions of instability.

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- 1 Felipe Livert Aquino and Xabier Gainza, "Understanding Density in an Uneven City, Santiago de Chile: Implications for Social and Environmental Sustainability," *Sustainability* 6 (2014). The article argues that "dwelling density depends on... socioeconomic conditions and the availability of urban attributes." The authors link uneven socioeconomic distribution across the city to spatial inequalities.
 - 2 Alejandro Aravena and Andres Iacobelli, *Incremental Housing and Participatory Design Manual* (Hatjie Cantz Verlag, 2012), 85–86.
 - 3 Aravena and Iacobelli, *Incremental Housing and Participatory Design Manual*, 86.
 - 4 Aravena and Iacobelli, *Incremental Housing and Participatory Design Manual*, 86–87.
 - 5 Alejandro Aravena and Andres Iacobelli, *Incremental Housing and Participatory Design Manual*, 14.
 - 6 Diego Gil, "Law and Inclusive Urban Development: Lessons from Chile's Enabling Markets Housing Policy Regime," *American Journal of Comparative Law* 29, no. 3 (2019): 25–26.
 - 7 Gil, "Law and Inclusive Urban Development: Lessons from Chile's Enabling Markets Housing Policy Regime," 29–37. The author described the implementation of subsidy programs and voucher system.
 - 8 Aravena and Iacobelli, *Incremental Housing and Participatory Design Manual*, 85.
 - 9 David O'Brien and David Carrasco, "Incremental Housing: Harnessing Informality at Villa Verde," *Archnet-IJAR: International Journal of Architectural Research* 14, no. 3 (2020): 350–51.
 - 10 O'Brien and Carrasco, "Incremental Housing: Harnessing Informality at Villa Verde," 347–48.
 - 11 John F. C. Turner, *Housing by People: Towards Autonomy in Building Environments* (Pantheon, 1976).
 - 12 Hernando De Soto, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (Basic Books, 2003).
 - 13 Keller Easterling, *Extrastatecraft: The Power of Infrastructure Space* (Verso, 2016).
 - 14 Michel Serres, *Malfeasance* (Stanford University Press, 2010).



**Louis Kahn's Parliament Building:
Authorship Reinscribed Through Political Flux**

Arriving to Bangladesh out of the silence of Mongolian Steppe, I stepped into another world. Dhaka is alive in a way that has its own gravity, you are never alone. The symphony of engines, horns and voices folding into a unbroken wash of noise. In that overwhelming density, the city keeps pressing outward, and every resident negotiates the question of what it means to carve out a space for oneself.

And then, Kabir's Garden. On July 5th I recount, "*A beautiful escape from the delirium of the city. In the quite was a little hortus conclusus, which holds a plethora of vegetation inside, bananas and white guava, for example. Outside of the garden is the neighbors farm, with cattle, cucumber, lettuces and much more.*" Here I felt a boundary not as separation, but as a kind of authorship. A line drawn in the earth that created a pocket of intention inside the chaos.

That shift from the overwhelming collective life of Dhaka to the quiet authorship of a garden, is exactly the condition through which I approached Kahn's Parliament. It is another enclosure in the middle of a city that churns relentlessly around it. But unlike Kabir's garden, its boundaries do not merely protect; they are constantly rewritten by political flux. The Parliament is a monumental *hortus conclusus*, one whose walls cannot fully contain the forces pressing against them. These forces make their way inside. Authorship of the parliament is no longer Kahn's alone, it has been repeatedly reinscribed through political flux.



Fig. 1. Dhaka, Bangladesh. Kabir walking me through his garden. We sit, talk and pick white guava before returning to the city.



Fig. 2. Dhaka, Bangladesh. Old Dhaka is filled with life. In this delirium, people find places of respite everywhere.

Political Flux

Bangladesh is a nation formed through rupture. Once part of British India, it became East Pakistan in 1947, geographically separated from West Pakistan by over a thousand miles, and politically oppressed through language, extraction and centralized power. The assertion of Bengali linguistic and cultural identity culminated in the Liberation War of 1971, after which Bangladesh emerged as an independent nation marked by trauma, instability and an urgent need to construct a civic identity from the remains of partition.¹ It is within this unsettled terrain that the National Parliament Building was positioned as a unifying symbol: an architecture meant to give material presence to the ideals of democracy before they had been fully secured in practice.

Louis Kahn was commissioned in 1962, before independence, by the Pakistani government, to design a legislative complex for what was then East Pakistan. By the time the building was completed in 1974, the nation it was meant to serve had changed entirely.² A foreign architect, working across political regimes and national transformations, authored a geometry intended to embody democratic order: circles, voids and monumental symmetry suggesting rationality and stability. Yet this stability was always aspirational. The building was conceived as a permanent civic anchor in a political reality that remained volatile. In this sense, the Parliament was less a reflection of national condition than a projection of what the nation hoped to become.

Since independence, Bangladesh has experienced repeated cycles of political flux: military coups, the assassination of its founding leader, periods of authoritarian rule, caretaker governments, contested elections and mass protests.³ Throughout these shifts, the Parliament

has served alternately as a stage for democracy, an instrument of state power and a symbolic backdrop for dissent.

Bangladesh is defined by water. The Ganges Delta, the largest delta in the world, covers two-thirds of the country.⁴ I remember the rain. It rained every day, deep puddles in the streets and sidewalk never dry. I became familiar with the choreography performed to navigate the streets without soaking my only shoes. Constant rain and coastal context makes Dhaka significantly vulnerable to climate change and climate migration, as rising sea levels and extreme flooding displace millions each year. Bangladesh experiences high levels of internal migration from rural areas in the delta to cities like Dhaka, which, according to the Migration Policy Institute, absorbs around 400,000 new migrants annually.⁵ As the urban population swells, the built environment must respond to both the pressures of density and the transient realities of its inhabitants. These forces co-author Dhaka and its Parliament Building.

The US State Department had issued a travel advisory prior to my visit.⁶ In its recommendations was to avoid demonstrations and political gatherings. But in my first visit to Dhaka University, I noticed protesters gathering around a traffic circle. Politics is inscribed on the streets. Art spills outside the studio onto the streets. Posters, banners, signs and murals coat the street. Barricades, barbed wire and police shelters are strung along the edge. In galleries I met artists like Rafiqun Nabi and Arham ul Huq Chowdhury, who engage architecture, politics and everyday life through sharply satirical and socially embedded graphic practices.⁷



Fig. 3. Dhaka, Bangladesh. Political art is all over the streets with images and text calling for freedom and peace.

What begins at the university does not stay at the university. In Dhaka, political energy moves physically through the city: along roads, across traffic circles and through barricaded edges. Carried by students who treat the street itself as a medium. The university is not a closed campus but a hinge between cultural production and civic pressure. The posters and murals spill out and become mobile, carried

by hand into the public sphere. This is a distinctly generational politic: driven by students who organize through phones, images, slogans and rapid assembly. What some have called a Gen Z Revolution here is not only digital but spatial: protest travels, accretes and redirects itself through the city's infrastructure. By the time demonstrations reach the governmental core, they arrive already authored by movement.

In 2024, student-led protests once again activated the precinct as a site of confrontation, with crowds pressing against its boundaries and challenging the authority it represents.⁸ This moment did not merely use the building as scenery; it reinscribed it as a political surface. In these repeated occupations of assembly, protest and governance, the Parliament's authorship has steadily migrated. What began as Kahn's monumental composition has become a continuously rewritten civic text.

On Documenting the Parliament Building

I had walked by the Parliament a few days before my tour. It's quiet presence. Like seeing a ghost looming over me. On July 7th, just one year and six days after the start of the July Revolution, I outline the current situation:

"On documenting the Parliament Building. Using my guides phone, I was able take some photos of one side of the exterior. However, photography and notes were not permitted from inside the building. Inside the cafeteria I was able to scribble down some notes and sketches from memory. This is a problem, however, because the internal circulation is extremely disorienting. Confounded by the fact that sight lines cross floors it can be very hard to understand this building without the help of sketching and photography. Once inside, my guide Rocky and I

were accompanied by two staff, one security guard and the head of security. They enforced a strict itinerary. Only visiting the library, mosque, assembly hall and cafeteria. Rushed between rooms. On the exterior we were only allowed to see one side of the entrance and the south plaza. We were not permitted to walk the grounds or see the surrounding red brick complex. After the July Revolution and the resignation of Sheikh Hasina, the people stormed the capital and took documents, including original Khan sketches, and defaced the interior walls.⁹ Currently there is no parliament.¹⁰ The building only functions as office space for government workers. A month prior to my visit, no one was allowed to visit.”

I was walking into a politically charged situation. Closely watched as I was guided though the empty palace.



Fig. 4. Louis I. Kahn, National Parliament Building, Dhaka, Bangladesh, 1962–1982. People gather around at the Bangladesh Parliament House on August 5th, 2024. Photo by EPA-EFE.

National Parliament Building

Kahn's Parliament is composed from an elemental vocabulary: circles, squares, triangles and voids; arranged with didactic clarity. These forms are not decorative; they operate as an argument about order itself. The massive circular light wells, the square chambers and the thick geometric cutouts in the brick suggest a language of permanence rooted in first principles rather than style. This is geometry not as composition but as conviction.

The ambition of this geometry is to appear timeless, to stand outside the contingencies of history and politics. By reducing the building to primitive forms, Kahn attempts to give democratic space a universality that exceeds any single regime. Yet this pursuit of transcendence is itself political. Set against a nation defined by instability and contestation, the geometry proposes a stable and monumental vision of permanence. In this tension between timeless form and political flux, the building's central contradiction surfaces.



Fig. 5. Louis I. Kahn, National Parliament Building, Dhaka, Bangladesh, 1962–1982. The empty Parliament looms over the city. The fence, erected in 2012, signals changes to access.

We arrived to the Parliament building by vehicle. The grounds closed to the public, we were not permitted to exit. Very different from Raymond Meier's photos of the building in 2002¹¹, filled with life and celebration. Now a fence surrounds the complex. Even by car I could feel the slow, monumental approach as we cross the grounds. The security team accompanies us as we enter though the worker entrance, and past the security checkpoint. Just passed the checkpoint is a small reception area. It was immediately apparent something happened. Smashed glass displays line the walls. All that remains are a few photography prints of the Parliament Building. The head of security mentions the protesters broke the glass and stole or burned the artifacts, including an original Kahn sketch. As we navigate the monument, the tightly choreographed tour is constantly disrupted by the sediment of flux.



Fig. 6. Louis I. Kahn, National Parliament Building, Dhaka, Bangladesh, 1962–1982. In 2002, Raymond Meier photographed people in the then open grounds of the Parliament Building.

The Parliament's monumental weight is carried by two primary materials: brick and concrete. Both are deeply rooted in Bangladeshi building culture, yet here they are elevated to a civic scale rarely seen in the region. The brick is not a cladding but a structural presence: thick, load-bearing and exposed. It gives the building its mass, its tactile density and its capacity to register time.

Sourced from river silt, the brick behaves as a living material in a delta environment. It absorbs moisture, exhales heat, stains under monsoon rains, and softens at its edges under constant humidity. Efflorescence blooms across its surface; mortar joints open and are repaired. The geometry remains exact, but the material never fully stabilizes. In this way, climate writes itself directly into Kahn's composition. The brick in the Parliament is continuously being rewritten.



Fig. 7. Mawa, Bangladesh. The edge of the Padma River is made from brick. Originally sourced from silt from the same river, it slowly returns to silt.

Water is not peripheral to the Parliament; it is one of its primary spatial instruments. The artificial lake that surrounds the complex performs multiple roles at once. It moderates temperature through evaporative cooling, reflects the building's geometry back upon itself and establishes a controlled perimeter that limits access. What appears at once as serenity is also a form of security.

The lake produces a visual and thermal buffer between the city and the building's interior order. Visitors cross water before entering, moving through reflection before reaching mass. In this way, hydrology becomes part of the building's political and climatic logic simultaneously. Kahn's civic monument is cooled, framed and protected by water.



Fig. 8. Louis I. Kahn, National Parliament Building, Dhaka, Bangladesh, 1962–1982. Water is pressed up against the monumental geometry of the Parliament Building.

