THE VALUE OF ORNAMENT

by

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

ABSTRACT

This thesis recognizes ornament as not simply an excessive accessory, but an innate human desire to imbue objects with beauty and meaning. Ornament's prominence throughout disparate architectures regardless of culture, era, or class intimates its instinctive nature. Despite modernism's efforts to dispense with it, ornament subconsciously returned by turning buildings themselves into sculptural forms, or by embellishing facades with louvers, exposed structure, and surface patterns. However, these forms of decoration fail to provide many of ornament's historical benefits and are limited in their expressive capabilities by deferring to function. Traditional ornament was capable of breaking down imposing building masses to the human scale, allowing people to project a personal or regional identity onto a building. Not only have designers forgotten how to accomplish this, but an entire system of economics disincentivizes such architecture.

The commodification of real estate has turned architecture into another tool for capitalism to extract profit. Neoliberalism has found an ally in modernist principles by embracing the ideals of modularity, efficiency, and rationality as a theoretical framework to manufacture a globalized architecture. The architectural individuality of localities has largely disappeared, leaving citizens unable to identify with their own cities. This thesis seeks to dispel modernist myths and posits ornament as a means to reintroduce regional identity in an increasingly homogenized world. Theoretical discussion is supplemented with case studies documented through photography, illustrating the consequences of ornament's exile through economic and political narratives. Without a proper understanding of the societal influences that constrain the profession, architecture will continue to neglect the natural human desire for ornament.

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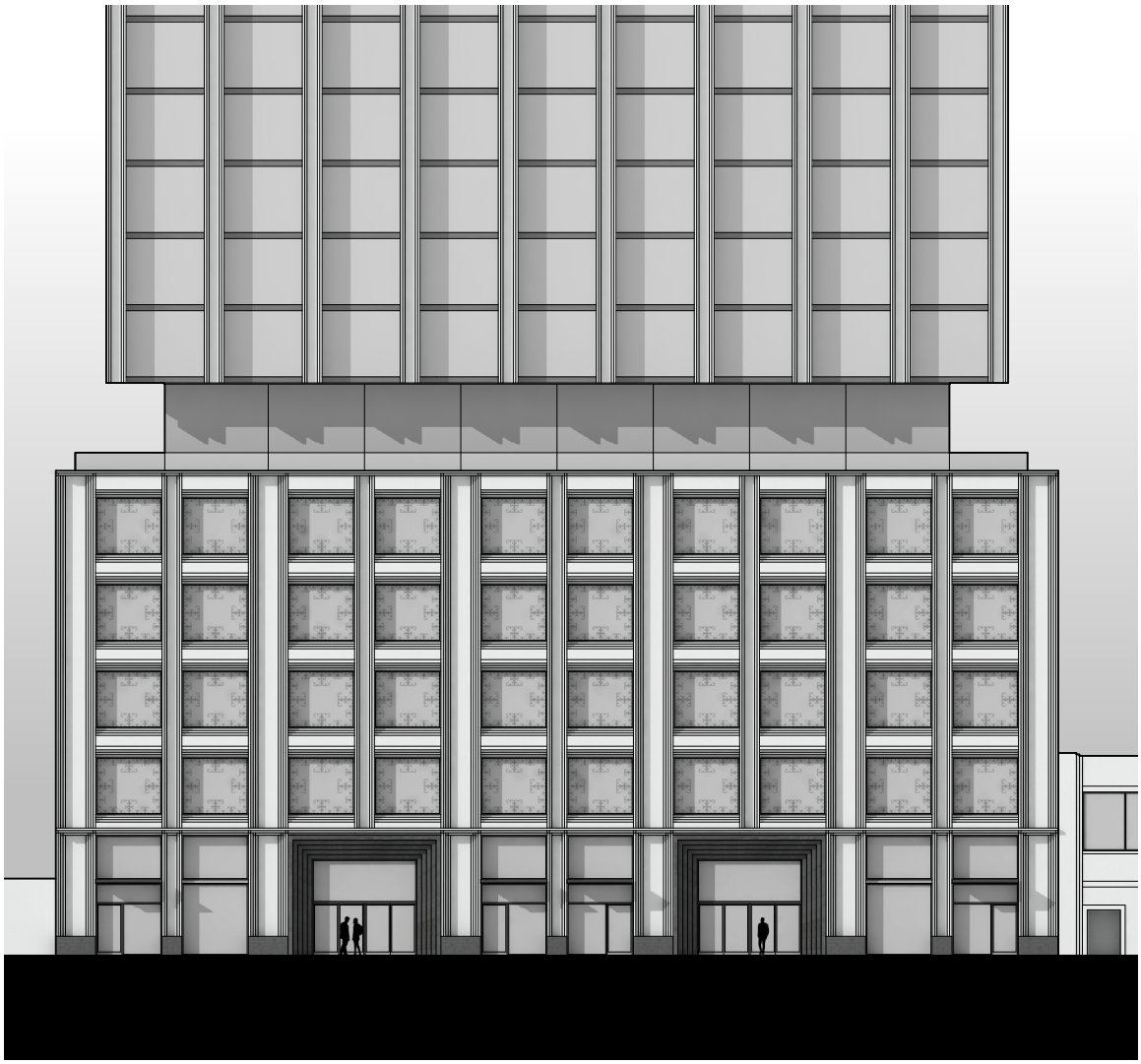

Fig. 0.1) Proposal for mixed-use tower in Toronto with articulated podium

INTRODUCTION

This thesis began in earnest as a design project aiming to reintegrate ornament in architecture to produce more fine-grain urban environments. After several arduous attempts I realized I did not possess the necessary knowledge of ornament's cultural history, or the motivations for its initial removal. Redirecting my thesis towards written research, a recurring argument in my studies stated that ornament was expelled partly due to its role as a distinguisher of decorum. The classless society that modernism envisioned had no need for ornament's bourgeois extravagance.[1] And yet, as wealth inequality grows around the world, new ornament is nowhere to be found. If ornament really was a symbol of the elite, it would surely be a common sight among the built works of capitalism.

