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Abstract

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A Context and Housing for Students in Belfast.

Eugene O’Callaghan, SAUL 2011
Building Blocks

On any other scale but our own human one, everything is constantly moving, made of roughly the same material, and the edges between things are fuzzy. An existence so ephemeral, so small and unreachable, or so big and all encompassing is as good as useless to us as sensible physical force. We may feel the effects of small or large scale forces through a chain reaction, or as a climate, but these forces are, by nature, uncontrollable. Our corporeal range of motion and sensitivity is relatively constricted; the things that we can grasp, and use, and make sense of are roughly similar to the things that we have already made; materials are at hand.

Temporal jumps (associations across time) are more easily proposed than their spatial equivalents. People are invested in the spaces that they regularly use being conservative in form. A sudden, dramatic shift in space is alarming; it should accommodate change in a more gentle fashion, by increments. In temporal terms, we behave more radically. A common-place trip to the cinema involves an abrupt defamiliarisation from our temporal surroundings and the wilful embrace of a situation where narrative time can be shuffled, extended, or condensed according to the motivation of the film-maker.

Time is a radical, malleable, and unstable concept, yet history commands a considerable degree of authority over our actions and plans; people are creatures of habit. Space, on the other hand, is relatively solid, static, and definite, but easily disobeyed. The form that space is given by design is subjective; it is psychologically difficult to abstract yourself from the general story of man of which you are a part. In architectural terms, Le Corbusier’s perspectives of life in and amongst his superblocks-in-fields are no doubt dimensioned correctly, but the quality of life he pencilled in bore no relationship to the reality of the situation. Removing people from familiar dense communities and placing them in alien circumstances en masse, on the other hand, produced exactly the result you would expect from such a sequence. Time is radical, but unreliable and difficult to project. Space is relatively staid and amorphous, but precisely projectable.

The field that the architect works within is that of material organisation, but each project can obviously physically engage with only a small fraction of the material belonging to its site (in the widest sense of the term, that of all the contexts that could be described for a building). The material is ordered by differentiation, it structures a variety of spaces, which in turn produces a landscape of discrete objects. This is how the narrative path of a person is enacted in space; from place to place, landmark to landmark, object to object. Many of these paths thread the fragment of material (that is, a building) to all of its sites and contexts. But still, inevitably, only the dimensions and materials that form space are precisely controlled; the sum of all of the narrative paths could amount to something very unexpected.

The work of an architect is to project into the future, but it is an impossible task to forecast every possible narrative thread with a degree of accuracy (this is illustrated by Le Corbusier’s perspectives): “The map has no expectations of what will happen. It’s just informing you of the course you are on.” A plan has a finite range of effect. For example, it cannot show the entire Library of Babel (as it is an infinite space), only a fragment of it, and even at that the plan describes form and space, not the content of the books.1

In such a place as the Library, every possible discovery already exists. Robert Smithson described Passaic in the same terms; it contained “the memory traces of an abandoned set of futures” next door to New York. At some point, Passaic and New York were small towns whose citizens were planning for the future of their community; New York prospered, and beside it, Passaic did not. This difference is accounted for by shipping; New York’s land formation was closer to the Mayflower landing site, and suited such activity. Yet even in the 1960s, shipping was approaching a state of marginal economic importance to the city, and it is certainly peripheral now. Despite this, New York has maintained its power and status out of some sense of birthright, or expectation. It is dense and present; it has the resources to support nearly any venture, and at the same time it is not limitless, people know how to behave there.

Passaic, on the other hand, can be conceived as limitless, both temporally, as Smithson did, and as one of an infinity of places just like itself. So far, we have not dealt with the Passaic situation as either danger or potential; we consider it to be mere undifferentiated blankness.

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To generalise these previous observations, space is mute substance to be contained, and time is a narrative to be continued or confronted. Together, they are a context which offers a set of materials and possibilities. Forming a differentiated space (a new space) requires a generative, creative act in relation to this context. Anthony Vidler proposed the diagram as a solution: “It is not subject to history, nor does it hang over history. It creates history by unmaking preceding realities and significations, setting up so many points of emergence or creativity, of unexpected conjectures, of improbable continuums. It doubles history with a becoming.”

Further to this, the diagram offers a route out of language, history, and philosophy, one that leads to the mute matter of space; “the diagram organises an escape from pure linguistics into a deterritorialised spatial zone”. It is a sign that can be iconic (like a photo), symbolic (graphic, abstract, and aesthetic), and indexical (analysis, a catalogue) all at the same time. Most importantly, through this complexity, it can point towards a relationship in space that was not previously seen or verbalised.

The diagram was used by Foucault as a method of characterising history; most famously, he described the Panopticon as the diagram of nineteenth century social order in Discipline and Punish. This method has also been used within the history of architecture. Ludwig Hilberseimer narrated the “spatial concept” for successive ages. The archetype of a period can illuminate the essential characteristics of spatial differentiation of the age; and as a diagram it should generate new patterns of thought and associations.

The Gothic And The City Block

The Gothic cathedral was undoubtedly the archetypal building of its age; Frankl’s seminal book entitled Gothic Architecture contains nothing but cathedrals. As a building, it was both infrastructural (as a keystone for a town to develop around, a hall, and because of its embedded economic value) and also a private, calm, and universal space for the individual. With light filtering down from the top of a high, narrow space, the form created an atmosphere of the supernatural suitable to the dominant philosophy of the age. The construction of the diagonal rib vault enabled the spectacular dimensions of the space which were, in turn, broken back down by the division and moulding of each piece of stone within the vault framework.

No single building can match the embedded investment (in proportion to the economy of its site), but contemporary cities bear a similar relationship to their region or nation.

This medieval diagram suggests that, to us, building a city should be no more daunting or difficult a task than constructing a cathedral was to a thirteenth century architect/builder. He had general structural principles rely on, but really didn't
know if it would all work until the vaults were left up in the air to fend for themselves. We have ideas about cities, but in part because of their multiple and transitory characters, we only really know how they will behave when they are existing. The symbolic and indexical power of the cathedral suggests a part-to-whole methodology and a sensitivity necessary to successfully design a city.