If geometry grounds the Parliament's form, light animates it. Despite the rain the day of my visit, massive circular apertures, triangular cuts and deep vertical shafts draw daylight into the

building with extraordinary precision. Light carves volume, marks time and reveals the thickness of the walls.

In Kahn's hands, light becomes a material as consequential as brick or concrete. It is his most consistent signature: an authorship that cannot be appropriated as easily as form or surface. Yet even light is not static here. As humidity thickens the air and pollution softens contrast, shadows blur and the building's luminous clarity becomes conditional. Atmosphere interrupts authorship. Even light, Kahn's most transcendent device, submits to flux.

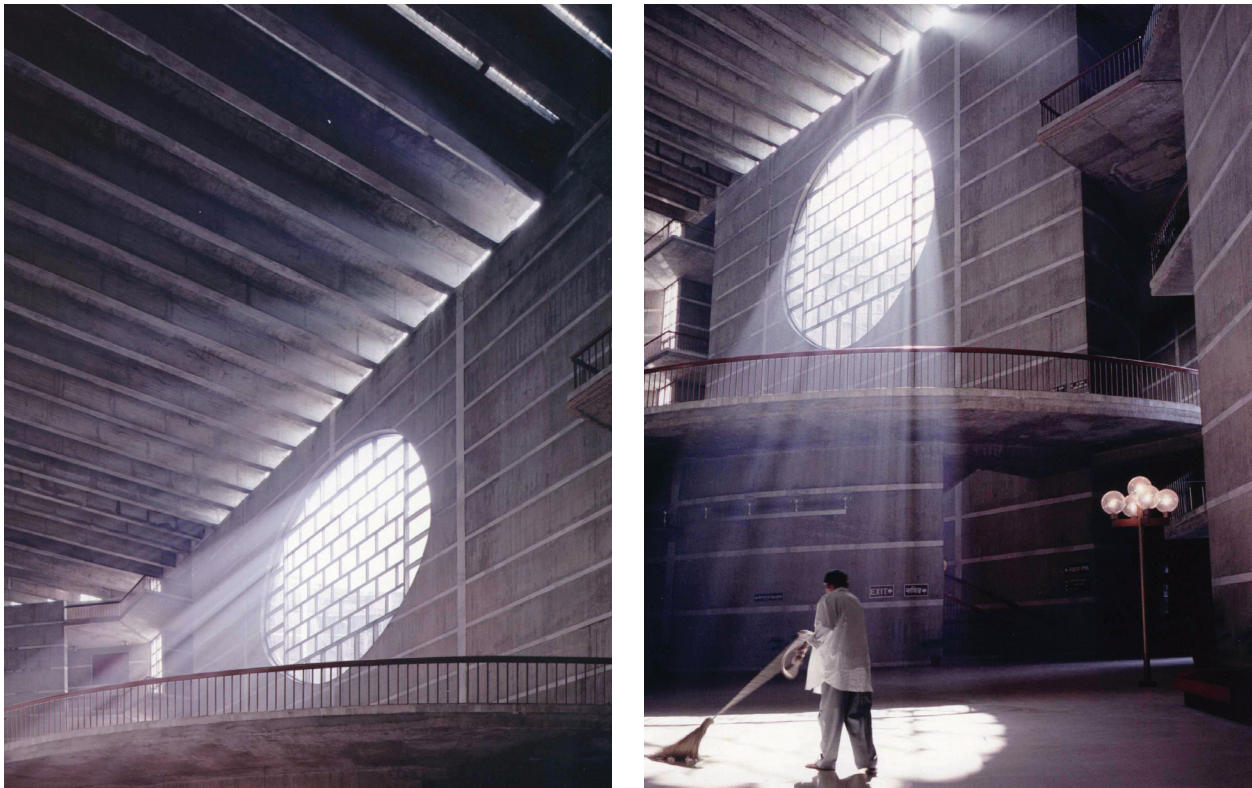


Fig. 9. Louis I. Kahn, National Parliament Building, Dhaka, Bangladesh, 1962–1982. Khan's light pours through the primitive geometric apertures, highlighting the ongoing maintenance of a structure of this size. Photo by Raymond Meier.

Internationally, the Parliament is celebrated as one of the definitive works of twentieth-century architecture: studied, photographed and canonized as a masterpiece of civic form. Locally, however, its reception is more complex. Kahn's Parliament is often described as a distinctly Bangladeshi monument: its brick drawn

from river silt, its lake shaped by monsoon logic, its light tuned to a tropical sky.¹² Yet in conversations with artists, students and residents in Dhaka, I repeatedly encountered hesitation around this claim. The building is revered and appreciated, but not always felt as culturally native.

This ambivalence points to a tension within Kahn's logic. The Parliament's material is local, but its language is abstract and universal. Its circles, squares and voids do not emerge from vernacular Bengali typologies but from a pursuit of timeless form meant to stand outside culture. In a nation whose identity has been forged through linguistic struggle, political rupture and collective mobilization, that aspiration to transcend context can feel misaligned.

For some, the building represents democratic aspiration rendered in stone. For others, it stands as an imported monument, monumental in scale yet distant from everyday civic life. If the Parliament reads today as Bangladeshi, it is not because of its original form but because of what has been written onto it since: through protest, maintenance, occupation and wear. Cultural authorship accumulates slowly, as a residue of lived history.

Flux Acting on Form

Bangladesh and Kahn are both inseparable from brick. On July 4th I wrote, *"As I walk around Dhaka the presence of brick is immediately apparent. Not only on the buildings of old, but new brick stacked up in the street. It is very much alive here as a structural building material."* The soft river brick ages with the place, edges softening and decaying and in the humidity. Nature slowly reaching equilibrium, reclaiming the geometry to granular silt in riverbed.

Fences, checkpoints, bag scanner and heavy security presence overwrite Kahn's intended openness. Every barrier I passed was residue of the political situation.



Fig. 10. Dhaka, Bangladesh. Brick is all over the streets in Dhaka.

Signs of the July Revolution was written on the walls. As we walked the grand halls, graffiti inscribed onto the brick walls reminds me how real this is. The assembly hall still smells of tobacco. My guide recalls seeing videos of people smoking cigars in the Prime Ministers seat in celebration of his removal.

The loudest reminder of the revolution was the silence. It was empty. The lack of people only exaggerated the monumentality. As we look from the top floor over the empty interior streets, the light poles and benches reveal its true scale. The scale of a city. In these quiet, elevated streets and interconnected sightlines become weapons of surveillance. I get the feeling I'm being watched. Khan's same choreography of openness, what Jane Jacob's coined "eyes on the street" is rewritten as control.



Fig. 11. Louis I. Kahn, National Parliament Building, Dhaka, Bangladesh, 1962–1982. The interconnected and layered geometry allows views into different worlds. Photo by Raymond Meier.

Authorship as Residue

Kahn's pure geometries, unified light and formal clarity establish the Parliament as a composed world: an authored place meant to stand the test of time, a constant set against constant political change. His architecture proposes permanence through form: circles that promise continuity, voids that suggest order, light that gives the building a steady inner logic. It is a vision of civic stability written in brick and shadow.

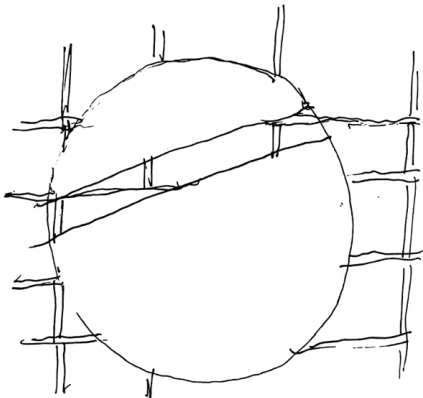


Fig. 12. The circular puncture into the interior façade reveals a staircase.

Yet this authored clarity does not remain singular. The state continually imprints new meanings onto the building. Every election cycle reinscribes the Parliament as symbolic capital. Security zones expand and contract. Access narrows and opens. The lake and plaza become calibrated political landscapes: sometimes sites of ceremony, sometimes buffers of control. What was designed as universal form becomes a surface for changing power.

Beyond the state, civil authorship accumulates through daily occupation. Workers, visitors, tour groups, janitorial crews and bystanders rewrite the building through routine use. The monumental figure of the Parliament is slowly metabolized into patterns of habit.

In moments of rupture, authorship shifts most visibly. During the 2024 student-led protests, thresholds were challenged. When crowds gathered at the building's edges, protest became a form of architectural inscription. The public did not just look at the Parliament; they wrote themselves into its meaning by testing the limits of its accessibility. In these moments, authorship migrated decisively from architect to state to citizen.

What remains today is a building authored many times over. Its permanence does not belong to Kahn alone. It emerges from the accumulation of political use, routine and generational pressure: authorship not as singular intent, but as sediment.

Synthesis

Albena Yaneva's claim that buildings should be understood as dynamic events rather than static objects offers a clear framework for reading the Parliament.¹³ Its meaning has never stabilized; it unfolds through controversy.

Tim Ingold extends this by insisting that making does not end at completion.¹⁴ Kahn's authorship marks only the first layer of

construction. Every repair and occupation continue the act of making, folding new intentions into the building's life.

Michel Serres provides the territorial logic beneath these shifts: to occupy is to claim, and to leave residue is to assert authorship.¹⁵ At the Parliament, political and civic actions sediment into material and symbolic traces. Authorship accumulates.

Together, these theories reveal the Parliament not as a finished monument but as an ongoing political process rendered in architectural form.

Conclusion

The National Parliament Building stands today as a structure that is permanently unfinished because it is continually rewritten. Kahn gave it geometry and light. Bangladesh gave it time, pressure, and use.

Authorship is not singular. It persists as the accumulation of political flux: layered through state power, civil routine and generational rupture. The Parliament endures by absorbing change. Its permanence is not the opposite of flux; it is the residue of everything that has passed through it.

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- 1 Hugh Russell Tinker, "History of Bangladesh," in *Encyclopedia Britannica*, 2024, www.britannica.com/topic/history-of-Bangladesh.
 - 2 Adnan Z. Morshed, *Dhaka Delerium* (Altrim Publishers, 2023), 89.
 - 3 Tinker, "History of Bangladesh."
 - 4 Akter Jakia et al., "Evolution of the Bengal Delta and Its Prevailing Processes," *Journal of Coastal Research* 32, no. 5 (2016), 1212. The Ganges drains almost all of the Himalayas, the most sediment producing mountains in the world, through the three main river systems: the Ganges, Brahmaputra, and Meghna.
 - 5 Maria Camila Duque, "Climate Change in Bangladesh Shapes Internal Migration and Movement to India," Migration Policy Institute, 2024, www.migrationpolicy.org/article/bangladesh-india-climate-migration.
 - 6 US Department of State, "Bangladesh Travel Advisory," 2025, travel.state.gov/content/travel/en/traveladvisories/traveladvisories/bangladesh-travel-advisory.
 - 7 During my time in Dhaka, I had the pleasure of meeting both of these artists and discussing the political text and subtext present in their work.
 - 8 Alisha Rahaman Sarkar, "How Bangladesh's Students Carried out World's First Gen Z Revolution," *The Independent* (London), 2024, www.independent.co.uk/asia/south-asia/bangladesh-protesters-gen-z-sheikh-hasina-overthrown-b2591824. After months of student-led protests in Bangladesh, young people, many from Generation Z, overwhelmed the long-standing rule of Sheikh Hasina. The protests began with demands to end the quota system for civil-service jobs and escalated into nationwide unrest. By early August 2024, demonstrators had stormed her official residence, forcing her to flee the country and effectively ending her 20-year tenure in power.
 - 9 "Students Clean up after Vandalism at Parliament," *Dhaka Tribune* (Dhaka), 2024.
 - 10 Sm Najmus Sakib, "Bangladesh to Hold Referendum on Constitutional Reforms on Election Day," *Anadolu Ajansı* (Ankara, Turkey), 2025, www.aa.com.tr/en/asia-pacific/bangladesh-to-hold-referendum-on-constitutional-reforms-on-election-day. Muhammad Yunus, interim leader of Bangladesh, recently announced that national parliamentary elections will be held in February 2026.
 - 11 Raymond Meier, *Louis Kahn Dhaka Construction/Louis Kahn Dhaka* (Edition Dino Simmonett, 2004).
 - 12 Morshed, *Dhaka Delerium*, 91. The author describes Kahn's search for inspiration from the "Bengal delta, its rivers, the green pastoral, expansive landscape, raised homesteads, and land water geography." The article describes the vandalism occurred following the fall of Sheikh Hasina's government. However, afterwards the students returned, cleaning up the exterior and interior of the Parliament Building.
 - 13 Albena Yaneva, *The Making of a Building: A Pragmatist Approach to Architecture* (Peter Lang, 2009).
 - 14 Tim Ingold, *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill* (Routledge, 2000).
 - 15 Michel Serres, *Malfeasance* (Stanford University Press, 2010).