This led me to the realization that behind the veneer modernist platitudes is an economic system that benefits from producing the placeless architecture of neomodernism. This is this same economy that populist movements are now protesting as the effects of globalism restructure economies and homogenize architecture. It became clear to me that if ornament was to be rehabilitated, not only would the myths of modernism need to be dispelled but the economic and political dimensions of ornament would also have to be dissected. As such, this thesis has been presented as a series essays exploring the implications of ornament and its potential as a marker of cultural identity. To compliment theoretical discussions, a series of case studies personally documented through travel and photography apply concepts to real world examples.

The first section of this thesis disputes modernist fallacies and reasserts the important roles ornament serves in architecture. Seeing as ornament's primary purpose was to imbue objects with beauty, the first chapter explores the contentious nature of aesthetics. After examining the biological desire for beauty, the second chapter discusses the many subtle functions of ornament from organizing facades to communicating meaning. Recent approaches to ornamentation are documented and evaluated, illustrating the shortfalls of contemporary attempts at embellishment. Strategies are then proposed to better integrate

1. Le Corbusier and James I Dunnett, The Decorative Art of Today (London: Architectural Press, 1987), 4–12.

ornament in a contemporary setting with studied examples. Lastly, the crucial role of materials is explored in facilitating the use of ornament as a marker of regional identity.

The second portion looks at the history of ornament as a distinguisher of class or decorum. Seen through the lens of economics, ornament's value is tracked from its treatment in Ancient Rome all the way to the postmodern period. Special attention is given to the Neoliberal policies that dictate the economy in the 21st century and the various ways it suppresses ornament and architectural quality through the commodification of real estate. Finally, the role of religion as a catalyst to both capitalism and modernity is uncovered, shedding light on the puritanical origins of minimalism.

The last section of this thesis begins by challenging the political stereotypes surrounding ornament's use in architecture. A concluding chapter applies this information to the unfolding political upheaval in Britain, observing Brexit as a reaction against the globalized neoliberal economy which continues to produce placeless, dehumanizing architecture. In this populist context, ornament is presented as a potential solution to architecture's elitism by making buildings more visually and conceptually legible.

Architecture, due to its enormous cost, remains more dependent on political and economic powers than other forms of culture or art. By evaluating the history of ornament in terms of economics, I have gained an intimate understanding of the societal forces that influence the advancement of architecture. The modernist banishment of ornament has evidently produced unintended consequences which will inevitably compound as new developments continue to neglect the human instinct for ornament. If architecture is to once again become a relevant mode of cultural expression architects will have to reckon with their role in service to capitalism, and re-evaluate the validity of modernism's 20th century ideology in contemporary society.