In her essay The Thing, Elizabeth Grosz draws attention to a historical philosophical unease (on the part of Bergson in particular) about the total objectification of the world because it fails to "acknowledge the in-between of things, the plural interconnections that cannot be utilised or contained within and by things that make them possible". Making a thing is an inherently entropic action, some of the potential contained in a concept or idea is lost when it becomes a function adapted to the body, a specific object. However, the loss of potential is compensated for by the intelligence that the technological object harnesses; it increases our range of motion and allows us to devote our energies to the social and cultural intelligence necessary to position ourselves within a field, rather than spending time establishing the limits of the field and all it contains. While technology produces a seemingly chaotic, layered flow of information—simultaneously from nearby and far away—it also provides the tools necessary to organise it according to our needs. After that, it is up to us to show enough awareness of the present moment not to be overawed by new and multiple possibilities.

In terms of progress (as a series of technological leaps forward), the nineteenth century was a dynamic time, similar to our own. It offers the added advantage of perspective; its history is 'in the books' which allows us to judge the social and cultural positions of the age in relation to its technology. Throughout the last eighty years, the nineteenth century has been rewritten from this point of view, most notably by Benjamin and Foucault.

Foucault’s reading of the Panopticon has taken on a status approaching myth; while it does express an institutional tightening of morality and control associated with Victorian times, its real power is in the suggestion that it could be one of many structuralist tropes that collectively produce a coherent representation of a society. In The Arcades Project, Benjamin had already attempted a similar representation of nineteenth century Paris, although from a less abstract and more subjective point of view. In his 800 page (and counting) opus, he established Paris as an archetype for the nineteenth century city by looking at it very closely. Louis Aragon, the surrealist writer, was a contemporary of Benjamin’s, and shared his interest in the vibrant psychological density associated with alternative Parisien spaces. Aragon’s reputation may not be as high profile, but he offers a more appropriate model of the nineteenth century city that is between the simple discursive break in the path of history of Foucault and the exhaustive detailed minutiae collected by Benjamin; firstly, because of the scale of his work (Paris Peasant), and also more importantly, because he was engaged with an urban problem. When Aragon was writing Peasant (around 1924) the Haussmann Commission were approaching the end of their program of rationalisation; this was a done deal by the time Benjamin and Foucault were at work. For Aragon, the corruption, wastefulness, and bullying nature of the Commission’s members and actions were anathema to his Marxist beliefs; and the destruction of the underground, alternative, and seedy spaces of the city to make way for the plainness of boulevards disrupted his proto-Situationist interests. In Paris Peasant, he explores these issues in a flowing melange of writing styles at two sites; Buttes-Chaumont, on the edge of the city, and the Passage de l’Opera, which was to be blown up within the year so that the Boulevard Haussmann could connect to the Boulevard des Italiens.

Today, this exact point of connection is the absence of space that used to contain the Passage. Half a kilometre up the Boulevard Haussmann is the Galeries Lafayette, the ultimate model for a nineteenth century department store. Underneath it is a metro station, sewers, the obsolete pneumatic tubes of the telegraph system; all of the hidden infrastructure of which Haussmann was so proud. Then, one awkward triangular block south, is Garnier’s Opera; it was undoubtedly a very important diagram of nineteenth century society, and the polar opposite of Foucault’s Panopticon. In scale, form, and program, this short strip of Paris contains a set of indexical links to the nineteenth century city that can provide us with a compelling reference for our own circumstances in the city.

Garnier’s Opera is an urban behemoth; it is a block of the city that landed, shattering the coherent size and order that can be seen to the north of the Boulevard Haussmann. The blocks that surround it are fragments, cut at irregular angles that make awkward road junctions between them. Were it not for the size and weight of the Opera, its landing might not have thrown the fragments so far apart. The width of the roads and boulevards allows them to be connected


13 Louis Aragon, Paris Peasant (Boston: Exact Change, 1994).
so that the angle of built fabric at the joint is not impractically thin.

The traces of the Opera’s grand vertical landing some time in the past are complemented by the sense of a continuous pinwheel motion implied by its form. From an original generic square block, the Opera was sheared to make a parallelogram, then rotated so that it hovered in dynamic balance on its corner. Finally, to create façades and an interior, the block was chopped off at each corner and hollowed out. The sense of continuous motion is further enhanced by the asymmetry set up by the exterior stairway to the west side of the block; it adds weight to this side and implies leverage between itself and the pinned centre point of the building expressed by the dome.

The Opera’s interior presented two kinds of performance; the social milling about, and the theatrical singing in the auditorium. The traditional diagram for a theatre involves a front-of-house and a back-of-house that support a central auditorium space. In the Opera, this diagram becomes more complex because the servant/served relationship between the front-of-house and the auditorium is completely ambiguous, even opaque; and the technical and administrative spaces are programmatically subordinate to the auditorium, but spatially they envelop it.

This dynamic and layered complexity in plan (both internally and externally) is, to a certain degree, resolved and ordered in section; in the vertical dimension there is a plinth of vaulted catacombs, two and a half storeys of primary programmatic space, and a capital of alternately vaulted and pitched roof space. Horizontally, there are lines of structure that organise the entry, social space, auditorium, technical space, and administrative block as a sequence.

At the scale of the city, the calming influence of the section can be equated to the boulevards; the slightly chaotic dynamism created by the Opera is contained by the Boulevard Haussmann to the north, and the Boulevard des Italiens to the south. They gradually converge at an empty triangle of land that used to contain the Passage de l’Opera.

In *Paris Peasant* Aragon made a straight-forward description of the space and the programmatic content of the Passage, but at the beginning of the chapter, he made the most important distinction between the boulevard and the arcade; each type creates a correspondent type of person. The Passage had book shops and dark cafés, back rooms, and brothels. These places were described by Aragon as “secret repositories of several modern myths”¹⁴, so the people that inhabited such spaces were inevitably mythic and interesting to him. He had a sense that there was great depth and the possibility for the unusual to be found in shadowy darkness if you knew how to look for it.