**Tempelhof Airport:
Permanence After Flux**

On August 8th I wrote,

"Today, we spent the better part of the day returning to Tempelhofer Feld. This time, we enter through the southeast entrance. We are greeted with a grand staircase and a view looking into the park. The park is alive with a bar serving refreshments and snacks below the steps. Beyond there are people laying in the grass, grilling and having parties. On the large tarmac, people are cycling, roller skating, and this novel method of streetkite longboarding and windskating... whereby someone on a longboard or rollerskates is being pulled with a large kite. We stop to lay in the grass where I write this before taking a long nap. The sound of children playing, people's conversations, singing and music remind me of the orchestra I find myself in."

Read back now, the entry records something I could not see at the time: that the field had already been overtaken by uses that did not belong to its original program. The airfield no longer organized movement for aircraft, but for bodies. Infrastructure had become the surface.

Berlin is a city defined by layering: erasure followed by reuse, rupture followed by occupation, history overwritten rather than preserved. Across regimes, conflicts, closures and civic movements, its meaning has never stabilized. It has been rewritten repeatedly by state power, legal struggle and everyday users who now treat the airfield as park.

Tempelhof becomes the ideal site through which to read the full logic of this research. Here, material, legal and cultural residues operate at once. Identity forms through repeated use, ownership crystallizes through referendum and law and authorship disperses across thousands of civic actions. The airport's permanence does not

originate in its form. It emerges from the accumulation of what has happened on top of it.



Fig. 1. Tempelhofer Feld, Berlin, Germany. The massive tarmac and uninterrupted open space becomes a scaffold for users to make it their own.

Cycles of Flux

Tempelhof did not begin as an airport. Before aviation, the site functioned as a parade ground for military drills and mass assembly.¹ This origin already casts the ground as a surface for collective choreography, long before aircraft marked it with runways. Under the Nazi regime, this latent openness was transformed into one of architecture's most extreme attempts to script identity at the scale of the world capital.² Designed by Ernst Sagebiel under Albert Speer's master plan for *Germania*³, Tempelhof was conceived as Berlin's aerial gateway to a new imperial order.

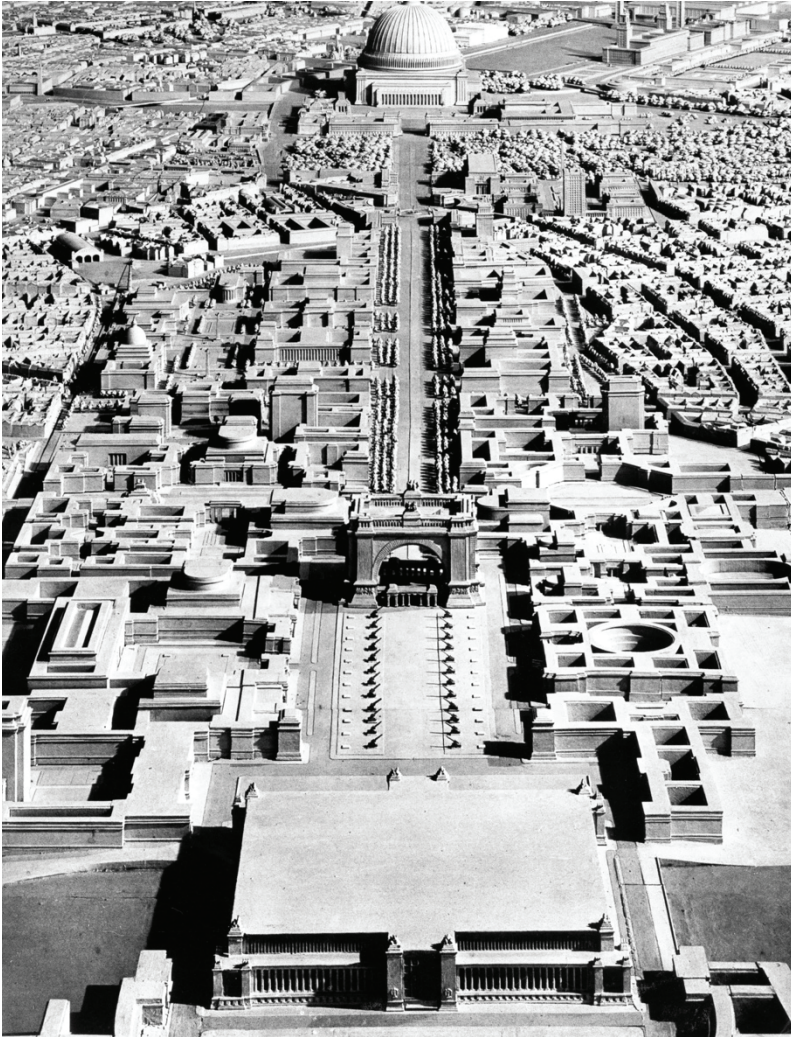


Fig. 2. Berlin, Germany. Model of Hitler's world capital Germania. Photo by CPA Media Pte Ltd.

Monumental, continuous and relentlessly horizontal, the terminal was the largest airport in the world at the time of its completion. Its endless façade and symmetrical rigor was more ideological than infrastructural. Planned extensions, only partially realized, would have staged both aviation and mass political ritual in a single continuous spectacle. Here, architecture was tasked with fixing national identity through scale, repetition, and global visibility.

That fixed identity did not hold. With the defeat of the Third Reich and the division of Berlin, Tempelhof was radically reinscribed. During the Cold War, the airport's role flipped: from fascist monument

to democratic lifeline. In the 1948–49 Berlin Airlift, the United States and British military overlaid the former parade and grass airfield with steel mats and then asphalt runways to handle continuous cargo flights.⁴ The same ground planned as a stage for imperial spectacle was rebuilt as infrastructure for survival: food, supplies and mostly coal flown into the blockaded city.⁵ The architecture of the terminal remained largely intact, but the surface it addressed, and the regime it served, did not. Material and political authorship shifted together: the field was no longer a stage for power, but a corridor of dependency and support.

After the fall of the Wall in 1989, Berlin entered its next phase of flux. Vast amounts of land, former industrial zones, military grounds and infrastructure, were suddenly released from their previous functions.⁶ Property, purpose and governance across the city were renegotiated almost overnight. Tempelhof continued to operate as an airport through this transition, but its role became increasingly ambiguous within a reunified and rapidly restructuring metropolis. By 2008, commercial operations ceased entirely.⁷ What followed was not clarity, but dispute: conflicts between federal and municipal authorities, between real estate interests and public advocacy, left the future of the site politically unresolved.

In 2014, this unresolved condition was formalized through a citywide referendum in which Berliners voted to halt all redevelopment plans and preserve Tempelhofer Feld as open public space.⁸ Following the 2014 referendum, the site was again radically reinscribed during the 2015–16 refugee crisis, when portions of the hangars and park were converted into emergency shelter for thousands of displaced people.⁹ This moment constitutes one of the clearest examples of legal residue in the city's recent history: public use, protest and occupation were

converted into binding urban law. Ownership and authorship shifted from governmental to collective.

This civic claim did not emerge in isolation. Berlin has a long culture of bottom-up urbanism, from postwar squats to cooperative housing, community land trusts and informal cultural reuse.¹⁰ These traditions trained the city to see vacancy not as absence, but as potential. Tempelhof, with its enormous post-industrial surplus land, offered physical room for this logic to accumulate. The sheer scale of the airfield allowed competing uses and identities to coexist.

For this reason, Tempelhof becomes the logical apex of this project. Nowhere else do cycles of political, legal, cultural and material flux remain so visibly layered in one continuous field. The site suspends these forces in tension. Permanence here is not inherited from monumentality, nor secured by ownership alone. It emerges through repeated contestation, adaptation and public occupation layered over time.



Fig. 3. Bplus.xyz (b+), San Gimignano Lichtenberg, Berlin, Germany, 2012-. Formally VEB Elektrokohle [electro-coal] Lichtenberg, was closed after the fall of the Berlin Wall. Many structures like these sit vacant in former East Berlin awaiting their next use.

Tempelhof Airport

The first time I visited Tempelhof, I got off the U-Bahn¹¹ a stop too late. The map told me I had arrived, but the entrance was nowhere to be seen. I walked several minutes along the endless string of bays until I was interrupted with the large central massing. On a later visit, I approached from the opposite end entirely, taking a different S-Bahn, emerging into an entirely different experience. One entrance delivered me to the terminal edge; another released me right onto open tarmac. The site does not announce a center. It absorbs you from wherever you arrive.

This misalignment between expectation and bodily arrival is not accidental. Tempelhof today is not organized around a single, legible point of access, but around an extended edge condition that stretches across districts. Its scale resists total comprehension in one frame. You do not approach the airport; you enter it laterally, through fragments of a perimeter that once functioned as a controlled boundary and now operates as porous civic threshold.

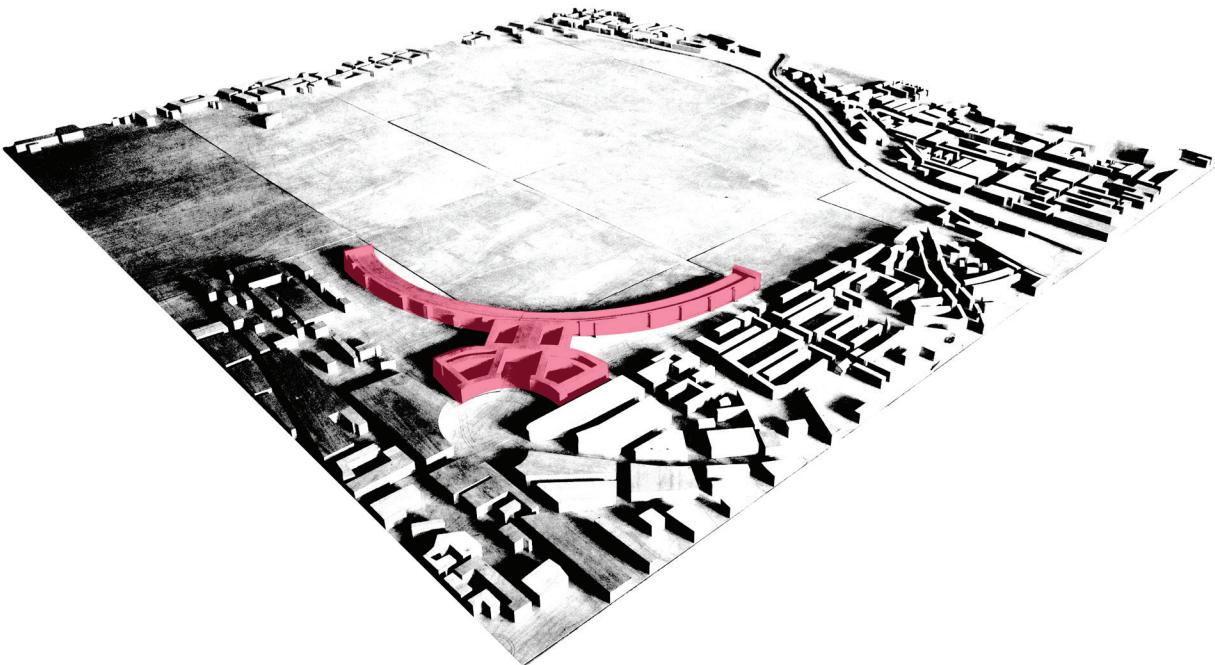


Fig. 4. Ernst Sagebiel, Tempelhof Airport, Berlin, Germany, 1936–1941. In what used to be the lanes of a US added bowling alley, a model represents the relationship between airport and field.