Fig. 0.2) Leadenhall Market in the City of London

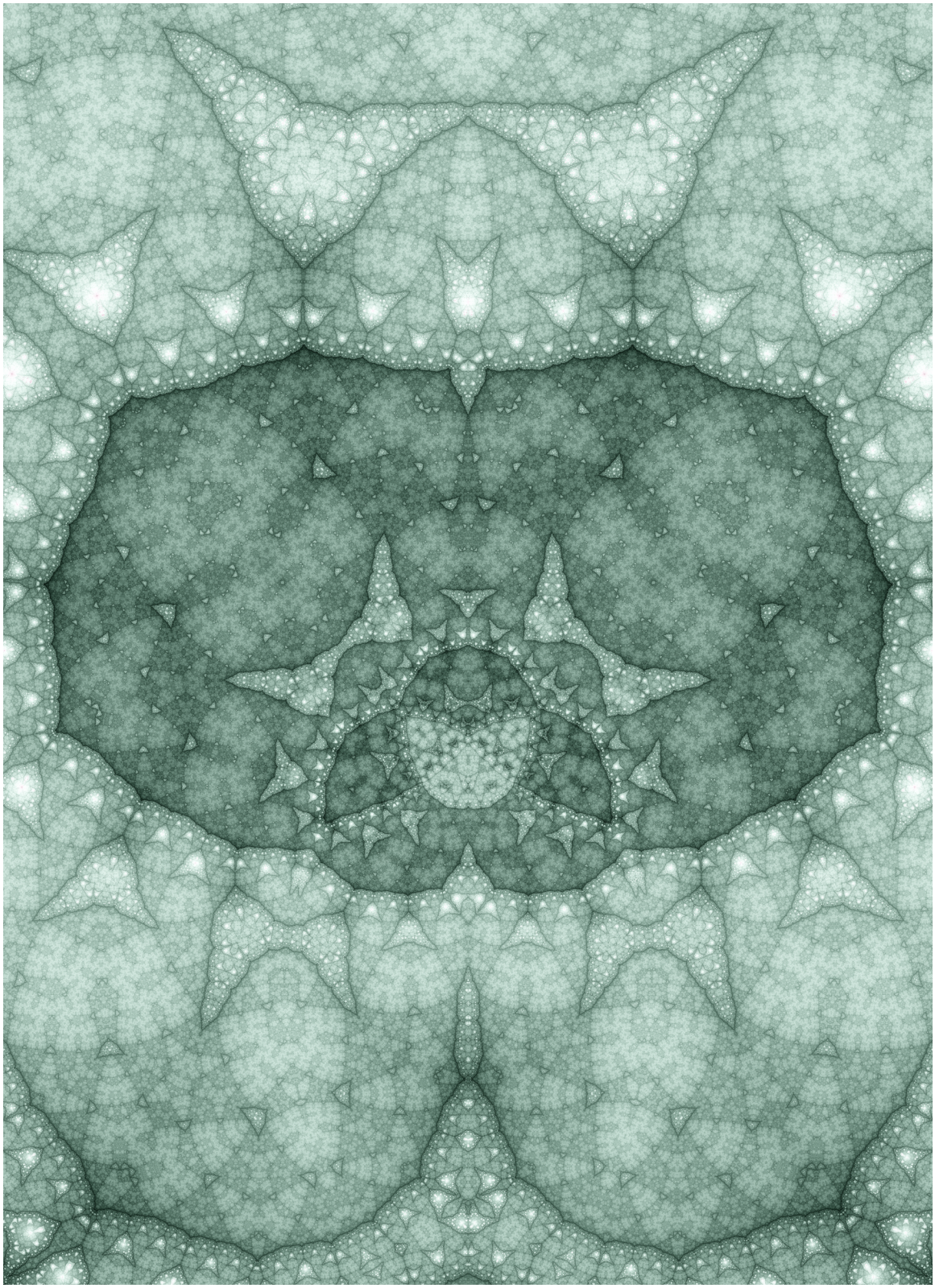

Fig. 1.1) Fractal design

CHAPTER 1: AESTHETICS

Beauty, like ornament, serves no "practical" purpose beyond visual pleasure. Indeed, both beauty and ornament have become taboo following modernist doctrine. Beauty, it was assumed, would naturally emerge from an object's functionality. Such rational logic was a sensible method to side-step the slippery and contentious nature of beauty. Even as beauty exited the architect's lexicon it remained at the forefront of the public mind, increasing the divide between the academic profession and a dissatisfied populace. Only recently has the word seen a resurgence as the writings of Donald Ruggles[2] and Alain de Botton[3] have reclaimed the term. In the United Kingdom, the federal government has established the "Building Better, Building Beautiful" commission to promote beauty in architecture. And the 2019 Tallinn Architecture Biennale is dedicated to the simple premise that "Beauty Matters". The increased discourse surrounding the topic coincides with burgeoning neuroscience research investigating the psychology of beauty, unearthing why humans perceive it, its effects on human wellbeing, and clues towards its implementation in architecture.

Natural selection is the process by which certain qualities or behaviours lead to a survival advantage, allowing more progeny to carry on those behaviours and multiply throughout ensuing generations. Disadvantaged behaviours face greater difficulty surviving or reproducing, leading those characteristics to vanish in history. Some behaviours come from knowledge that is taught or learned through personal experience. Other behaviours are influenced by societal forces, leading to the varied cultural differences that encapsulate human civilizations. Yet more behaviours can be passed on genetically as instinctive responses, like the fear of falling manifests itself in almost all people. Humans in particular seem to have a vast amount of these intuitive behaviours. This makes sense given our general lack of physical advantages in the natural world; we possess no claws, or shells and we are not particularly strong. Our greatest advantage is our substantial brain sizes which have been pre-loaded with helpful survival manuals.[4]

2. Donald H Ruggles, Beauty, Neuroscience, and Architecture : Timeless Patterns and Their Impact on Our Well-Being (Denver: Fibonacci, 2018).
3. Alain De Botton, The Architecture of Happiness (London: Penguin Books, 2007).
4. Grant Hildebrand, *Origins of Architectural Pleasure* (Berkeley: University of California Press, 1999), 5-9.

Beauty seems to be an extension of this programming as a way for us to parse safety from dangers. Colourful flowers suggest bountiful fruit, whereas a sagging asymmetric plant indicates disease or rot. Fractal patterns recall the distribution of tree branches or flower seeds. A symmetrical face on a well-proportioned body suggests a healthy mating partner. Dangers give us discomfort, while pleasure is used to encourage beneficial behaviours. To survive and prosper, we must succeed at four primary activities: nourishment, reproduction, securing shelter, and exploration. The latter two have great implications for architecture, informing why certain spaces please us and others are unsettling.[5]

Such logic grounds Grant Hildebrand's hypothesis in *Origins of Architectural Pleasur*e (notice the diplomatic omission of the word "beauty", even Hildebrand wanted to avoid that minefield). The first portion of the book describes the shelter conditions that satisfy human survival instincts, which he categorizes as refuge and prospect. Refuge refers to the darker, more intimate spaces humans occupied to feel safe (such as the caves proto-humans emerged from). Prospect offers bright views from an elevated position, allowing us to survey the land for hunting and foraging opportunities. According to the author, implementing these complimentary conditions to architecture eases our survival instincts and allows occupants to better enjoy the environment.[6]

Other sources of architectural pleasure are the ephemeral qualities of enticement and peril. The feeling enticement arises as a mystery unfolds, moving from areas of darkness to lightness to encourage exploration through space. Peril refers to the thrill of controlled risk, like standing on a bridge at a great height and looking down, or the precarious cantilevering of Frank Lloyd Wright's Falling Water house over rushing rapids.[7] This perilous beauty recalls the sublime, often present in the grandeur of nature from the dizzying depths of the Grand Canyon to the awesome power of water crashing down Niagara Falls.

Most relevant to this thesis are two concepts to describe the visual stimulation that people crave – equal parts order and complexity. Complexity without order is just noise. Order without complexity is

5. Grant Hildebrand, *Origins of Architectural Pleasure* , 10-13.
6. Grant Hildebrand, *Origins of Architectural Pleasure* , 15-49.
7. Grant Hildebrand, *Origins of Architectural Pleasure*, 51-83.