The boulevard was a space that Aragon characterised as a mirror; blank, smooth, lacking weight or depth, and only capable of reflecting the image of the visitor back at themselves; the potential for the unusual to occur is nearly non-existent. The absence of the life that once happened there is today nearly monumentalised by the empty triangle where the Boulevard Haussmann joins the Boulevard des Italiens. Aragon was aware that the Passage’s viable days were coming to an end, and that this would inevitably lead to its abandonment. He described it in

order to advocate for its usefulness as a model for the alternative, which should always remain a possibility. At the point of its functional obsolescence, the Passage still contained potential, which is something that cannot be said of an empty triangular office plaza.

In the nineteenth century, for the first time, the ground came to be inhabited in such a dense, tight manner that there was a necessity to displace either people or their infrastructure; some more space had to be found. The displacement could occur upwards, downwards, or sideways; until the latter part of the age, upwards was severely limited by building technology; sideways would require longer and faster transport systems, which would need exponentially greater amounts of space again; both of these options were left to America to pioneer later on. So the nineteenth century city dug downwards.

Haussmann’s interventions.

Haussmann’s work was described as a program of pragmatic, mechanical services for the city; but it is just as easy to argue that his primary motivation was a social one; he used the Boulevards to take away the alternative spaces hidden in a dense city ground plane. He opened up light, air, and space at that level; but in order to achieve this objective, the sewers, the metro, and the telegraph lines had to be pushed underground into an area more dense than even the back lanes of the city. Haussmann’s vision was of a mechanical, inorganic body below that supported a smooth, mobile, and open space above:

“The subterranean galleries, organs of the great cities, would function like those of the human body, without showing themselves in the light of day; pure and fresh water, light and heat would circulate in them like the diverse fluids whose movement and maintenance keep us alive.”

He achieved this in terms of making infrastructure and a new type of space in the city, but the Boulevards did not wipe clean the shadowy alternative life of the arcades; it simply moved to the underbelly of the Boulevard itself.

As both representational and real space, the sewers defined an area separated from a clean and orderly society. For the top-hatted flaneur, they were a place to find a cheap thrill; organised tours through the sewers were a normal feature of cultural life in Paris. The women would be punted along midstream in a boat, while the men formed a protective guard alongside, on foot. Despite Haussmann’s best intentions, Paris refused to leave the sewers alone to fulfil their role as an inorganic service duct. The points of entry into the underground were immediately narrated as dangerous tears in the city fabric where the hellish underworld could seep through; this was expressed by Baudelaire in his characterisation of the underground as a monstrous prostitute in a fit of violent revolution, by pulp literature as a common paranoid description of a sneaky German invasion through underground passages, and by Guimard’s expressionist designs for the metro street entrances.

Haussmann’s formal move was to dig down and scoop out lines of space through Paris rather than to expand it, but the consequence of replacing density with openness was the displacement of a lot of people. This did register as an expansion; the ordered alterity of the arcades became the disordered alterity of the Zone, an amorphous ring around Paris where the underground resurfaced.

The Impressionist painters described the Zone in a manner close to how Turner described landscape; massive yet shrouded, threatening but sublime, engaging. The paintings produce the social tension that was inherent in Haussmann’s radical formalist excavations, but went unrecognised by him, at least in his public descriptions. They are stretched with an intensity of the gaze, but no focal point for it to rest on; it is like staring out of a car window at the pavement whizzing underneath you, and barely resisting the urge to open the car door.

Where once alternative lives took place in a coherent, central, and implicitly valued space, they were now pushed to the periphery, where the sewers resurfaced. Space that was stable became fluid and contaminated. What was supposed to have been the ultimate and complete solution to the problems of the city was only partially effective; discarded fragments of the city were littered around the periphery of Paris. This action merely shifted the city’s social problems and isolated them in a place where they would fester. Yet simmering tension has never boiled over into all out revolution, even though it was a historically likely event in Paris. Haussmann may have avoided this by carrying out a second order clearance and rationalisation of space; at Montfaucon, he transformed a shanty town dumping ground, with its attendant cultural oddities and dangers, into Buttes-Chaumont park. There is no space that cannot be made smooth and frictionless, but a corresponding edge will inevitably pop up some place else; in this case the sewers were extended underneath the park, and carried both gelatinous muck from the local slaughterhouses and the sewage of the city further east to the woods of Bondy, somewhere else that was both small enough and far enough away from Paris that it would not provoke

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17 Pike, Subterranean Cities, 243.
20 Pike, Subterranean Cities, 239.
a destabilising social reaction, at least for the time being.

Although they are considered to be largely positive contributions to the city of Paris, Haussmann’s ideas always pushed away the elements that didn’t conveniently fit. Over the course of sixty-five years at his scale of operation, the city managed to reabsorb what he cast out. In his plan for the Ville Radieuse, Le Corbusier took Haussmann’s diagram of urban reform by linear displacement and made it both radial and comparatively instant. In doing so, he unleashed chains of unforeseen fragmented social consequences in multiple directions, and we still live with the resultant mess today.

The smoothing of space created an inevitable temporal quickening; the metro produced a mobile population and normalised an experientially fragmented city; and the telegraph created a state of near simultaneous information across space. What the urban experience lost to infrastructure in density and altemarity was compensated for by the rush of collective simultaneity, speed, and a widely accessible sense of liberation provided by the new technologies of movement. Their benefits were significant for the individual, but the telegraph in particular had an exponential impact on large institutions and organisations;

“... starting in the 1870s large companies with several offices began to lease private lines for internal communications between different sites, since internal messages could then be sent for free, and large organisations could be centrally controlled from a head office. This lead to the rise of large, hierarchical companies and financial organisations— big business as we know it today.”