Only after being disoriented by its size does the architecture resolve itself: the immense crescent of the terminal revealed as a continuous datum behind the field. What reads from afar as a singular monument unfolds on foot, measured by duration.

Tempelhof is organized as a continuous spine that runs the full length of the crescent-shaped building, backing directly onto the airfield. Program is stacked and linear: administrative and passenger functions embedded within the thickened wall of the terminal, with aircraft hangar bays opening outward onto the tarmac. A vast projecting canopy extends from this spine, stitching terminal and airfield into one continuous architectural figure. This organizational logic produces a linear apparatus folded along the edge of the field.

The terminal mass is carried primarily by a reinforced concrete structural frame, providing compressive strength and monumental solidity. At the hangars and canopy, this concrete system transitions to long-span structural steel trusses and girders, allowing column-free expanses for aircraft movement. Together, concrete and steel operate as a spanning machine: a hybrid structural system calibrated for extreme horizontal reach rather than vertical height.

Tempelhof Airport sits on the northwest edge of the site. At the entrance, the originally planned circular public square is surrounded by four-story buildings. The monumental terminal hall looms over the 90 m long forecourt.

Changes in ownership and function are continually rewriting the circulation of the former airport. On August 6th I wrote,

"The tour guide pointed out a false ceiling they installed after WWII. At the time they cited heating costs, but she speculated it could have also been to remove the monumentality of the space. It could also be due to renovation costs. [Then] there we were, at the end of the tour inside the space above the false ceiling."

The scale was immense, you could imagine the effect such a narrow, long and tall space. The ceilings were almost as high the central hall, diminished only by the 10 or so feet. The entry experience altogether was unlike any other airport. It had dignity. In material, in presence in the city, in most ways."

Originally, movement through Tempelhof was designed as a controlled procession. The central terminal hall operated as a funnel, compressing bodies into a narrow, disciplined order oriented toward flight and spectacle. The architecture choreographed arrival and departure as acts of state power.



Fig. 5. Ernst Sagebiel, Tempelhof Airport, Berlin, Germany, 1936–1941. On the left is the space above the now capped entry hall. On the right is the current experience walking into the entry hall with the dropped ceiling.

After the war, that choreography was quietly rewritten. False ceilings, retrofitted mechanical systems and maintenance shortcuts flattened the original monumentality. During the Airlift, circulation shifted again: from ceremonial movement to continuous logistical flow. Movement became endurance rather than spectacle.

Today, circulation has been rewritten once more. As we navigated the central hall, traces of post-9/11 security infrastructure remained embedded in the floor, checkpoints without passengers, bottlenecks without queues. What was once an active spatial machine has become residue, an historic shell.



Fig. 6. Ernst Sagebiel, Tempelhof Airport, Berlin, Germany, 1936–1941. The main terminal hall, frozen in time, suspended in a state of liminality.

By contrast, circulation has migrated outward onto the field itself. The runway now carries the dominant movement systems of the site: cyclists, skaters, walkers, kite lines and long lateral paths cut across what was once restricted airspace. The choreography of the terminal survives as memory, while the choreography of the field

operates as public improvisation. Movement at Tempelhof is no longer centralized. It has been displaced.



Fig. 7. Tempelhofer Feld, Berlin, Germany. Informal program, such as community gardens pop up throughout the massive field.

A heavy stone façade covers the modern reinforced concrete construction. Windows repeatedly pierce the walls in a grid. An arcade wraps the first floor. These complete the external facing façade, symbolizing power and permanence by using classical and neoclassical style. However, the interior façade looking into the airfield looks forward. A modern steel cantilevered structure forms a 380 m long overhang. Although Nazi propaganda treated the “new construction” with hostility, the inward façade and internal construction followed the principles of New Objectivity¹² in material selection and construction technique.

Tempelhofer Feld is the same size as Central Park. But without many trees, its openness and interrupted views make it feel much larger.

From aerial imagery it is a massive void in the middle of the city. This scale enables simultaneous appropriation of space.

Flux and Residue Across Scales

At Tempelhof, flux does not arrive in a single form. It operates politically, socially, ecologically and infrastructurally at once, each producing a distinct kind of residue.

Political desires to consolidate air traffic to one airport led to many closure battles in the 2000s. After its closure and amidst an ownership uncertainty, developers lost the long legal battle in favor of preserving it as public space. The establishment of the refugee camps in 2015 involved overturning protective legislation.¹³ This put the airport back into contention, raising concerns the refugee camp could become a key to opening a backdoor to private high-end development.

Nowhere is Tempelhof's cultural overwriting more visible than in the unstable layering of symbols scattered across its interior and peripheral spaces. Nazi flags stripped away. Nazi eagles removed and replaced with American bald eagles that still rest there today. One regime overwriting the other.

In the central terminal, fake airline placards sit among authentic wayfinding signage, remnants of a film set or performance installation that blurs reality with simulacrum. It is impossible to tell what remains from its operational history and what is simulated.

A basketball court crown the top floor of the building. Its crest bears the "Berliner Braves" at its center: rendered in Native American imagery closely resembling the former Washington football team logo. Indigenous iconography is recirculated again within a German airport, effectively tethering it to US cultural identity of militarized occupation.



Fig. 8. US bald eagle replaces the original Nazi eagle.



Fig. 9. The "Berlin Braves" logo, sitting at the center of the basketball court.



Fig. 10. The original airport signage is infiltrated with fake signage, creating a blend of historic and simulated artifacts.



Fig. 11. A basketball court crowns the top floor of the airport.

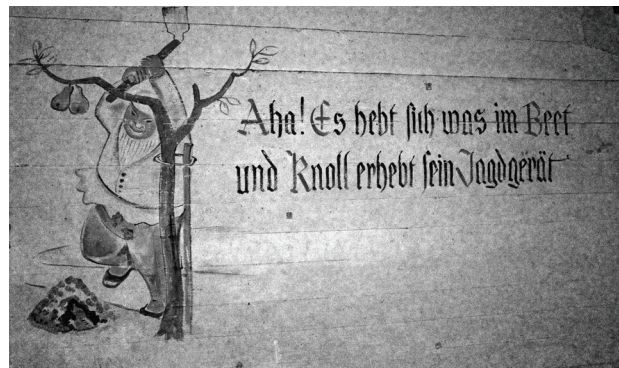


Fig. 12. The airport sits on sub-grade bunkers with German folktales lining the walls.

All photos of Ernst Sagebiel, Tempelhof Airport, Berlin, Germany, 1936–1941.

The basement is divided into small bunkers, with walls plastered in old German folklore stories and murals, thus grounding the site to its original context. Authoritarian shelter becomes narrative surface.

These are not isolated curiosities. They are residues of cultural flux: ideological symbols stripped, replaced, misused, aestheticized and recombined. Tempelhof does not resolve these layers into a singular identity. It holds them in suspension. The site becomes legible not through coherence, but through accumulation: fascist monument, American stronghold, civic park and stage all occupying the same architectural envelope. Here, permanence emerges from symbolic excess.

But today, the government has set its sights on preservation and stopping the overwriting. The refugee camp is entirely ephemeral as any alterations to the building are prohibited.¹⁴ This raises larger concerns over what historic preservation entails. While the structure is protected for its historical significance, its rigid conservation status prevents it from fully accommodating the evolving social and spatial demands of the present. This tension highlights a paradox: while the structure is protected for its historical significance, its layered uses is what makes it relevant.



Fig. 13. Tempelhofer Feld, Berlin, Germany. A white container village with Ukrainian refugees sits directly against the public park, separated only by a chain link fence.

Beside the refugee camp, the airport is largely vacant. But time presses on, and the building slowly unravels. During my tour, building material and equipment covered the tarmac as workers scramble to make structural repairs to the cantilevered overhang. Repeated disuse balloon maintenance costs and citizens begin to question if it's worth the money.

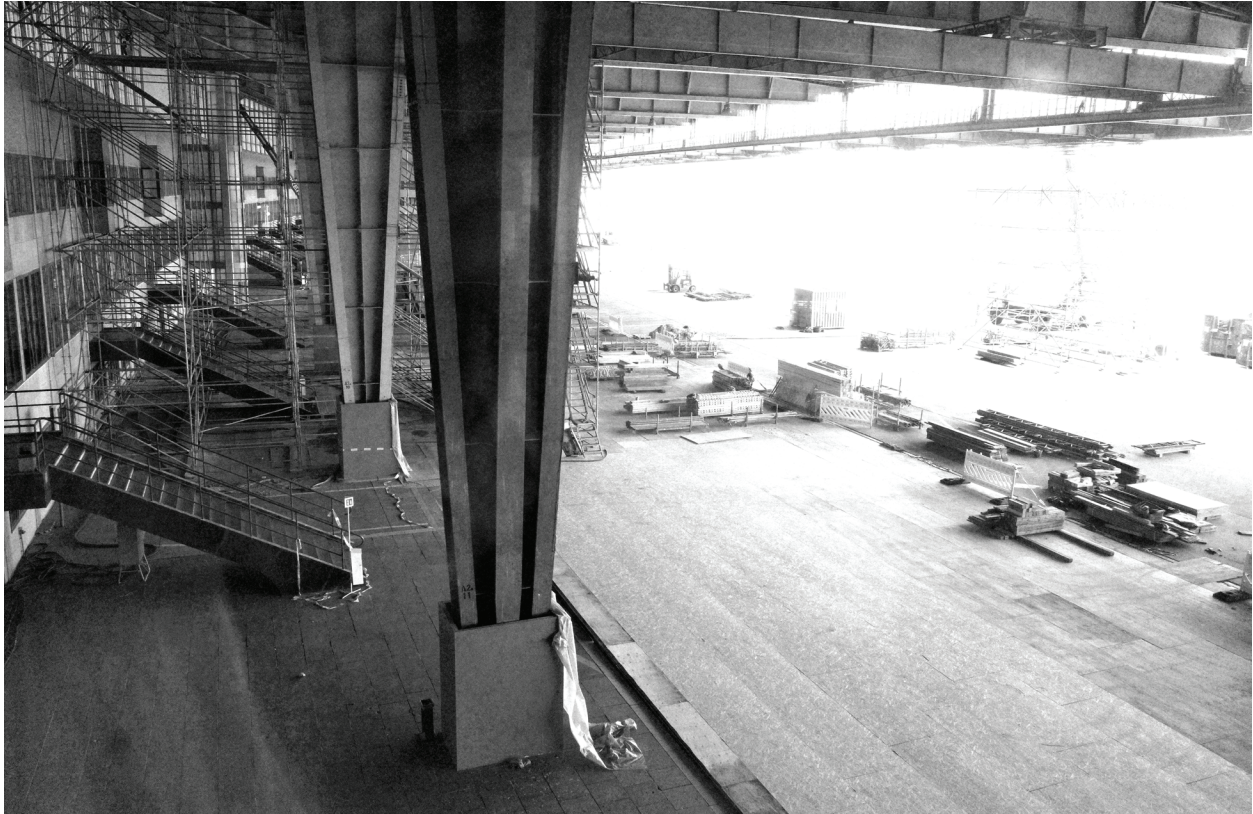


Fig. 14. Ernst Sagebiel, Tempelhof Airport, Berlin, Germany, 1936–1941. Equipment and material strewn along the tarmac as they make structural repairs to the cantilevered structure.

There are plans to revive the airport. Approved in 2020 as *Vision 2030+*, the plan calls for extensive renovation to enable future uses while balancing monument preservation with market-based operation and long-term public participation. It emphasizes diversity, experimentation and the coexistence of opposites, positioning the site as a space defined by unfinishedness and continual change across social, cultural and programmatic conditions¹⁵.

This would put the airport back in step with the park, becoming a unified image of collective will. Unlike the quiet of the airport, the park tells the story of now. Walking through the massive park, nodes of sport courts, community events, community gardens, art installations, bird watchers, kitesurfers and people simply enjoying the weather become a beacon for life. Many of these spaces are the result of improvised construction. As in Mongolia and Quinta Monroy, residents channel their build capacity to create community gardens with raised beds and improvised sheds. Here, residents can author the space, resulting in a deep sense of ownership.