Fig. 1.2) Grand Canyon

monotony. The synergy of the two, ordered complexity, elicits the greatest pleasure.[8] For example, the steady drone of a metronome does not produce the sonic beauty of music. The human brain is quite adept at tuning out constant repetition. But a consistent percussion rhythm accompanied by evolving melodies and rhyming lyrics introduce the necessary complexity to produce music. Applying this idea to contemporary architecture illuminates why so much of it is regarded as mundane. The vast majority of buildings erected today lack the variety of textures, materials, forms, and patterns that satisfy the human eye.

This can also help to explain the discordant attitudes towards modernism between trained architects and the untrained public. While modern buildings often lack visual complexity, there is a conceptual complexity to modernist theory that architects can appreciate, including an understanding of the intricate details required for minimalist finishes.[9] However, this appreciation excludes the wider public who lack the knowledge necessary to appreciate such works, creating a divide between designers and the public they are meant to serve. While "design education" remains the focus of many architectural associations as a way of training laypeople to appreciate modern architecture, a more inclusive approach would promote greater visual complexity in architecture to meet that primal need. This also goes to show why classical and gothic architecture have enjoyed such lasting appeal. Those buildings were able to marry rhythmic geometries with extensive theology, offering the conceptual rigor for a deeper appreciation by inquisitive observers.

The common theme present in all these categories is the search for information as a prime motivator for many human behaviours. The panoramas of prospect spaces offer a wide scope of available information. Enticement embodies the unfolding of information from the concealment of darkness to the

8. Grant Hildebrand, *Origins of Architectural Pleasure,* 91-103.
9. Grant Hildebrand, *Origins of Architectural Pleasure,* 134-137.

safety of light. Ordered complexity allows us to rapidly categorize and catalogue the visual information of our immediate surroundings. Environments of low information like flat tundras or sandy deserts suggest hostile environments for survival. The highly informative scenes of forests, meadows, and river systems suggest hospitable environments with plentiful sources of food and water.

The concept of information also features heavily in the writings of polymath and architecture theorist Nikos Salingaros: "Human emotional response is based on neurophysiology and information input. It cannot be undone for the sake of a particular architectural design style that eschews ornament. An environment lacking in texture, color, and ornament can be punishing for a human being, as exemplified in the design of prisons throughout history. Going to the other extreme, an environment that is supercharged with uncoordinated visual stimuli – such as the Las Vegas strip lit up by neon lights – exceeds the visual input that can be consistently tolerated."[10]

The physiology that Salingaros describes begins with how the brain and eye work together to process imagery. Experiments tracking the motion of eyes scanning a photo shows that the eye focuses most of its time on regions that have high detail, contrast, and curvature. The eye spends a third of its time focusing on a narrow scan path of high information, with occasional glances to areas of low information. The brain uses the areas of high information to recognize and remember objects and reconstructs the low information areas by extrapolation. This system allows us to process complicated scenes with the speed and efficiency necessary to respond to potential threats.[11]

This explains why ornament has been such a crucial component of human culture for thousands of years. The contrast and detail of ornament, especially at edges and transitions, allows us to intuitively understand objects by establishing efficient scan paths. This also explains recurring complaints against modernist architecture – the large plain expanses of walls (especially in brutalism) deprive observers of necessary visual information.[12] The structure of the brain itself seems specifically attuned to identifying

10. Nikos Salingaros, "The Sensory Value of Ornament," *Communication & Cognition 36*, no. 3 & 4 (2003): 333.
11. Nikos Salingaros, "The Sensory Value of Ornament" 334.
12. Nikos Salingaros, "The Sensory Value of Ornament" 335.

ornament. A large number of cortical neurons inside the brain only react to ornamental elements like crosses, stars, and concentric circles. These patterns are built into our cognitive structure and since those neurons are there, we should be stimulating them.[13]

While the mechanisms for colour detection are well known to be the cones and rods of our retinas, a lesser known fact is that cone cells are also responsible for our ability to see in fine detail. Pathology becomes a useful analogue to the effects of minimal environments. Many eye diseases like cataracts or retina damage limit our ability to see in fine detail. The lack of visual information creates stress as our ability to respond to the environment is reduced. This effect is architecturally reproduced by glass and mirrored facades, which blur out details and impede the eye's ability to focus. This raises an unsettling question: does minimalist architecture subconsciously remind us of failing vision?[14]

Colour adds another layer of information, an evolutionary adaptation that separates humans from most animals. Colour perception starts in retinal cones, which as mentioned also detect fine detail. Therefore, colour and ornament are intrinsically linked. It is no surprise then that modern banishment of ornament accompanied the loss of colour in architecture. Again, pathology provides insight to the importance of colour. Some forms of colour blindness such as cerebral achromatopsia result in patients who are restricted to greyscale vision. Unsurprisingly these patients are more likely to suffer from depression living in such a drab world. The things that bring us joy, from brightly coloured flowers, fresh fruit, and healthy faces become repellent as grey normally suggests death and decay.[15]

Though the modernist abandonment of ornament was largely based on ideology, emerging research continues to shed light on the nature of ornament and beauty. Convincing data shows minimalist architecture produces unhealthy environments that raises anxiety by reproducing scenes suggestive of danger. Informed architects may be able to compensate for this through their training, but the public cannot. Not that pleasurable modernism is impossible, but that may be more due to the short-term excitement of

13. Nikos Salingaros, "Unified Architectural Theory, Chapter 12," ArchDaily, May 16, 2015, https://www.archdaily.com/632062/unified-architectural-theory-chapter-12.
14. Nikos Salingaros, "The Sensory Value of Ornament" 338.
15. Nikos Salingaros, "The Sensory Value of Ornament," 343-346.

novelty. Singular minimalist buildings do not compromise the entire surrounding environment, and in some cases can create a pleasing variation on its context. But the effects become more pronounced at the large scale, when entire streets or neighbourhoods are deprived of complexity. The isolation of modernism's "tower in the park" communities has long been blamed for their descent into slums, but it is worth considering what role minimalism played in their demise by failing to adequately stimulate occupants.