Nineteenth century Paris contained a larger intra-city telegraph network than even London (although most of it consisted of pneumatic tubes rather than telephone lines, they were still administered by the same service)“. Although the lines were buried under the Boulevards, they were of similar social importance. The spatial power that the Boulevards allowed a central controlling body to employ to maintain order was matched in temporal form by the telegraph, as well as spawning the

dominant business model of the twentieth century, it revolutionised methods of government. As news agencies distributed news nearly instantaneously, newspapers could publish and comment on an event or situation within a day“. This forced governments to be more expansive and direct in engaging with their territory and citizens.

The lines of infrastructure under the Boulevard Haussmann provided accessibility, choice, democracy, and personal mobility on the one hand, and on the other, they enabled the concentration of capital and extended the social control of institutions. Whether this situation was a prototype for the American Dream or an elitist conspiracy to hold the working class in one place by disguising the method of control as an illusion of freedom is a debate that continued into the twentieth century, and remains definitively unresolved; it is a matter of the interpretation of space and the relationships that it contains. Where this debate crystallised as a new cultural form in the nineteenth century is right where the Boulevard Haussmann leads us back to, the Galeries Lafayette department store.

The status of the radical new freedoms (outside or underground) quickly receded; the flaneur and the metro traveller were soon inhabitants of a utilitarian and normal street life once again. Inside, the department store made clear that it supported a new existence, with a new figure of inhabitation (the consumer), by the creation and maintenance of spectacle.

The eighteenth century spectacle was a simple theatrical presentation of a situation or story as it had been for preceding centuries. By the nineteenth century, the spectacle still presented a narrative, but it had become more about objects and anthropomorphism; technology (our conception of useful things and our interaction with them) replaced myth.

“A prototypical department store, it placed (manufactured goods) in a climate controlled landscape, it flooded them with light, it isolated them in departments, it channelled people through them, and it turned them into the focal point of aesthetic and linguistic contemplation. Its peculiar ambience charged things with special significance and made it difficult to perceive them as static.”

The sequential arrangement at the Crystal Palace, room after room and object after object, produced an implicit possibility of infinite expansion in space; and conversely, the constant feeling of wishful engagement with one object while being simultaneously distracted by the gadget next to it brought about a psychological rush that was coherent across the experience. The impression of wholesome unity was conveyed upon a set of objects of exceptional diversity and mobility by a blurring of space enacted using temporal means; the London police force were employed to herd people along at a brisk pace.
The Galeries Lafayette, in a tighter urban context, refined the elements, and smoothed the psychological intensity of constant dynamic engagement with traditional service functions. The most significant formal move in the plan was the building-high atrium in its centre; the block context did not allow the elevation to reference the scale of a temple as the Crystal Palace did, so the voiding of the form managed this instead. Rather than being organised axially, either side of a long and high central space, the display areas spiral up around the atrium. This is both more spatially efficient, and doubles its referential index; the high, narrow, top lit space is diagrammatic of the Gothic, and the central opening in the building fabric refers to a focal civic space in a Classical town plan. This doubling only serves to obscure either meaning; the centripetal orientation collapses space back on top of the figure whose thoughts might wander upwards through the atrium (the space is as much a mirror as the boulevard); and a high space open to each floor creates a forum in which no one can be heard. However, an aesthetically grand space that denies its functions of contemplation and communication is the ideal space in which to foster the state of continuous mild distraction suited to the consumption of goods.

As the boulevard created the flaneur, so the arcades made an alternative figure, and the department store’s subject was one for whom “to perceive something became inseparable from perceiving its value”[24]. The culture of the department store, as an urban diagram, is the least civic one offered by the nineteenth century, yet it is the one that has lasted. It is a culture of value, individual desire, and the objective yet linguistic signification of status. Across divisions of class, people focused their gaze on objects that could represent them in a universal, timeless way. For the first time, the focus of the majority shifted away from objective necessity (and the durational processes of living) towards a longing for possessions that would also be meaningful to a stranger, and would show a measure of value after a person was gone. The commodity became an indexical diagram of the person that owned it.[25]

The modernist age of architecture was narrated as the age of the machine, the world was to be engineered. It is a matter of acquiring a basic level of technical knowledge in order to build a structurally sound shed, or to do the parametric sums necessary to make something work faster; it is an architect’s job to project the social and cultural implications of building in space and time. The important parts of Haussmann’s work were what he got rid of, where he moved it to, and the society that his new space allowed for; not that the pipes no longer leaked as badly. Architecture should not look at technology as a means of carrying out its work, but should identify the formal trajectory of technological advancement (in social terms, as a diagram) and project a space to facilitate or deny this direction.

Modernism, as a social and cultural reality, is spectacle, and the displacement of alternative theatres by the theatre of the mainstream. As architecture, it is not- and never should have been- narrowly rationalisation, form follows function, and the smoothing of space, because the inevitable outcome of this trajectory is blank nothingness; a scaleless, rudderless alienation.

Disaster Relief

The Corbusian housing model offered aesthetic geometry, a “magnificent play of mazes brought together in light”[26], cleanly and singularly set against the blankness, and it quickly proved to be nowhere near enough. The suburban pastorial image of a proximity to the land combined with the convenience of modernity has been more attractive, but its relationship with the massive infrastructure system needed to keep it going (highways, power, water) is tortuous[27].

Certainly, where communities manage to form amid the sprawling messiness, they are successful, but contemporary descriptions narrate the suburbs as a place that produces mental illness (American Beauty, Mad Men, Desperate Housewives). Of course these are exaggerations of reality, and the blank character of aggregated suburban inhabitation has not been as disastrous as architectural Modernism’s housing, but perhaps this is just because the crisis point hasn’t arrived yet; ‘the big one’ might be on its way.