Tempelhof as Synthesis: Identity, Ownership, Authorship

At Tempelhof, identity, ownership and authorship no longer operate as separate conditions. They collapse into a palimpsest. Identity is formed through repetition. Like in Mongolia, repeated use stabilizes meaning without ever being formalizing it. The park is practiced into existence, similar to the nomadic traditions in the steppe.

Ownership emerges through legal battles and uncertainty. The 2014 referendum converted public use into binding law. Berliners acquired the site by refusing its transformation. As was the case in Quinta Monroy, Legal permanence followed cultural permanence. What had already been claimed through habit, whether it be park or informal housing, became crystallized into law.

Authorship is dispersed across countless acts of inscription. Gardens, refugee shelters and improvised infrastructures rewrite the airport without completing it. As in the Bangladesh Parliament Building, no single author governs its meaning. Instead, authorship accumulates through modification, insertion and maintenance. Each act leaving a trace.

Here, flux is not an external disruption but the continuous condition of the site. Political regimes, legal frameworks and civic practices move through the body. Permanence emerges not from resisting these forces, but from absorbing them. Tempelhof becomes permanent precisely because it is repeatedly rewritten.

Yaneva describes buildings as events that unfold through negotiation rather than static objects.¹⁶ Ingold understands making as a process that continues long after construction ends.¹⁷ Serres insists that to touch is to claim, to leave residue is to occupy.¹⁸ Together, these readings frame Tempelhof not as a preserved monument, but as a continuously authored civic artifact, stabilized through accumulation rather than completion.

Permanence after Flux

Tempelhof does not survive because it remains unchanged. It survives because it has been repeatedly claimed: by regimes, by refugees, by skaters, by gardeners, by voters. Its permanence is not located in concrete or steel, but in the continuous conversion of action into residue. What endures here is not form, but inscription.

In *Slouching Towards Bethlehem*, Joan Didion writes, “It was the first time I had dealt directly and flatly with the evidence of atomization, the proof that things fall apart.”¹⁹ Tempelhof bears that evidence openly. Its history is not one of continuity, but of fracture, inversion and repeated loss of coherence.

Across Mongolia, Chile, and Bangladesh, permanence appeared in partial form: through identity, ownership and authorship, each emerging unevenly from instability. At Tempelhof, these strands converge. Flux thickens the fact that this place has existed. Permanence, finally, is not what resists change, but what remains because change never stops.

1 Krystin Arneson, "Tempelhof: The Single Site That Embodies Berlin," *BBC* (London), 2022, www.bbc.com/travel/article/20221031-tempelhof-the-single-site-that-embodies-berlin. The author describes "In the 1700s and 1800s, Tempelhof served as a parade grounds... Weimar-era soldiers marching in step as their brass instruments glistened in the sun. This flat, grassy expanse is also where some of the world's first pilots tested their aeroplane prototypes – including Orville Wright, who embarked on a record-setting one-hour flight from Tempelhof's lawn in 1909."

2 Claire Colomb, *Staging the New Berlin: Place Marketing and the Politics of Urban Reinvention Post-1989* (Routledge, 2012), 47–50.

3 *Welthauptstadt Germania* was the projected renewal of the German capital Berlin during the Nazi period, as part of Adolf Hitler's vision for the future of Nazi Germany after the planned victory in World War II.

4 St. Endlich et al., "Airlift," Flughafen Tempelhof, www.thf-berlin.de/en/history-of-location/symbol-of-freedom/airlift. During the Berlin Airlift, Tempelhof's original steel-matted runway failed under continuous heavy cargo loads, prompting the rapid construction of a new asphalt runway on a brick foundation made from war rubble, completed in just two months in 1948.

5 Endlich et al., "Airlift." Between 26 June 1948 and 6 October 1949, almost 278,000 flights and more than 2.3 million tons of freight was transported into the blockaded city.

6 Colomb, *Staging the New Berlin: Place Marketing and the Politics of Urban Reinvention Post-1989*, 83. The author describes post-reunification stresses, "Berlin lost most of its industrial base within a very short time, in particular the eastern part of the city. Between 1989 and 1998 the number of manufacturing jobs decreased from 400,000 to 130,000."

7 Arneson, "Tempelhof: The Single Site That Embodies Berlin."

8 Arneson, "Tempelhof: The Single Site That Embodies Berlin." In the public vote in 2014, as many 90% of residents in some districts voted to protect their new greenspace.

9 Arneson, "Tempelhof: The Single Site That Embodies Berlin." The author writes, "Beginning in 2015, the terminal and some of its grounds were used to house Syrian refugees, with more than 2,000 sleeping under the hangars' 52ft-high ceilings at one point. Today, a "container village" near the runway is housing several hundred Ukrainian refugees."

10 Colomb, *Staging the New Berlin: Place Marketing and the Politics of Urban Reinvention Post-1989*, 60, 309–10. Berlin's contemporary reputation for bottom-up urbanism is rooted in long-standing patterns of citizen-driven reuse and experimentation. After 1989, vast tracts of cheap, abandoned industrial and infrastructural land enabled informal cultural occupation, with artists, activists, and community groups transforming the city's "voids" into spaces of production and gathering. *Staging the New Berlin* notes that these practices emerged from a "culture of tolerance and experimentation" and that Berlin's incompleteness: its "voids, illegibilities, and erasures", became central to cultural life and urban identity. Earlier, in the 1980s, West Berlin pursued socially innovative planning initiatives that foregrounded community involvement, laying groundwork for cooperative models of urban development.

11 U-Bahn or *Untergrundbahn*, meaning "underground railway" is one of the transit systems in Berlin

12 MoMA, "New Objectivity," www.moma.org/s/ge/curated_ge/styles/new_objectivity. "The New Objectivity (*Neue Sachlichkeit*) emerged as a style in Germany in the 1920s as a challenge to Expressionism. As its name suggests, it offered a return to unsentimental reality and a focus on the objective world, as opposed to the more abstract, romantic, or idealistic tendencies of Expressionism."

13 Arneson, "Tempelhof: The Single Site That Embodies Berlin."

14 Arneson, "Tempelhof: The Single Site That Embodies Berlin."

- 15 Flughafen Tempelhof, "Vision 2030," www.thf-berlin.de/en/development/vision-2030.
- 16 Albena Yaneva, *The Making of a Building: A Pragmatist Approach to Architecture* (Peter Lang, 2009).
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- 18 Michel Serres, *Malfeasance* (Stanford University Press, 2010).
- 19 Joan Didion, *Slouching Towards Bethlehem* (The Noonday Press, 1990).

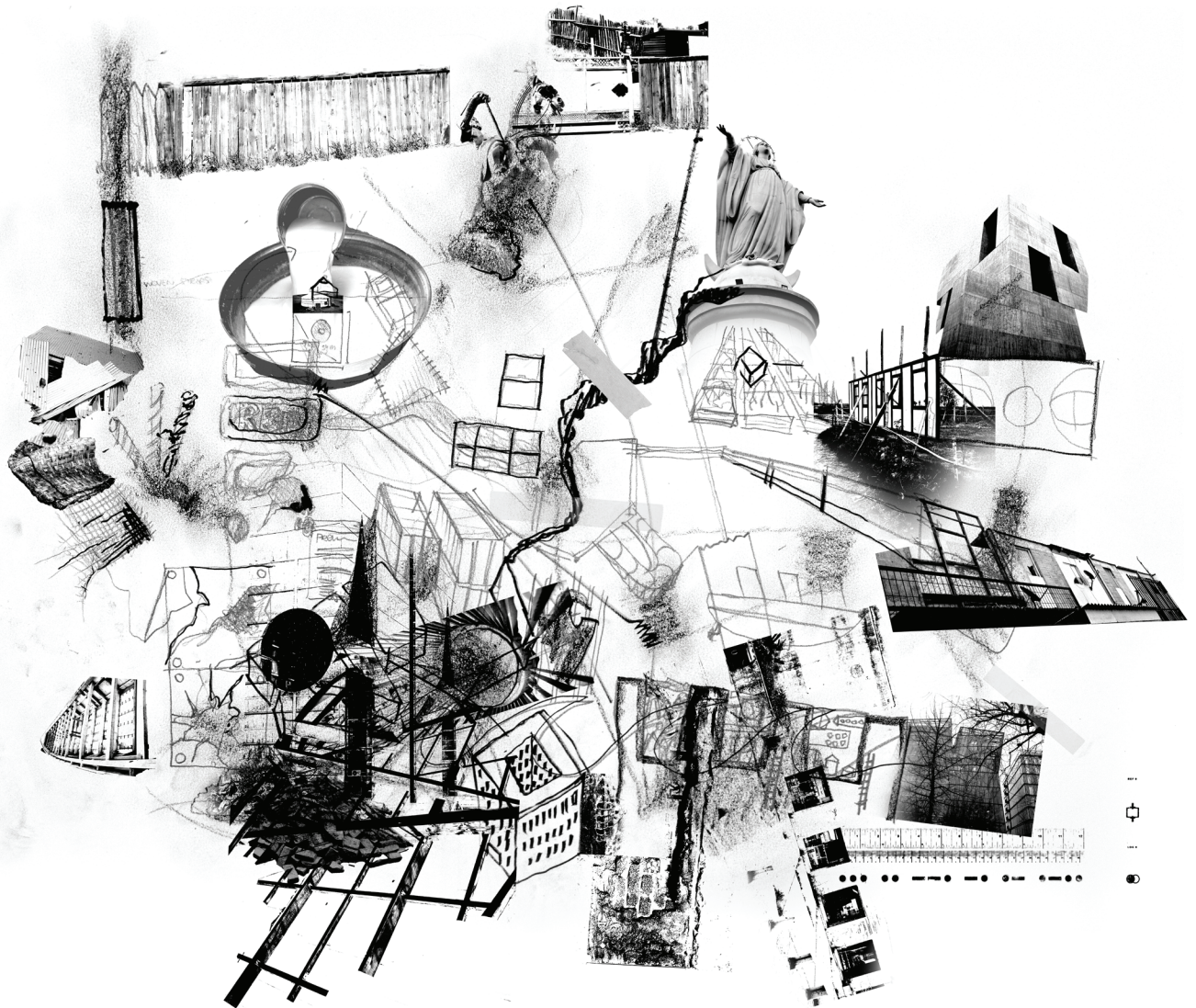


Fig. 1. Field of Residue: Material, Legal and Cultural Traces Across Sites

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June 18

I landed in UB and quickly made my way to a driver who approached me and knew of the hostel I was staying. I forget his name. He offered my candy, then a cigarette. I accept both unsure how to take them together. He knows my name because Michael Jordan and proceeds to make the connection to Michael Tyson. We made our way down the empty highway, quickly morphing into stand-still traffic.

Enkh has been working at the hostel for some time. She's young, probably my age, been to Rhode Island, New York and Mississippi. She did not like the people down in Mississippi. She's very curious about LA and my experiences travelling there visiting friends.

I walk around the city, pausing to watch a 2 on 2 basketball game and then a city square. I make my way to the state department store and meander my way to the top passing jewelry, high fashion and expensive housewares. At the top are some great cultural products and souvenirs as well as a wall depicting the history of the store. I eventually make my way to Sükhbaatar Square, where it is packed with temporary structure from pop-up tents to large tensile structures to gers. As it turns out the FIBA 3x3 women's world cup is happening this week. I stay for a little and watch Team USA warm up. It asl happens to be graduation as hoards of people in blue cap-and-gown pour out of a large building facing the square, quickly being bombarded with flowers from excited parents. I approach the gers which here are being used as resting spots to escape the sun. I don't get inside.

June 19

The road the ger district is a cacophony of cars and stand still traffic, then single lane roads and then rough gravel. Jiggur and I try to keep conversation as our bodies jostle left and right. Jiggur first takes me to the Ger Hub, and we discuss history of UB and ger districts and ger hub. We then walk by the recently built astronaut themed playground, water kiosk and met with a local community leader at his public shower house. He owns a grocery store nearby and a car repair shop and is looking to build a fountain next to Ger Hub.