Of course, general preference for simpler design may change with the times just like any other trend. The Baroque was a decidedly busier era than the preceding Renaissance while later styles were more restrained. But the absolute intolerance of ornament brought about by modernism does not seem based on any empirical grounding. A base level of visual detail will always be necessary, regardless of the era's stylistic preferences.

Ornament remains the most direct means of creating the combination of order and complexity that is so desired. It works seamlessly with our physiology to help us quickly understand our environments by detailing and contrasting edges. Those details help us organize and recognize the constituent parts of our surroundings. Ornament stimulates the detail sensitive, pattern seeking portions of our brains. It creates visual coherence across all scales, from units of millimeters to the scale of the city block. And coherence at all scales one aspect of the elusive quality we call beauty.

CHAPTER 2:
IMPLICATIONS OF ORNAMENT

Why did Palaeolithic humans work so strenuously to create symmetrical hand axes, or choose particularly lustrous stones to carve into knives? It did not make cutting any easier or holding the stone more comfortable. It was an extraneous effort to imbue beauty to their tools - a primordial ornament.[16] Since then ornament has made its way across disparate cultures regardless of geography, era, or social class. Its presence in isolated civilizations from Europe to Asia and South America proves its universal appeal. This innate desire for ornament finds itself in the way we style our outfits, how we garnish a nice meal, or how we decorate our bodies with tattoos. While those forms of ornamentation remain perfectly accepted cultural practices, architecture in modern times finds itself peculiarly opposed to such expression.

* * *

MODERNIST CRITIQUES:

As I have personally learned through various critiques over the years, a host of arguments are used to oppose ornament. Architecture professors have told me that ornament is tacky, and people only want it because they have poor taste. But taste is always evolving as it changes with greater education, new experiences, trends, and the natural passage of time. So how could it be argued ornament is fundamentally flawed based on the fluid concept of taste? It is also problematically elitist to regard public opinion in such low esteem since they will ultimately be the users and observers of your work.

One professor also noted that ornament and its symbolism were only useful in times of illiteracy, hence it has become obsolete. But by the 1900's the vast majority of the population in developed countries were literate, yet ornate buildings continued to be built well into the midcentury. Clearly ornament functions on a level beyond an architectural picture book. This reductive argument also ignores the variety of ways in which we "read" buildings, like the idea of ductus which Mary Carruthers explains as the journey through a work of art.[17]

16. Thomas Wynn and John Gowlett, "The Handaxe Reconsidered," *Evolutionary Anthropology* no. 27 (2018): 26-27, https://doi.org/10.1002/evan.21552.
17. Mary Carruthers, "The Concept of Ductos or Journeying through a Work of Art," in *Rhetoric Beyond Words: Delight and Persuasion in the Arts of the Middle Ages*, ed. Mary Carruthers (Cambridge, UK: Cambridge University Press, 2013), 190.

Another often cited concern is in catering to the diverse populations of contemporary cities. It is claimed that symbolism requires a level of cultural familiarity whose restricted legibility makes it undemocratic. Especially as traditional styles reflected a societal consensus that no longer exists, a consensus that historically worked with the common values shared by religion. But this ignores universal experiences that transcend cultural boundaries, like the appreciation for nature or the fundamentally mathematical order of the universe. There are many examples of ornament that eschew religious imagery for a geometric appeal as featured in the work of architects like Louis Sullivan, Frank Lloyd Wright, and Carlo Scarpa.

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Fig. 2.1) Brion Cemetery in Altivole, Italy by Carlo Scarpa (built 1978)

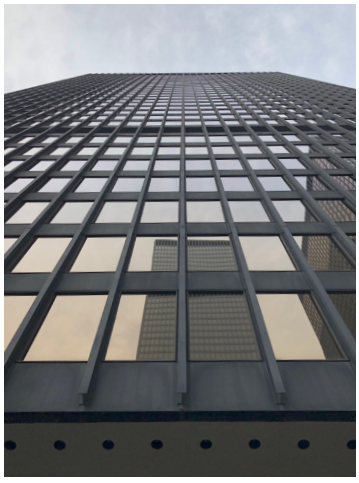

Fig. 2.2) TD Centre in Toronto by Mies Van Der Rohe (built 1969)

FUNCTIONAL ORNAMENT:

Many of these critiques stem from the reductive dogma of modernism which redefined beauty as a product of function. Modernism sought to formalize the entire built world into a series of Cartesian grids, it replaced personality with universality, and irrationality with rationality. The problem with these ambitions is the simple fact that humans are naturally irrational beings constantly in search of meaning and expression. Depriving people of their irrational desire for ornament has led not only to sterile urban environments of dead streetscapes, but possibly even contributing to the feelings of disorientation and alienation that are endemic of modern society.