The residents of New Orleans considered hurricanes to be things that threatened disaster, but then spun east and destroyed some holiday homes and a few fishing towns in Mississippi; this was just a fact of life. In the face of an annual threat of disaster, such an attitude is necessary; at least it was until Katrina arrived, a disaster so great and instantaneous that it contained the power to wipe out generations of material existence. Even if the emergency response and evacuation had been flawless, and there was no loss of life, a city may still never recover from such a sudden dispersal[28].

In its aftermath, New Orleans was peacefully quiet on nearly every street. Most people had evacuated, some people who stayed behind wanted to be rescued, often from their rooftops. In white neighbourhoods, certain houses were heavily armoured gathering points for the nearest survivors; protective numbers with which to repel the marauding hordes of black people that were said to be on their way, intent on looting and killing every white person they could find. In reality, the black people were evacuated to Alabama or Texas if they were lucky, or sealed into the Superdome if they were not.

Mary P. Corcoran, “Valuing the local(e) in suburbia”, Building Land 18 (2009), 46-54.
In such an extreme situation, bigotry that was an undercurrent becomes a visible torrent, and even moderately sub par services collapse under the strain. The kind of tabula rasa problem that the city presents is not a situation in which there is nothing, a blank slate; it is a situation where there is lots of physical stuff, but none of it works. This is “the big one” that the modern city must face down. It is a situation of multiple complex factors, simultaneously global and local; government authority is locked into a constant struggle to provide enough infrastructure for the people in the short term, and sinking resources into supposed first world places over the long term is considered to be environmentally and globally unethical. For architecture, how its most powerful buildings can respond to this situation is a vital question.

The Australian interior, as it approaches the coast, ceases to be desert and becomes dry, humid scrub land. Where there is heat, dry wind, and parched vegetation, there are also bushfires. Once a spark catches, even in a bit of isolated, open grassland, it ignites the potential for an explosive chain reaction to occur. The source of its energy, what makes an Australian bushfire a potential catastrophe above and beyond a forest fire anywhere else, is the eucalyptus tree. Its oily leaves are suited to the Australian climate, but during a bushfire, it is “petrol on a stick”. As the fire rages through eucalyptus plantations, it emits thick yellow and brown smoke, and sends up charred leaves into the high winds created around the fire as it eats up oxygen. The charred embers can be carried several kilometres until they land, and start a fresh blaze. This characteristic, called spotting, is peculiar to Australian bushfires.

Most fires do not threaten people and their settlements. A small blaze in the outback, and the spot fires ahead of it, once they are tangential to the city, will not do much more than renew some scrubland and cull a few kangaroos. If the prevailing wind changes direction, and starts blowing towards the city, suddenly the spot fires have an extensive source of oxygen, and they explode in size, joining up to form a long fire front stretching from the original blaze to the furthest spot fire. The front is capable of sweeping through the bush at speeds of thirty kilometres per hour. Very suddenly, a common bushfire, of which there are hundreds every summer and spring,
becomes an approaching natural disaster.

The grumbling, then rolling roar of tornado wind speeds, gushing, acidic smoke, and the smell of burning eucalyptus; "the whole of the horizon was exploding in this, sort of nuclear type cloud, and in the middle of this cloud was an orang-black type of centre", "it’s completely blocked out the sun".

It looks like napalm dropped from invisible planes, obscured by smoke rolled all the way across the sky, "it was impossible to outrun". "It wasn’t just trees, just grass, it was the whole sky that was on fire".

The flames were between sixty and eighty metres high, such incredible heat physically drives you backwards, even from a safe distance away. The fire produces 20,000 kilowatts for every metre of its 150 kilometre long front (a fan heater produces 1 kW of heat). The wind blowing embers ahead of the fire front "sounded like machine gun fire". "It looks like a hundred shooting stars coming out of the sky except they’re big branches". The symptoms of oxygen deprivation are heavy breathing and fatigue.

The fire became colossal so quickly that warnings were too late. People fleeing in front of its racing advance took refuge in local community buildings, feeling the most safe there, with others. "Within thirty seconds, the sky was completely black, blacker than the darkest night". Hunkered down, try to ignore the screaming. "It almost seemed too monumental to grasp, that everything could be burning at the one moment".

After it has passed, those left alive look for open space and air amid "a scene of hell, every tree was burning, and all you could see on every hill was glowing". The fire plundered the timber frame suburbs, but eventually ran out of fuel, and only darkened the skies over the city. So the survivors make their way towards the middle of Sydney.

As a space for emergency housing, the place for Sydney that the Superdome was for New Orleans, the Opera House is a block of its own in the middle of the bay that looks back at the city, relatively unscathed, and the charred hills on the horizon. It is connected to both, but not fully a part of either.

The Opera House is, in one way, the same thing it always was; a plinth floated into the bay deep in the harbour, and anchored there with a perfect sphere on top of it. The sphere was then sliced into chunks and spread across, the surface of the plinth as a set of monumental shells or waves. In another way, the building is completely different because the people that fill it are not tourists who come to somewhere else for a night out, to drink in the drama of soaring arcs of concrete tipping against each other high in the air, and the theatre of entertainment contained within its own world of a sealed auditorium. The visitors are now displaced persons, severely shaken, some of them ill.

Initially the auditorium doors are locked. People camp down in the lobby, in undercots, or sit on steps, hunched over, clutching a bottle of water. A small crowd gathers on the plinth, a collective silent stare out across the bay at the burning hills of outer Sydney. Smoke still billows into the sky at unsettling speed, as if it is a film that is being run through the projector slightly too fast, while around the Opera House, every movement made is exhausted and slow. As more stragglers of people pick their way up the steps of the plinth, a security guard in a preposterously white shirt unlocks the auditorium. There is no rush, but people seem to find comfort in a softer, enclosed atmosphere, away from the smoke and the rushing wind. They arrange themselves in the seats to wait, and maybe sleep.

A reuse of vaulted space to house people in times of trouble was an overlooked function of the Gothic cathedral; it could provide shelter from a siege to an entire town population. As the cathedral operated simultaneously as a defence against disaster, and as a textual diagram of its age, so too does the Sydney Opera House exist as both spectacle and housing. It is a link between the age of the nineteenth century (which could be considered to have lasted into the early twentieth) and the generic city that the trajectory of post-war settlement has brought us towards.