From there we meet with a hardworking single mother of 4. We are here to see her studio where she makes high quality Terlig. For lunch we have yogurt, clotted cream over bread, milk curds and milk tea before we enjoy buuz, a large duming today filled with beef. I don't eat dinner. I make my way to the studio where her youngest daughter I has some books open. She's studying for her university entrance exam. She's already been accepted to university all she needs it's to pass the test. She wants to go into architecture school. Her other three daughters have impressive professions, doctor, lawyer and accountant. She is proud all of her daughters work in the field they went to school in.

The soft sheepswool of the winter Terlig. The lightness of the royal blue summer Terlig as I try it on. The loud whirling of the sheep processing wheel.

We finish with caramelized clotted cream, whose name is translated to something melted. It was delicious.

Finally we visit a ger making studio where a man makes high quality artisanal gers and double the market price, about 4 million MNT. He walked me though the process all the way to a finished ger,

which is housing for a couple of workers. I take religious notes.

We walk down from the Ger district onto a street which seems to mark the divide between ger district and city. Jiggur lives just over this road in a large Soviet era apartment block. She used to work full time but has recently switched to part time. Soon she will move to Indiana on Fulbright where she will study public affairs. Her husband lives in New York studying at NYU. we part ways and I taxi back to city center where my hostel is.

I walk around for a while, no destination. Before bed I speak with Unkh, a girl working at hostel. She tells me she saw a lesbian couple today, something she says is rare here. She adds that older locals generally disapprove, which she describes as the norm. Then she asks if she should dye her hair platinum. She mentions that the hostel staff are all teenagers (17, 17, 19, and even 15), which surprises me.

June 20

Today was hot and dry. Uneventful for June in UB. I walked to Naratuul. Commonly known as the "black market" only because the good sold are untaxed. Jiggur had told me here is the largest market for gers in the city. When I entered I was confronted with a cacophony of goods. Clothing, electronics, homewares, camping, bikes, generators and anything else you can think. I lost hope finding the ger market in sea of items. On my out I made a detour though a parking lot and discovered a string of storage containers filled with ger assemblages. Felt, wood structure, tarps, foam, lattice, rope, stoves. Here two men load up a truck as an elderly couple watch. I watch too. They load the wood pieces and put felt in between very carefully. I ask them about their recent purchase. This is a 6 wall ger that cost 6 million MNT. About 2,000 USD. It felt like clothing. Layers of felt feel like an extension of the terlig.

The walk to market was long and I saw a great transect of the city. The city is under construction. Towers in their unfinished state and the pains of construction whizzing by. There are noticeably more women and girls than men and boys. The young people are most stylish than what I see in the states.

June 21

Walked one hour to Zaisin monument. Beautiful monument with views to the city. Ger districts loom over the city as they crawl up the mountains to the north. No ger district to the south, too steep.

June 22

I walked north, the only direction I have not travelled and the least spoken about. The transition from city to ger district was almost a line in the sand, made really by a large road that divides the two areas. Decided to treat myself to a day at the sports club before my trip. Tomorrow I will begin my journey to Khuvsgal Lake.

June 23

Travel day. 12 hour bus to Möron became 15 because the tire in the bus broke in the countryside. The AC was not working properly making a hot long ride. Arrived in Möron at midnight.

June 24

Today was windy and hot, typical for Mongolia in June. I arrived to the family around noon. They

ate located in the belly of the valley a long ways up the right side of Khovsgahl lake. They greeted me and offered me milk curds, milk tea and the skimmed fat of the milk like a kind of butter. We sit for a while as they prepare lunch.

Then lunch and I play uno with some of the children. Afterwards a long nap. Then I help scoop dung into the wheel barrow and watch them wrangle a cow that is having some problems with worms. We end the day with some yogurt and more uno before I go to bed.

June 25

The soil here is dry and sandy. Very rocky and arid. By the lake the soil is soft and the grass grows into the sky. This is where the yak graze, although they call them cow is this is their primary stock here.

3 hour horse trek through the valley and into the forest where we met the reindeer people, an ethnic group living usually higher in the mountains this time of year. They are here to make some money selling tchotskys made of reindeer horn. A speed boat stops while we put up the horses and offloads a group of Mongolian tourists.

After a long nap I played frisbee with the children till sunset before helping separate the calves from the adult yak for the night.

June 26

This morning the sister of the husband and their family depart. They had already been here when I arrived. They live in Möron and do like many Mongolians living in the city do and stay with relatives that still live in the countryside.

Today we walk to the high point where we can offer stones or sticks and go around the pile one or three times and make a wish. The view was beautiful through crystal clear skies and glass water you can see the stones at the bottom of the lake. Water as blue as the sky is blue. Our guide, the youngest boy who's about 7 came with us.

I watched and then helped them turn the yogurt into milk curds by boiling the yogurt. Then came rain as we rushed to bring the milk curds that were drying outside back inside. There we played some uno. The oldest boy stirring the pot got distracted and the yogurt started to boil over. We all rushed to the pot and started blowing w oil air with our mouths as the hot wood fire burned beneath. As the sun became to set so came the rain we had been seeing in the distance. The long shadows of the Ger and out hut loom as the sun sink beneath the mountain range. But before a full double rainbow blessed our senses within the big open sky.

Tonight the wood stove was burning due to the cold but also to dry the clothes of the herders. The heat differs greatly from top to bottom. Standing it is very hot almost unbearable. At the level of the beds it was very comfortable. Near the ground was still very cool. Partly because this family is not using a wood base, in summer or in winter. The ground is only vinyl flooring atop the grass and arid soil.

June 27

I wake up early to sound of a motorcycle telling me they have begun milking the yak. This family milks the cows only in morning. They yield 40 liters of milk per day from their stock. The calves are within a large fence, about 5 times the size of their group, where they put them last

night. Adjacent is a larger fenced in area where the mothers are already lying down by the time I arrive. The process is as follows: First they let one calf into the pen where they find their mother and begin feeding. Then the oldest son ties the mother's front feet so she can't go far. My job is to then remove the calf from the mother and tie them up along the fence. Then the wife or the grandmother begins getting the milk. Once she is finished, I untie the calf where they feed again before laying down alongside each other. Once all of the calf have been moved they release them to the rest of the stock where they are chased out to pasture.

The oldest son wrangles one of the yak while they are still in the pen. They pull the yak into the field where the husband kills the yak by 3 axes of the head. They drain the blood, almost a full painters bucket. I help hold the yak as they wedge wood stumps to hold it belly up. They begin carefully removing the skin, a difficult job as the wire-like hair often gets in the way. Once the skin is off the stomach, the husband holds the skin tightly as the oldest boy hits the skin with the back of an ax to separate the skin from the ribs and back. The hoofs are cut and then snapped off and placed in a pile. Once the skin and hoofs have been removed, the process of dressing the yak begin. By this time the wife, grandmother and two boys have joined us. They carefully remove the chest cavity to the side on a clear plastic sheet and the wife and grandmother begin separating, cleaning and flushing out the entrails, etc. I help hold the intestine while the grandmother cleans out the intestines. Simultaneously, the husband and son begin dressing the yak, taking out the legs, ribs, tongue, etc before placing it on a canvas sheet. The pelt is taken to the forest where it will decompose. My guide tells me in socialist time this pelt would be sent to the factory to make clothes, but now much of this is wasted in the countryside. Once everything has been cleaned, they load up the car and we head to the ger. The grandmother takes some waste parts of the yak and brings it to the dog. After a short and reliable breakfast of skimmed milk fat over bread with salty milk tea, the husband and wife along with their youngest son head into town. There they will sell the meat while the youngest son takes English classes.

While oldest son is removing the last of pelt from the skull, my guide speaks with him and tells her he is in university for urban and land planning. I ask him questions I already know the answer, if he plans to stay in the countryside or move to the city after graduation. I can tell through the care in his work he's not going anywhere.

First, milk is boiled and the topmost part containing the fat is skimmed off. This has been our breakfast eaten over bread with sugar. It has a softer butter-like texture but with a milkshake layer included as well. Once cooled the milk is again put over the fire, this time with 2 scoops of yesterdays yogurt. The milk is aerated by lifting a small pot into the bowl and purring it at chest height. This action is repeated until warm. Then the mixture is removed from the fire and laid to rest.

The process of creating the milk curd is similar. Once yogurt begins to sour, it is again poured into a large bowl where it mixed up constantly with a whisk, this time to boil. Then the mixture is cooled and poured into a fine cheesecloth where it sits overnight. Sugar is added and the thick paste is squeezed out of a piping bag in

a pattern similar to a churro into a large mesh tray. These trays sit outside on wooden pergola until dry. This is entire process is done each day. The dried milk is a crucial food for the family to sustain themselves over winter.

While the milk and yogurt mixture is boiling we step outside of the now hot ger from the fire. The older brother is engaging his younger brother to wrestle. He reluctantly accepts. Two times they wrestle before the victor, the younger brother is asking me to wrestle. I accept and we hand the younger brother out things. 3 times I lose before stopping to check on the yogurt. The loser must walk past the victor who raises his hand up in the sky before smacking the losers butt as we pass each other.

Later two friends come to join us on motorcycle and we play some volleyball outside of the family ger. Before long they decide to head over to a neighbors area. It appears to be abandoned. The past few days I had seen no movement in the area. Only an empty cabin within a fenced in area and a small shipping container. We enter and find a rectangle shaped with stones about the size of a volleyball court with two wooden poles sticking out in the center. The two friends unwind some rope from the tail of the motorcycle and tie it up as we play.

After lunch the brother and I set out to look for the calf who didn't come home the night before. He's worried he is hungry or cold or thirsty by now. We set out on the motorcycle and pass the herd looking to see if he returned to no avail. We go out looking at places that lost calfs favor with no luck. Suddenly we stop. He touches the ground looking at tracks. "Horse" he says. We keep moving. Eventually we find ourselves along the lake and stop to track along the water. We find droppings. He uses his boot to move the top layer to reveal the soft inside. "Two days" he says. We both reluctantly move up the hill. Up the hill we find tracks of yak moving over an opening in a derail icy fence. We get back on the motorcycle and follow the path to a small opening. There we find the herd has moved here and that must have been the tracks we saw. We carefully look around as we head back to the ger. On the way back we see the mother of the calf alone looking for her baby.

June 28

Last morning in Khovsgal before the driver picked us up and takes up to Möron. Today the mountains on the west side of the lake are clouded. The cold air cuts through all my layers but the fire in the family's ger keeps us all comfortable. I am going for a last walk when the clouds come overhead and so comes the rain. The cold rain pierces my skin and into my heart. I am suddenly overwhelmed by the feeling to cry. This life is so beautiful I find myself not wanting to leave. I wonder what it would be like to move here. To live in countryside with a strong family. To experience the brutality of winter. The pain of death and the ecstasy of life.

But the truth is this is not my life. I would be running away. Away from the bad ills of capitalism, consumerism, gluttony. But also the good, my family and loved ones, the places I hold close to me. This life, the life of the nomadic herdsman, can only happen on the steppe. Out of harshness and brutality comes the need to move, to be mobile.

But still I find myself a feeling of closeness to the nomadic way of life. Living in Austria before moving to West Virginia. After college I

have not lived anywhere for more than two years. Not unlike the nomadic herdsman searching for greener grass and a more forgiving climate, I am searching for opportunity and community, my own greener grass.

I am reminded of the unforgiving countryside over breakfast. As we adore the two month old baby the mother recounts the story of her birth. When she was pregnant one of the yaks kicked her stomach. They thought they lost the baby. Then they felt movement and rushed to hospital from an ultrasound quite a ways away. They deleted a heartbeat. As it happens, she had unknowingly been pregnant with twins and one survived. This was their miracle. Now they have 3 children. In Mongolian culture this is seen as a sting family. If you have one more, the government will award the mother a medal, a holdover from socially times still proving beneficial to maintaining population growth.

In Möron we take a walk to the grocery store which has a food court for dinner. On the way back we get lost in the sea of dirt roads surrounded by fenced in properties. Eventually we hail a taxi only to realize we had turned around two blocks from our guesthouse.