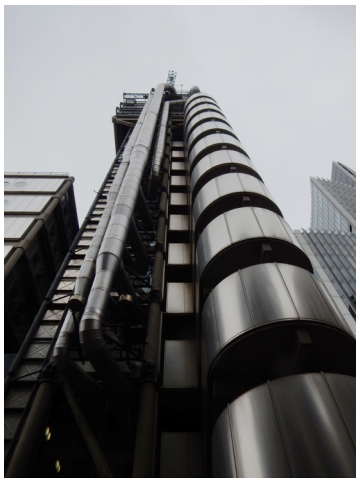

Fig. 2.3) Lloyds Building in London by Richard Rogers (built 1978)

Fig. 2.3) NEO Bankside in London by Rogers Stirk Harbour + Partners (built 2012)

As a human impulse, ornament never truly disappeared but changed forms according to modernist principles. The decorative I-Beams of Mies Van Der Rohe's TD Centre office towers symbolized not only the actually load bearing column hidden behind the envelope, but also the entire industrial process that made such a style possible.[18] Modernism created new categories of ornament that were acceptable means of aesthetic expression because all suggested a functional purpose. Nevermind whether this ornament actually improves building performance, all that is required is a rationale for an aesthetic decision.

One of the most commonly used tropes is the exposure of structural components. High-tech architecture took this mechanical ornament to the extreme as exemplified by the Lloyd's of London building by Richard Rogers. Stairs, elevators, air ducts, pipes, columns and beams are all displaced to the exterior of the building. This creates a highly articulated, though industrial-looking, façade. Later projects by Rogers Stirk Harbour + Partners like NEO Bankside and the Leadenhall Building moderate this aesthetic while using external structure to produce column-free interiors.

Louvers are another form of ornament that is readily appropriated by contemporary architects. Brise-soleils suggest a consideration for controlling sunlight, although their placement frequently fails to effectively shade the building. It is all the more

18. Robert Levit, "Contemporary Ornament: A Return of the Symbolic Repressed," *Harvard Design Magazine* no. 28 (2008): 79.

absurd when considering the easiest way to limit solar heat-gain would be to stop specifying floor-to-ceiling windows, but that would make too much sense. Louvers are then relegated to the aesthetic duty of façade articulation while only appealing to the notion of function. New Ludgate by Sauerbruch Hutton seems to embrace this aesthetic purpose by wrapping the exterior, north elevation included, with vertical fins. The unabashed use of colour creates pleasant gradients of red and blue.

As computer software continues to dominate the design process a new decorative phenomenon has emerged which I refer to as "appliqué". Architectural appliqué is the use of flat displays of pattern through perforations, frits, etchings, etc. Computer technology has allowed us to apply textures to 3D models with ease and visualize the results through renders.[19] The Ryerson Student Centre in Toronto was designed by Zeidler Partnership Architects with Snohetta and features a white randomized geometric pattern sprawled across the façade. Like louvers, appliqué uses the control of daylight to substantiate what is clearly a decorative element. According to the architects, "the varying façade pattern controls heat gain into the building and frames views of the city grid and nearby buildings from the interior, acting as a traditional framed window without actual frame constructions."[20] That is a lot of words to excuse the incorporation of a playful pattern. Especially when that "traditional framed window" construction would

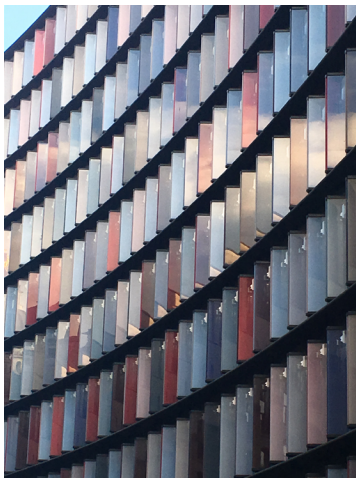

Fig. 2.4) New Ludgate in London by Sauerbruch Hutton (built 2015)

Fig. 2.5) Ryerson Student Centre in Toronto by Zeidler Partnership & Snohetta (built 2015)

19. Antoine Picon, *Ornament: The Politics of Architecture and Subjectivity* (Somerset: Wiley, 2014), 27-29.
20. "Ryerson University Student Learning Centre," Snohetta, 2009, https://snohetta.com/project/250-ryerson-university-student-learning-centre.

go a lot further to mitigating heat gain and framing views.

The structural trickery of cantilevers is made ever easier by advancing engineering and material technology. The cantilever has become especially rote as a form of ornament in contemporary architecture, an aesthetic means of creating more interesting building mass while vaguely referring to digital pixelization as a spirit of the times.[21] Economic logic allows the floor space lost by pushing into the building mass to be regained at another point through an outward cantilever - treating architecture like a game of Jenga.

Similar to cantilevers, balconies increase the usable area of a building. By achieving that basic functional objective, architects are then free to experiment with the decorative forms they truly want to make. It does not matter whether the building is located in a cold climate, or if balcony space is really all that comfortable 40 stories in the air. The illusion of practicality is enough to allow for some visual indulgence. This trend was most recently popularized by Aqua in Chicago by Studio Gang.

Fig. 2.7) Aqua in Chicago by Studio Gang (built 2009)

Beyond these functional elements being exploited for decorative purposes, buildings themselves have morphed into sculptural elements. As Robert Venturi said, "When modern architects righteously abandoned ornament on buildings, they unconsciously designed buildings that were ornament."[22] Now decorative forms proliferate city skylines especially as "starchitect" firms push their brands across the globe. Bjarke Ingels Group have built a business empire finding new ways to rationalize why a building either needs to twist or look like a mountain regardless of site context.

Other firms like Herzog and De Meuron put greater effort into context research but often produce similarly iconic works. Again, the alibi of function is used to explain the sculptural form of the building.

21. Aaron Betsky, "Jenga Architecture Proposes the Unstable and the Tentative," Dezeen, August 06, 2018, accessed August 07, 2018, https://www.dezeen.com/2018/08/06/opinion-aaron-betsky-jenga-towers-pixelated-buildingsarchitecture/.

22. Robert Venturi, Denise Scott Brown, and Steven Izenour, *Learning from Las Vegas* (Cambridge, MA: MIT Press, 1972), 163.