The Opera House is modern because it is spectacular in both form and content. As architecture, it is the clear and simple expressed construction of spectacle; the dimensions of the space under the shells, the way this grand volume is revealed from the low, horizontal spaces under the plinth, and the simple coupling of such a sequence with a program of theatre and performance. An important part of the creation of this narrative is the way the shells are made so that their perception as solid material from edge to edge is clear. Where the glass surfaces meet and converge, the joints are recessed or fold under the concrete. The concrete edge is always revealed, showing its solid character and explicitly describing the ceramic surface treatment as being laid directly on to it. From inside, the post-tensioned vaulting ribs are clearly displayed as being just that, and the void space between the ribs reads as being consistent with the thickness of the revealed concrete edge of the shell as seen from the outside.

In order to become this reduced, diagrammatic object, the building went through a tortuous process. As the product of an international competition, it was conceived by Jorn Utzon as a modern expression of Helsingborg castle, then modelled in Denmark and Britain (where the inner dynamics of a massive concrete shell were nearly beyond Arup’s calculation capabilities), before being sent to Australia to be built, where the money for the project just happened to be located.

The Opera House collapses space so effectively on a global scale that it is nearly surprising that the building holds up space locally. Across territories and time, it embodies universal ideas (spectacle and the place of collective inhabitation) and a generic process (its own realisation) to the point that it is almost incidental that it is an opera house in the middle of Sydney harbour. At the time, it must have seemed possible that there could be an identical Opera House in every city in the world, or a city that consisted of only Opera House structures. The fact that a sketch of four offset arched lines at slightly rotating angles is now instantly symbolic of Sydney is some kind of tourist construction, it belongs to another age that is not the modern one.

The contradictions of the Sydney Opera House, like the massive concrete gilded shells that are actually held up in tension, are contained, synthesised, and expressed in a simple set of formal and material moves. As a building, it precisely walks the line between the modernity of culture and people, and the modernity of machines and objects.


The Passenger And The Airport

Within the field of architecture, the most consistent and influential narrator of the contemporary city over the last half century has been Rem Koolhaas. Beginning with a diagrammatic exploration of Manhattan in "Delirious New York" in 1978, he refined, generalised, and boiled down this description to "The Generic City," an essay published in S, M, L, XL in 1995. If his own recent buildings are to be believed (the Seattle Central Library and the CCTV tower being prime examples), then this is his definitive vision of our city, and it carries some weight.

The city he identifies is a blank, smooth, amorphous surface that offers a foundation for singular, private, individual clusters of program that exist as long as competitive evolution allows them to. Its self-identity is always the most reductive one possible, a vague icon, like the three brush strokes that form an 'Eiffel Tower' with which to identify Paris. The reason for this is what Koolhaas cites as the Generic City's greatest strength; its ability to completely dispense with spatial history and any attendant complications of character.

Of course the Generic City still has a temporal history of its own; post-war suburbanisation stretched the city fabric to the point where new, subordinate centres were necessary on the periphery. As this mode of development was favoured, it intensified, and the differences between the city and its suburbs became muted; one was the place of work, the other the place of residence, and a smooth highway connected them. The infrastructure necessary to support this mode of existence is massive, so in order to maintain efficiency, all points along the infrastructure network tended towards a similar form of connection at the cost of connecting to each other at a more human scale.

The developing trends of technology have perfectly complemented this trajectory towards a desire for spatial isolation combined with temporal simultaneity; the physical world and the virtual world have mutually reinforced this narrative of reality. Although it is convenient, efficient, easily readable, and a rational machine for living, this city is also perfectly homogeneous, blank, and empty; as a social and cultural existence, it is a vacuum.

The figure left to endure this existence is the passenger; always en route, passing through, or put up in a hotel room. The spectacle of modernity has been replaced by the boredom of waiting in line to be shot between program clusters in some variety of sealed tube. The direct experience of his environment has been taken from him; infrastructural space is too massive to be worth walking in; instead it is seen from behind a plate of glass attached by silicone to something (anything) else. For the same reason that we have always written information down for safe keeping, it is also reasonable that we store some of our intelligence in buildings, but this has been deemed unnecessary.

The Opera tells us about how certain figures in society operated, the boulevard even more so, the department store shows us another person, the Sydney Opera House can diagram different people again. Objects bear traces of their people, and people attach memories to their things. To ignore this, to attempt to destroy and remake buildings at a faster rate than they can be engaged with and valued by people (in other words, historicised) is also to erase those figures that the buildings may be trying to create. This indiscriminate destruction and removal of people as an easy solution to a pressing problem was previously described by Le Corbusier’s perspectives, and it is still a destructively simplistic approach to dealing with life. Problems of space and time cannot be solved as rational abstractions outside of people if they are then to leave that closed system and become actual experiences. The space between things may be smooth, the time between them nothing at all, but as the passenger is left with no real temporal experience to call their own, only a mere existence strung out between two indexical destinations (as Koolhaas would describe them, sitting in any airport), they remain an anxious and uprooted figure.

For the contemporary city, maybe ‘the big one’ is a vacuum that grows towards a complete emptiness. A slow, viscous, seeping atmosphere of stasis, begrudging of any individual effort to shift it. The slow death of the centre of an organism despite our intention to keep it alive points to a situation of multiple complex factors that nobody is really in control of; it is simultaneously global and local. City governments are locked into a constant struggle to provide enough infrastructure for the people in the short term, and sinking greater amounts of resources into supposed first world places over the long term is considered environmentally and globally unethical. Within architecture, how its most powerful buildings respond to this situation is a vital yet basic question.
The Student And The City

Emptiness should be filled with figures in space that are embedded; the space and the figure produce each other to the point that they are both inevitable, their existence is simply fact and not dependant on regulation, or a tax break, or the promise of greater resources some time in the future. A Haussmann may still come knocking, but the longer the roots put down in a place and the stronger the figure, the greater the chance that the invasion of smoothness will crack open at this point, making for a far more interesting city. Most importantly, urban problems won’t just be shifted to somewhere else.