Möron has a population about 40,000 and is the 5th largest city in Mongolia. It has a small city center with a grocery store, apartment buildings and many hotels. Otherwise, the majority the city resembles the ger districts in UB, with dirt roads surrounded by fenced in yards. Unlike the ger district, many of the house are simple wooden structures with metal roofs. This is due to the vast forest in the region, making wood readily accessible. This is the only region in Mongolia with extensive forest.

A typical city block is a dirt road with a long uninterrupted road with homes on either side. The other direction is extremely narrow just fitting two homes. Most of the city has electricity but no sewer or running water. The city center has both of these that pervade into the innermost urban condition.

June 29

14 hour bus from Möron to UB. Through endless nothing of this country. Herds of sheep, goat, cow, yak and horse scatter the landscape.

June 30

Today my tour guide from Khovsal offered to take me to the Terej national park and a hotel on the east side of the city. Her daughter accompanied us. They often go out of the city to explore the national park and use the large playground and open pavement for roller skating.

Terej has many tourist camps whereby people from UB come to spend a few days. The structures are get-like in form but have the characteristic glass protrusion poking out from the center of the ger. This indicates the modern ger. Although visibly similar the structure is completely different most notably featuring an open interior without the two poles holding the center. In the center of this city of gers is a large fee serving as an even space. This ger is structurally similar to the traditional ger with four large wood columns holding the center with layers of lattice, felt and canvas in the exterior. On the long drive to the other side of the city to visit another tourist camp, we drive past a neighborhood of concrete gers. They were from an abandoned tourist camp. But unlike the traditional ger, whose footprint is no more than the boot that Mongolians wear, these structures

remain permanently. Closer resembling a bunker in their distressed state, paint peeling off, doors off, this structure takes the shape of the ger but the ger is not there.

July 1

By now my body is sore from being flung between bus rides, car rides and long distances of walking. I take the day to rest, leaving only to go for a short walk to eat lunch and find tweezers for a splinter I got from sitting on the porch of the guest house.

By evening, the cool breeze has succeeded over the brutal totality of the suns heat. I meet my friend Mason, a Mongolian native I met through someone at the hostel last week. We walk through the city. We walk through the busy streets to well lit and even more well attended park. Even on a Tuesday, the night streets fill with people gathering, children playing and teenagers skating. We continue walking, stopping periodically to sit and talk. We go through the adjacent amusement park which is packed with life and children playing on and with everything imaginable. There is an event in the center of the park in anticipation of Nadam, the most important celebration in Mongolia which is set to begin next week.

We make our way through the city as he takes me through narrow passages navigating the city in ways I had not experienced until now. He's a lawyer working downtown and often goes on walks through the city at night.

July 2

Today is my last day in Mongolia. Thinking about leaving the beautiful place I'm glad I got to know and the wonderful people I met. I visited the Chinggis Khan museum. A new museum built only a few years ago. At the top was a massive gold Chinggis Kahn statue and a beautifully decorated innate hall. There is no doubt Chinggis Khan still have a great impact on Mongolia. It was only fitting to end here. I spent the night walking through the city again. Something that never gets old for me. There is no summary for Mongolia. So much left between the lines of this journal. So much not said. So much that dies in the space between my ears, I'm happy I could keep something. This place, caught between so many worlds, never ceased to amaze me. Landing in Ulaanbaatar you know this place is completely different from anywhere else.

July 3

Travel day. 8 hours of travel now feels light compared to the multi-day plane itineraries and 14 hour bus rides. Clouds lay low on the city as we land Dhaka. Thanks to the graciousness of Eneyatullah, I am welcomed on to the airport by a liaison who took to the VIP room, where I enjoyed a bottle of water while they went through my immigration documents. Leaving the airport I was taken to my AirBnB by Kabir, my driver during my stay in Dhaka. I was informed "he goes where I go". I was not expecting such a luxury during my time here.

July 4

Today we visited Old Dhaka. Dhaka University campus and the adjoining park. Ahsan Manzil. Most of time was spent wondering the streets of Old Dhaka, where I get lost in organized chaos that is Dhaka traffic. Stopping occasionally to look at a shop or enjoy a snack. As I walk around Dhaka the presence of brick is immediately apparent. Not only on the buildings of old, but new brick stacked up in the street. It is very much alive here as a structural building material.

My guide would often refer to the Mongolian ability to adapt and improvise as the "Mongolian way". This I know is true. Stemming from the Mongol empire, their ability to always be on the move and make do with what's at hand is something I have seen time and time again. The question of how Mongolians maintain their culture as society changes is answered here. They had suffered a generation of cultural suppression during socialist times under Russia. They have lost a generation knowing the Mongolian script in favor of Cyrillic. But even in the apartment blocks far from the countryside, I see evidence of this Mongolian way.

July 5

This morning I started my day low on cash. So I do what anyone would do, go to an ATM and brace myself for the fee. There was some issue with the machine reading my card. The security guard noticed me struggling and came over. He motioned for me to take my card. As I went to pull my card the machine suddenly pulled my card in and then showed the welcome screen. My eyes said all. Kabir and the security guards discussed for a while and then called someone who could translate the situation. Apparently my card is gone, not getting it back ever.

Once again, Eneyat came to the rescue even while he was in Singapore. He invited me to his office where someone would give me some cash for my trip and share a coffee with me. I truly don't know what I would have done without his help.

Afterwards we returned to Old Dhaka to visit Lalbagh fort and walk around the city. From there we visited Kabir's garden outside the city. A beautiful escape from the delerium of the city. in the quite was a little hortus conclusus, which holds a plethora of vegetation inside, bananas and white guava, for example. Outside of the garden is the neighbors farm, with cattle, cucumber, lettuces and much more.

Ark, the creative director for COSMOS, invites me to the theater last night with his two daughters. It was a bilingual puppet show titled "Indivisible Stories". After the show I spoke with a few people outside the theater discussing their work and my research on the parliament building. I ended the night a BOANK house where we talked for a while before going to dinner. Afterwards we enjoyed some sweets.

July 6

Rickshaw lovingly referred to as Tesla for its sound as it passes by. Mawa.

July 7

On documenting the Parliament Building. Using my guides phone, I was able take some photos of one side of the exterior. However, photography and notes were not permitted from inside the building. Inside the cafeteria I was able to scribble down some notes and sketches from memory. This is a problem however because the internal circulation it's extremely disorienting. Confounded by the fact that sight lines cross floors it can be very hard to understand this building without the help of sketching and photography. Once inside, my guide Rocky and I were accompanied by two staff and one security guard. They enforced a strict itinerary. Only visiting the library, mosque, assembly hall and cafeteria. Rushed between rooms. On the exterior we were only allowed to see one side of the entrance and the south plaza. We were not permitted to walk the grounds or see the surrounding red brick complex.

In the current state of the Parliament Building. That said, I am extremely lucky to get access to see the inside. After the July Revolution and the resignation of Sheikh Hasina, the people stormed the capital and took documents including original Khan sketches and defaced the interior walls. Currently there is no parliament. The building only functions as office space for government workers. A month prior to my visit, no one was allowed to visit. Luckily they accepted my request and I was able to see the object of my interesting in Bangladesh.

July 8

I spent the morning preparing for Santiago. In the evening I was invited by Ark Reepoon to a gallery opening at the Alliance Française de Dhaka. There I was introduced to many people. Artists and architects. Towards the end I saw two familiar faces. We had met the day earlier in the BUET art school.

In the evening Eneyat Kahn invited me to a dinner party at his house. His home was in a neighborhood where diplomats live. As we entered his fortress, a sign read "Honorary diplomat of Romania". He welcomed me with open arms while we chatted for a while before dinner. His home was beautiful with amazing artwork from Bangladesh artists covering every inch of the wall. From there I went straight to the airport on to the redeye to Hong Kong.

July 9

Travel day starting at 2 am. Landed in Hong Kong at 8 where I had a 13-hour layover before departing for Sydney

July 10

It is unclear when the 9th became the 10th. From Sydney, we headed to Santiago, after a stopover in Auckland. I arrived in Santiago around 2 pm. Lily, was already at the airport waiting for me.

It was noticeably easier getting to the city from the airport. A public bus took me within walking distance of the guesthouse. In the afternoon I walked around the city.

July 11

Santiago is very cold. Uneventful for Chile in July but it is clear I need to buy a jacket. I spent the morning running errands. Santiago feels a lot like Europe. Likened more to somewhere like Berlin than Mexico City. Food here is quite expensive, similar to the US and Europe so it was clear I would need to get some groceries. I also had to ship a few books I got in Dhaka that my back couldn't take any longer. In the afternoon I walked by NAVE arts hall by Smiljan Radic. From the outside it looks very inconspicuous. Easily missed in the colonial architecture that shapes the city. Also the tent atop was taken down, adding to the anonymity. I hope there is event while I am in town so that I may go inside.

July 12

We visited the Museum of Human Rights and Memory.

July 13

Travel day.

July 14

After breakfast, I walked down to the beach and layed down for a while. The sun roared between hiding under the thick cloud cover and peaking through. The wind came and went. The waves are big and the water is cold. The weather in Iquique is very consistent, at least during my time here. 61 during the day and 54 at night.

In the evening I walked into the city center. There, in the central square was a market. A sizable market with vendors selling books, toys, hand made jewelry touristic tchotchkes, and of course, empanadas. One vendor was a man by the name of Elton John, even showing his ID to prove it. He was selling handmade jewelry. His stall consisted of a single table with piles of raw stones and minerals graduating down to more processed jewelry. He travels throughout south and North America, and parts of Asia, collecting stones he then turns into jewelry. Here a bought a necklace that caught my eye. Lily found a necklace as well and beautiful pair of earrings.

July 15

La Tirana is a small town of just 800 people one hour into the Atacama Desert. Today, however, over 100,000 people flood the city for the La Tirana Festival. Held over 8 days, the festival marks the largest pilgrimage in Chile, similar to Carnival.

After arriving to the city by bus, vendors line the street as you approach the central square. In the streets approaching, dancers in beautiful dresses and costumes march on the street while brass and drum bands fill the air. In the central square, this is happening 5 times in the some place. Bands fight for space in the air as you are immediately confronted with the chaos of sound and dance coming from all sides. Throughout the day it only gets busier, as the once open sidewalk become completely impossible. In one instance, after enjoying a show for a while I decided to leave to rejoin my friend before realizing there were 4 dances happening to me in all sides. I tried to squeeze between the cracks to no avail. We left a few minutes in to the religious service. The packed square that was once sparsely populated with people just this morning.

July 16

The long night of yesterday followed me into the late morning when I woke up. Afterwards a car came and picked us up around noon to head to to ridge line of Cerra Esmarelda where we will take off for paragliding. There the wind was fast and brisk. We set off and spent 20 minutes in the air following the birds, clouds and turbulence. We flew over Dragon's dune and the city before landing in the beach. The whole city is nestled between the Pacific Ocean and the steep sandy plateau. The city is incredibly dense, homes stacked side by side moving down the mountain morphing into apartment buildings and high rises along beach. After landing on the beach, we walked along the beach to our hostel.

July 17

Today we went north through the city center and into the port area. The transition from the dense walkable city center to the car dependent industrial area to the north was immediate, with a large road that is very difficult for a pedestrian to cross marking the change. At the heart of the cacophony of massive storage storage tanks, tractor trailers and large stocks of storage containers was Mall Zofri. A massive tax free shopping mall with shops ranging from high end luxury to oversees dupes.

Outside of the industrial center, straddled between the city is the port. As one of two free ports in Chile, it is incredibly large and busy. Near the port is a popular fish market where we enjoyed lunch on the second floor. From there you could see the maze of fishing boats lining the inner shore. The large vessels carrying cargo are

on the other side of the peninsula not accessible by the public.

In the afternoon I visited Quinta Monroy. The site sits only a 20 minute walk from the guesthouse I am staying at in the middle or a lower income neighborhood. Completed in 2003, the site completely blending in with its context. What was once void has been entirely filled in. What was once grey has been painted. The housing development could be easily missed, sitting down an alleyway, it forms a quaint courtyard.