Fig. 2.8) Tate Modern in London by Herzog & De Meuron (built 2016)

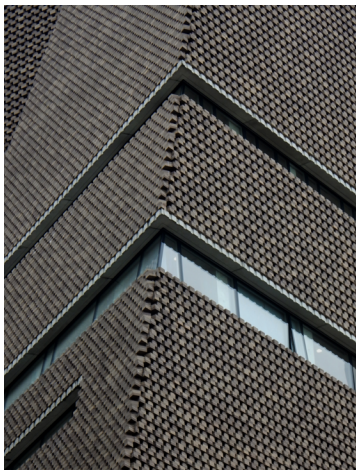

Fig. 2.9) Tate Modern Switch House detail

Fig. 2.10) Tate Modern heritage detail (built 1893)

According to the architects, "we carved a path through the jungle of unusually numerous parameters that must be taken into account. The resulting paths and connecting lines, gradually acquired shape, condensing into a pyramidal form generated from the combined geometries of the site context and existing building."[23] The extension of the Tate Modern carries the brick materiality from the original power plant to the new pavilion. A careful consideration of craftsmanship has been paid as the stacked bricks neatly align to complex angled geometries. But this attention to detail is undermined by the uniformity of the brick work, visually reading as a simple flat surface. This is especially apparent in its proximity to the historical building; whose bands of protruding bricks highlight window openings. Custom curved bricks blend the proud embellishments back to the surface of the envelope.

The problem with these newfangled varieties of ornament is two-fold. Firstly, the constant deferral to function as a permission structure to allow for aesthetic choices ignores beauty as a function unto itself,

23. "The Tate Modern Project," Herzogdemeuron.com, 2018, https://www.herzogdemeuron.com/index/projects/complete-works/251-275/263-the-tate-modern-project.html.

Fig. 2.11) Canaletto in London by UN Studio (built 2017)

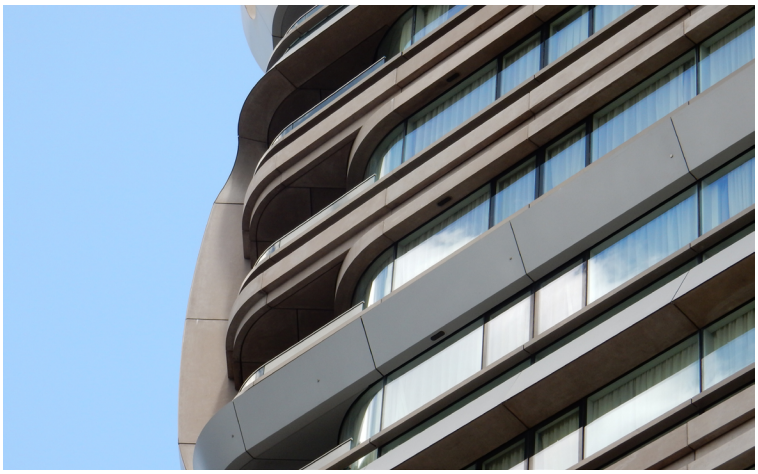

Fig. 2.12) Detail view of Canaletto by UN Studio

without having to derive from practical purpose. Secondly, and perhaps more problematically is the issue of scale. The simplicity and modularity mandated by modernism only allows for these ornaments only work at the macro scale of the building. For example, Mies' I-Beams span the entire height of the TD Centre. These forms of "functional" ornament result in features that extend far beyond the relatability of the human scale.

* * *

ORNAMENT REDUX

Not all contemporary ornament is so deficient. UN Studio's use of parametric software on the Canaletto residential tower in East London creates curvilinear modules that compartmentalize the tower's considerable height. Thick ribbons of grey aluminum cluster groupings of floors together to create a vertical rhythm of twos and threes. Inlayed strips of beige glass fiber reinforced concrete further subdivide the modules, curving in and out like a futuristic moulding. Though the exterior finishes fail to convey anything

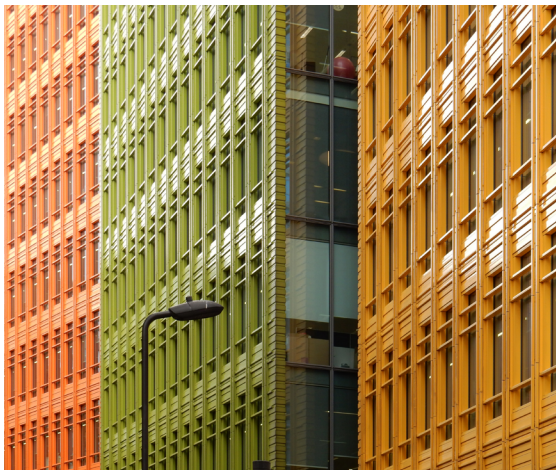

Fig. 2.13) Central St. Giles in London by Renzo Piano Building Workshop (built 2010)

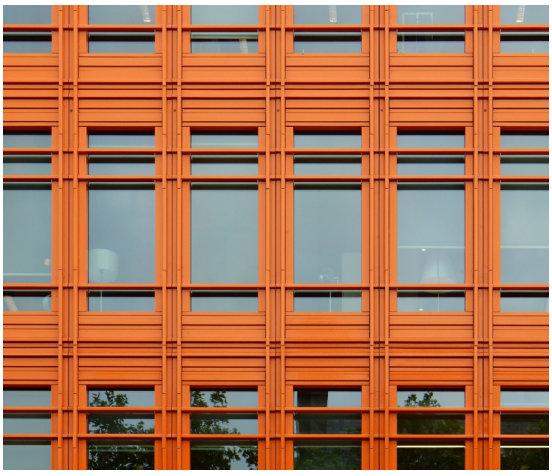

Fig. 2.14) Central St. Giles facade detail

about the context, the reflective glass, satin metal, and matte beige concrete create a balanced palette of materials. Depending on the quality of maintenance it may not appear so alluring in the future, but its present state is quite a pleasant composition.