At present, the student is a figure of great potential that is poorly accommodated. Boxing them into unstructured space only breeds a contentious dissonance between the student and everybody else. A space made for them should emerge from a narrative that projects what the student’s experience of space might be rather than from whatever materials are the cheapest and easiest to build.

Too often student space is standardised; it belongs to a larger scale group of people. Estates of semi-detached houses with small gardens front and back convey the idea of a certain mode of living, but it involves a family, a car or two, and a dog. Rearranging the structure to fit in a couple of extra bedrooms is simply a case of moving a few plasterboard walls around; this is easily accomplished. The suburban space that surrounds this low density housing is more problematic. It is a soft landscape that is controlled only by community agreement; and a community of students is often loud, messy, temporary, and creative in ways that a family looking for a cheap version of a suburban pastoral experience probably don’t appreciate. Such wide open spaces also manage to waste a lot of the potential gathered in a body of students. It is the presence of the loudest and messiest that will inevitably be marked on that kind of space, even if this presence only amounts to a few empty beer cans on the green.

The higher density of city university housing is an improvement on this state of affairs, but greater density is still not exactly equivalent to student space. Apartment blocks with a bit of planting and a few benches in a courtyard imply a retreat into a private and calm space, away from the stresses of the city. This typology suggests that it houses a commuter who goes from one box (their home) to another (their place of work) and back again. The mode of transport, such as walking or taking the underground, is certainly more public than that of a suburbanite, but the interaction of these quasi-commuters while passing each other in public space is reliant on a degree of extroversion (even nosiness) more typically associated with a small town community; the social ideal for a city inhabitant remains the cool, reserved, unfazed figure.

The image of the urbane individual who, in the most vague way, looks like they are about to do something sophisticated (in the most concentrated form, this is a hipster) is one that is attractive to a student, but the process of moving to college doesn’t fit this image all that well. A student’s arrival at university begins with a separation from their family, often for the first time. Given the choice between being a lonely individual, or finding a new group with which to replace the lost daily contact of family and old friends, the majority understandably choose to socially remake themselves. The organisation of a university supports this; the typical day consists of hours in class interspersed with free hours. Students have plenty of time hanging around in the same places, which become the campus.

As a site, the campus has a base function (the production of knowledge) that is managed by the university’s institutional structures. The traditional rigidity of such organisations is animated by the constant replacement of students by themselves. There is a social purpose present in this animation that draws connections between the students even though their individual backgrounds might not provide an obvious overlap of common ground. For the time that they are engaged with this site, a diverse group of people decide they are going to be a student body, to exist as a remarkable and different social figure, the greater the chance that the invasion of smoothness will crack open at this point, making for a far more interesting city. Hopefully, it is embedded where it can do the most reparative work.

A communal mode of living can’t be forced on to a person as their only way of being, but equally space doesn’t truly function publicly if there is no threshold between privacy and the complete, often anonymous, publicity of the street. Hierarchical rings of space that extend towards the street and the city, collecting people as they move out, is a way of structuring space that is also a positive, extroverted contribution to the city.

The university environment totals up to an idealised, smaller scale proxy for the urban city; it is diverse, generative and creative, socially capitalised, and nearly universally, it produces a typical figure at an accelerated rate. It is a flexible and animating form that, because of its similarity to the general urban environment, can be introduced at any point in the city. Hopefully, it is embedded where it can do the most reparative work.
Belfast is a city filled up with edges and boundaries. Sectarian divisions are explicit further out in the city, but in the centre the strength of a city block does some of the work of murals and peace walls in an equally authoritative, yet less confrontational way.

The Victorian era was a rich one for Belfast, and it created a city of strong, planar, Neo-Classical facades. Especially in the mid to late twentieth century, the frictionless, funnelling relationship of the building to the street has been intensified for security reasons; the Victorian court house building is protected by a flat, grey, car bomb proof wall along its lowest third. The Castle Court shopping centre displays a glass, yet opaque Hi-Tech facade to Royal Avenue because there is a concrete wall directly behind the glass.

The city centre has been protected, neutral ground since the seventies when the Ring Of Steel separated the urban core, and made it safe. The neutrality requirement has also meant that nobody has lived in the city centre for a long time, everybody enters it from a safe distance. As the definition of a safe distance stretched further away from the old Victorian city limits, the commuter was facilitated by the building of highways straight through the city centre, and multiple road widening schemes. The pedestrian is thrown off of massive, high speed roads into the few smooth funnels of the pedestrianised streets that are edged by the generic space of retail regeneration.

Even leaving aside sectarian and infrastructural divisions, the temporal movements in and out of the city form a severely limited pattern of use. There is a tidal wash of nine-to-five commuters and shoppers every day who fill up enough of Belfast’s mass of office and retail space to support some sense of life and urbanity, but they disappear again with the sunset.

Amid the forced smoothness of the city centre, what passes for the underground is a dip beneath a giant glass post-modernist dome at yet another shopping centre, Victoria Square. The laneway in front of it leads out to Royal Avenue and the library; as in nearly every city the library leads to more interesting places. In Belfast, it is at a corner between the city centre and a “quarter” (although in this case at least, the characteristic constituent elements were present long before the marketing campaign). Until it is cut off by a six lane road and then a highway, the area around St. Anne’s Cathedral is home to clubs, recording studios, restaurants, a play house under construction, some studios used by artists, and the School of Art and Architecture of the University of Ulster. In particular, this is a second cultural institution (of three, alongside the library and the MAC play house) that marks the turn of the city form smooth and funnelled towards messy and interesting.

At present, the square in front of the school contains a few benches, some planting, and three large sea buoys. It is the corner where the city turns between two conditions, and it faces two blocks dominated by a building each (the school to the north side, and St. Anne’s Cathedral), yet it doesn’t address this in any way. Like too much of Belfast, it’s a cleared site, this time with about a quarter of it poorly landscaped.