July 18

Travel day. In the morning we flew down to Concepcion before making our way to the control bus station. From there we took a bus to Talca, and from there to Constitucion. The evening cold cut through my clothes that were acclimated to the Iquique sun. 12 hours to travel all together.

July 19

Walked to the river. There is park created for tsunami mitigation. The park led us to the mouth of the river and the Pacific Ocean. Large rocks sit along the shore. Some of them we climb, some we observe, some we ignore. At the top of one, we can see a plant that seems to grind trees into mulch, likely processing for paper production. In the same sightline to can see this and the unforgiving waves crashing up against the tsunami mitigation concrete barrier.

July 20

This morning, I went to Villa Verde. The scale was larger than Quinta Monroy. It also closer resembled the pictures immediately following construction. I think this was because of the red paint remained mostly unchanged. Some first floors were converted to porches, vestibules, and sometimes stores and restaurants. Adjacent to the development was building that look like copycat structures, but they could be variations by the same firm. Afterward, I walked down the hill through an opening from logging. I returned to another development, typical of the housing on Constitution. Also, in proximity to the logging industry likely housing workers. People are seemingly homogenous.

July 21

Hiked from the guesthouse to a overlook. The overlook sits on a cliff and overlooks a beach with large geologic protrusions. I walked through a chain-link fence to a trail that seems to make its way down to the beach. The path leads to a logging road that takes me to a road running along the coast. I cross it and arrive at the beach. The sun peaks above the stone formations and lights up the salt spray and fog that coat the morning coastline. We make our way down the coast to the city, sometimes on the beach, other times pinched between the road and a guardrail. We passed a special place. A famous place where two protrusions are backed up to a cliff, creating a little cove. Between the formations the waves came up through the gap, sometimes touching the other ends. The haze of the salt spray only adds to the ambiance. I sit for a while.

We visited the library that sits along the central square. It's a very intimate space with high ceilings and big windows. It is three skewed trapezoidal structures with the central one being a staircase, with computes, books, and working spaces on either end of the second story. The first floor is reserved from some books and administrative work.

July 22

Today, we took a bus to Talca, then to Santiago.

July 23

Museum day. From Cerra Santa Lucia, you get a great view of the city. Museo de Artes Visuales (MAVI) was amazing. Some works often investigation topography and land resembled Architectural investigation. National Museum of Fine Arts was cool, but had a decidedly small collection compared to the scale of the building. The Feminist exhibition on performance art on the first floor was most inspiring.

July 24

In the evening, we went to BORAGO. It was incredible experience. The flavors were so new, most things I had never had the ingredients before. The 15-course menu took us to many places along Chile we could not aspire to see during our short 2-week trip.

July 25

I had lunch with Victor of ELEMENTAL. I shared with him a little about my research, and he showed me some things about the incremental project type. Just two days ago, the first phase of a brand-new incremental project was opened in Santiago that he redirected me to. Los Presidents sits on the verge of a "slum" in an area currently slated for development. The most interesting part of the incremental housing project is the code and ownership dynamics of the housing. It is clear I need to spend more time studying this aspect. But crucially, incremental housing projects are structured so that legal ownership belongs to the resident, creating housing security and a deep sense of ownership.

After our meeting, I walked nearby to the architecture campus (Campus Lo Contador Pontificia Universidad Católica de Chile, Facultad de Arquitectura, Diseño y Estudios Urbanos). It was densely packed with amazing and intimate architectures and experiences. But most notable was the library, which sits underneath the main plaza.

In Iquique I visited Quinta Monroy, the first incremental housing project. Now Los Presidents, the latest version of this approach. Los Presidents is most notable for the density achieved. Using two 2-story apartments stacked, they can achieve a great low-rise density. This fits into the urban fabric and creates space on the ground. Allowing for a courtyard without cars for the first time ever in incremental housing projects. They were also able to create a new road access and a linear park going up the spine of the project. Each courtyard serves around 40 people, or the scale of the classroom encouraging community within your courtyard. The grey building comes off as stark and imposing. This is in direct contrast of the other projects that are bursting with life and color. As time passes and the residents make it their own, it would be reasonable to assume these grey boxes will take the form of the rest of the surrounding neighborhood. For Victor, Ownership is an important topic in Architecture. Elemental would prefer to give decisions of finishes to the residents. This sense of authorship creates the tapestry we see throughout the city as residents continuously customize.

July 26

In the morning, we headed to San Cristobal, a large statue that sits on top of a ridge overlooking the city. Afterwards we went looking for the cultural center whereby we got lost when I realized I was mapping to the wrong building.

July 27

In the morning we visited the Gabriela Mistral Cultural Centre by Cristián Fernández Arquitectos (2010). It stands out in the city for its large mass and the orange corten steel façade. The first floor and the floor below are open to the public and feature galleries, a café, and a boutique store. The galleries feature everything from cultural dances and clothing to multimedia works from contemporary queer artists.

We spent the rest of our time walking around the city, exploring informal markets and cafes before returning to our guesthouse. From there we headed to the airport and parted ways.

July 28

I landed in Berlin around 11pm. Travelling from the airport to my hotel was infuriatingly easy. The train station sat just below the hoard of taxi drivers and families waiting outside customs. From there I took the train into the city and a short trip on the S-Bahn. I decided to stay at a hotel for the first two days because my back, which has been hurting since Bangladesh, had reached a breaking point. Walked 10+ miles a day though cities had taken a toll on my body, and it was clear I needed a good day of rest. Berlin is unique from the first three locations because I had been here a few years ago for a couple days to visit some friends while I was staying with family in Austria. I immediately fell in love with the city. The people, the fashion, the food, the music, the way you move through the city, with its weight on your back... it felt infinite.

July 29

Today I intentionally did nothing. I stayed in my hotel room all day only leaving at 2 am to enjoy a doner and walk around briefly to see how my back feels... much better. Even so late on a Tuesday, the city is breathing. People and techno fill the streets.

July 30

Today I moved into the guesthouse. It took a while as I waited for check-in. I spent the afternoon exploring the neighborhood and chatting. I also got groceries and Doner.

July 31

Today I met up with my friend Sophie and her friend Svea, who grew up and lives in Berlin. Sophie is living in Copenhagen. Svea showed us some cool spots to hang before we went to the Tchoban Foundation's Museum of Architectural Drawing. The building was interesting featuring drawings "etched" into the concrete façade. The museum was very small but nice. The first floor consisted of drawings for clients or commission. The second was "dream" sketches and drawings made either for commission or not.

August 1

In the morning I went to a Mies Haus just a few minutes from my walk. Haus Lemke. It was a very short from the guesthouse I was at. The house sits on a dense street with houses one side overlooking the other and apartment buildings on the other. Admission inside was free to view their current galley exhibition on Max Bill. I spend some time in the gallery and made my way outside taking the time to sit in the garden and joys the space and the weather. This humble house would be the last house he would design in Berlin.

Afterward I visited San Giamagno Lichtenberg, two abandoned towers that are the object of interest for B+ and architecture firm based in

Berlin. Remnants of the B+ interventions and installations litter the site. However, the larger structure appears occupied.

August 2

In the morning, I met up with my friend Sophie and her friend again for coffee. We also visit the Fahrsehturm as well as some other cool corners of the city. By the afternoon My friends Nico and Morgan arrive to Berlin. We eat amazing Bahn Mi and continue to explore.

August 3

Walked around the city. We stumbled upon a 1:1 wall mockup and re-use installation by a local architecture university. Most notable was a burnt pile of wood scaffolding and hay surrounded by caution tape.

August 4

Today we visited the 2 of the three museums in the KW Institute for Contemporary Art. One was closed. Very inspiring work. The design of the museum itself as well as the curation, especially of the main rooms, was also fresh.

August 5

Today, I showed Morgan and Nico the touristy must-see area of Berlin. We saw Museum Insel including the Berliner Dom and Mitte with the Fehrsehturm. In the afternoon we walked along the Canal in Kreuzburg. What as beautiful place. Lots of people enjoying the weather, talking, drinking, playing music and games.

August 6

Today, we toured the English version of the tour of Tempelhof Flughafen, the object of my interest. The scale was immense. We were late for the tour because it took us 20 minutes to walk to where we should be, or a whole U-Bahn stop away. The airport is massive. The scale of the building is dwarfed by the endless field. The large, curved hangar read more like a stadium... a sentiment that would read true as we explored deeper in the building. The tour only covered the main central terminal. The most notable space was the end of the tour. In the beginning we toured the vestibule before the main hall. The tour guide pointed out a false ceiling they installed after WW-II. At the time they cited heating costs, but she speculated it could have also been to remove the monumentality of the space. It could also be due to renovation costs. There we were, at the end of the tour inside the space above the false ceiling. The scale was immense, you could imagine the effect such a narrow long and tall space. The ceilings were almost as high the central hall, diminished only by the 10 or so feet. The entry experience altogether was unlike any other airport. It had dignity. In material, in presence in the city, in most ways.

Nazi flags stripped, Nazi Eagles replaced with American Bald Eagles. Fake airline placards sitting among real ones, from a movie set, or more likely a performance artist. Basketball court with the "Berliner Braves" cresting the center court with Native American imagery resembling the old Washington now Commanders football team logo. Bowling court on the top floor. Interstitial and liminal. Bunker for staff with German folk story quotes painted in calligraphy. Subgrade is bunker and second subgrade stores storage from the planes. Circular grass landing field for early planes. US paved landing strips replaced the steel plate runway during the Berlin Airlift. Double helix staircase.

Plans not finished. Big glass wall at the end of the Haupthalle overlooking the airfield. Seats on top of the cantilever holding 100,000. Stadium seats around the whole airfield holding a million. Café and restaurant.

At the end of the Haupthalle, there is a room off the restaurant where you can see all the hangars and the endless Tempelhofer Feld. The guide points out the hangars to the left that are being used to house refugees. Across the tarmac you can see white storage container-type units, also used for refugee housing. In the foreground you can see scaffolding all over the cantilever structure, as they continue the never-ending repairs of this massive structure.

Afterward we walked around Tempelhofer Feld. On our long walk along the hangars to the entrance of the park, we accidentally stumbled into the entrance to the refugee camp. The entrance was wide open but as we walked in, a guard stepped from outside the white container and redirected us. It seems the this is a common occurrence. Upon finding the opening of the park, just a few hundred feet up the road with an entrance about half the size. The park does a good job coming down to the scale of the city with humble entrances and huma scale amenities like sport courts, gardens and outdoor gyms along the periphery.

On the refugee camp. There is a large fence along the path we took into the park, dividing the park from the refugee camp. It seems upon our accidental entry, everyone is free to come and go. I can't speak for inside the hangar, but the white refugee housing units are exceptionally clean. Almost to the point of sterility. I wouldn't know they were being occupied if not for clothes hanging on the line and children playing in the grass street or courtyard.

Broken record but wow it is so large. A miracle it still exists for us. The lack of trees and the uninterrupted straight of the two paved runaways only adds to the scale. You can see so far. No matter how deep you go, you find the same loosely density of people. It is clear I need to return.

August 7

Today we decided to visit a few museums in our list. First, we visited the Neues museum. The building was a thoughtful renovation of a museums that plays the balance between preservation and contemporary needs.

Afterward, we visited the the Neues Artgalerie. The building was equally as consequential, and the art was so varied.. ranging from the work of Gerhard Richter (my dad's favorite) to political, land and feminist.

August 8

Today, we spent the better part of the day returning to Tempelhofer Feld. This time, we enter through the southeast entrance. We are greeted with a grand staircase with a view looking into the park. The park is alive with a bar serving refreshments and snacks below the steps. Beyond there are people laying in the grass, grilling and having parties. On the large tarmac, people are cycling, roller skating, and this novel method of streetkite longboarding and windsaking.. whereby someone on a longboard or rollerskates is being pulled with an large kite. We stop to lay in the grass where I write this before taking a long nap. The sound of people's conversations, the kids playing and the singing and music remind me of the orchestra I find myself in.

August 9

Sick. Rest day. Ate at a great hand pulled noodle restaurant.

August 10

Travel day. Spent the day connecting through Amsterdam where I had to run to make my connection. Coughed the whole flight. Arrived to Atlanta in the evening.

Appx. B: Field Photographs Documenting Travel and Observation