Because it is empty, but at the edge between the cultural underground of the city and the invading smoothness of high street retail, and because it is surrounded by the scale of a large building, and the growth of a university campus in the city, this square became the site for the project.

The Project

Belfast is a city filled up with edges and boundaries. Sectarian divisions are explicit further out in the city, but in the centre the strength of a city block does some of the work of murals and peace walls in an equally authoritative, yet less confrontational way.

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Location of the site (in red) in the city of Belfast.

Site plan showing Royal Avenue as it passes by the library and the site, St. Anne’s Cathedral, and the entry into the Cathedral Quarter.
The area around St. Anne’s Cathedral as a context.

The site of St. Anne’s Cathedral was occupied by a linen hall until 1774, and while the hall was demolished to make way for the cathedral, the linen industry flourished under factory conditions. The block that the project sits on used to contain Belfast Academy; into the twentieth century, a dense industrial fabric and an educational institution gathered around a slowly materialising cathedral. As the Troubles and the age of the commuter weakened the characteristic industrial fabric, ad hoc cultural enterprises began to take up the left over space. Belfast’s historic punk music scene had a strong presence in the area in the seventies. This cultural production continues to back fill the historical blocks in a different (but still characteristic) way. As well as more global and historical models, this is an important context for the project.

Spatially, the first move on the site is the making of a diagonal primary axis across the site, linking the city centre and the Cathedral Quarter. The axis opens up in the middle of the block to become less directional, and to allow for students and city inhabitants to rest or gather. The block edges are made to a height that is appropriate to the Cathedral and the Art School, and are then broken up to allow secondary access into or out of the central space. These breaks also provide a pattern of direct sunlight and shade across the space.

Inside the buildings, they are organised by grades of privacy to publicity, generally from centre to edge (but not strictly in this way so as to provide variety in terms of daylight conditions).

Living spaces are enclosed and illuminated by diffuse light through semi-transparent glass openings. They have the tight character of a ship cabin or a burrow; they offer a protected retreat away from communal space outside, but are not leisure spaces. They are spatially limited, to sleeping, or simply lying down and thinking, sex, and studying.

Towards the facade, there are a variety of gathering spaces for small (maybe five people) to larger groups (fifteen or so). Some of them are inside and insulated, bright but shielded from direct sun and rain. There are some morning or evening garden type glazed spaces, and then outdoor spaces at the facade. These social spaces can accommodate functions like a small library or reading room, a cafe, or a laundry. As the structure consists of stacking cross walls on plates, they can be made double height by cutting out of the floor plate above.

Each floor provides a new set of spaces for the student that engages with the city. At or near the ground, this involves larger spaces that can be taken over by larger groups of people, such as a combination of students and city inhabitants setting up market stalls, playing football, or exhibiting or performing some event. At levels made higher up, the spaces at the facade engage with the city in their openness to it, and provide for the student to rest, overlook the city, and think.

Construction detail and model.

1. Structural steel elements are welded at the 500mm connection and bolted at the 200mm connection.
2. Structural steel is coated with a smooth intumescent paint to provide two hour fire protection, and finished with a coat of metallic paint.
3. Horizontal elements are 5m lengths of glue laminated timber (40 x 200mm cross section).
4. Metal plates secure the timber to the 200mm welded joint and provide extra resistance to buckling moment forces at the weakest part of the structure. The plates are bolted through to brackets welded on to the structural steel.
5. Interior spaces are treated as thermally sealed boxes within the cross wall structure (interior finish to room specification, 100mm insulation, DPC).
6. Cross wall sits in back filled footing, rebar tied through to the slab face under tensile stress.
The depth (450mm) and variance in width (200mm to 500mm) of the elements animate the facade as the city inhabitant walks by it, and allows for a variable solid to void relationship depending on the angle of their approach. Facades that line the street will open up as the pedestrian passes by, while narrower access routes between blocks will show a more closed front to the pedestrian as they continue their route along the street, or through the central public space. Many of the social spaces extend back into the plan, so the student is free to modulate their level of privacy or publicity by choosing to inhabit a side of the building near another block, or by retreating from the facade.

Elevation from Royal Avenue, through the central public space, and into the Cathedral Quarter.

Through the modulation of space at the facade, between the blocks, and through the central space of the site, a structure for the accommodation of students will create a gradual, and therefore genuine and meaningful, relationship of publicity to the city; as well as marking and forming a threshold between two conditions of Belfast city, belonging to Royal Avenue and the Cathedral Quarter. This is an expression of a researched thesis idea in that it takes a block of the city that had been previously removed, and carefully remakes it. This remaking is sculpted to fit the generic narrative of a particular figure (the student) so that a certain value of use as well as form might become embedded on the site, allowing the structure to be a truthful response to the crisis of the temporal population vacuum that afflicts Belfast (and many other cities besides).
Reflections

If a synthesised project is one that is so smooth that it cannot be separated from its thesis, how far away does that put the centre of the spiral? The Library of Babel, by definition, contains an infinite number of theses dealing with the project, and the project leads to the same number of ideas as there are people that look at it (multiplied by some low-ish number). Of course anything is infinitely possible in the abstraction of infinity but, in cold terminal fact, there is at least one thesis lying latent in the specific project that contradicts this one generic thesis. Such is the inevitability of an architecture of external objects.

Yet objects alone, plain, unthought of, are blank, or empty and senseless. Passaic was such a vacuum before Smithson had a think about it, and it may not be the only thought to have, but I suppose it's enough.
These drawings are of a primer project in Berlin during the first semester. They describe how Tempelhof airport has changed over time, and a proposal to continue its use as a park, and also to use it as an airplane graveyard. The grid of the obsolete planes would organise an adventurous space, and be a source of material for the creative energies evident in the city. There would be a continual flow of the grid being built up, and dematerialised.
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