While he would probably cringe at the characterization, the façade of Renzo Piano's Central St. Giles produces a richly articulated ornamental effect. Angled walls of vivid orange, yellow, and green subdivide what is actually a single building occupying an entire city block. The ribbed screens of terracotta are overlaid with crisscrossing horizontal and vertical rods to create additional depth and complexity. These ceramic batons serve no practical purpose beyond articulating the building façade. Pedestrian walkways cut through to a central courtyard to complete the devotion to fine-grain urbanism.

One of the most refreshingly unrepentant uses of ornament is Damien Hirst's recently completed headquarters designed by London firm Stiff+Trevillion. Among the historic beige and brown brick

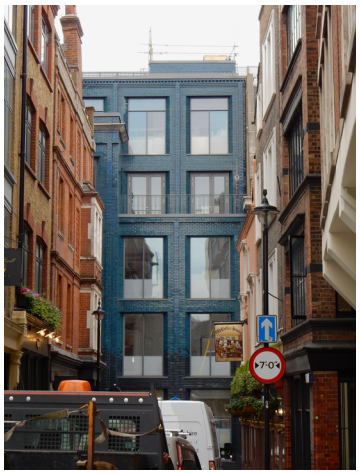

Fig. 2.15) Damien Hirst Headquarters in London (built 2018)

Fig. 2.16) Damien Hist Headquarters cornice ornament

Fig. 2.17) Damien Hirst Headquarters corner detail

neighbours of Beak Street is a distinctive yet fitting building. The masonry construction is in keeping with the context. Bricks are skillfully stacked in decorative arrangements, adding depth to the punched windows and embellishing the roofline with a faceted border. But the clay's colour, glazed in an iridescent combination of blue and green, stands out from the warm tones of the adjacent walls. More daring are the wide frames of silvery ornament framing a chamfered corner and the building cornice. Lines of diagonal relief intersect to produce triangular symmetries reminiscent of art deco patterns. The eclecticism is only appropriate for the creative enclave of Soho.

These projects show, to varying degrees of success, many of the benefits that traditional ornament was able to provide. Thus I propose four principles for successful ornamentation:

1. Variety in scale. Human beings, by and large, experience life below 2 metres in height. Our units of measure reflect this - the empirical foot is a rough comparison to the length of a human foot. The French

word for inch, “pouce”, translates to thumb. Humans inhabit a micro world. As hunter-gatherers, our eyes were evolutionarily developed to pick up the most minute details. Our lives depended on detecting predators lurking in bushes, noticing fruit hanging between tree leaves, and seeing prey among the blades of grass. Ornament serves this optical imperative by breaking down big masses to smaller, more detailed pieces.

2. Variety in pattern. Humans are pattern seeking creatures, searching order even amidst chaos. This extends to music, language, and of course architecture. Just as rhythm turns chaotic sounds to pieces of music, ornament can architecturally introduce rhythms and hierarchies that pleasantly engage our pattern-seeking vision.

3. Variety in depth. Simple patterning is not enough. Humans also inhabit a three-dimensional world. Our eyes triangulate depth, our pupils dilate to bring subjects into focus and blur out peripheral information, we discern sources of light through the casting of shadows. Again, our buildings should engage this sense by more means than just recessed windows or doorways. Shadows highlight the range of scales and patterns on a facade and emphasizes distinctions between separate architectural elements.

4. Delineate borders. Ornament should be placed strategically to increase the visual legibility of a building by providing high information areas along object edges. As Salingaros established, the human eye works by establishing efficient scan paths across areas of high contrast and detail to form an initial impression and then extrapolates the regions of low information. It is no coincidence that most ornament occurs at component edges. Capitals and pedestals announce the beginning and end of a column. Quoins emphasize the presence of corners. Pediments, freizes, and cornices visually terminate rooftops. And moulding is used everywhere from baseboards to window frames as a contrasting border. The increased detail from these features allows our brains to intuitively categorize and comprehend our environments with expedience. Minimalist environments challenge this subconscious process by offering little information for our brains to decipher.

Ornament, at least traditionally, has been able to address all these visual properties. A single moulded door spans from quarter-inch protrusions, half-inch recessions, and inch-wide trim to one-foot wide panes of glass and finally a panel height of seven feet. That single building component, ornamented correctly, achieves a gradation of scales that moves from the width of a finger to the height of a body. Now apply this to the scale of a building. Entire facades are broken down, patterns evolve, and depth is created from the shadows casted. From these articulations emerges hierarchies of order and rhythms that allows us to organize space. Building masses become relatable through composition in accordance to the ordered complexity and scale that humans are biologically predisposed to appreciate. From these fundamental principles emerges an articulated ornament whose tectonic and symbolic functions remain mostly overlooked by contemporary architects.

Another important role that ornament plays is establishing visual connections to disparate elements. A similar pattern carried from wall to wall shows those objects to be part of one building. Extending that pattern from building to building then creates a relationship to the neighbourhood. The recursive properties of ornament allow for cohesion to be achieved at all scales. Or as architect and mathematician Christopher Alexander explained: "Space, when properly formed, is whole. Every part of it, every part of a town, a neighbourhood, a building, a garden, or a room, is whole, in the sense it is both an integral entity, in itself, and at the same time, joined to some other entities to form a larger whole."[24]

Ornament is also uniquely capable of organizing building facades through rhythm and hierarchies. With enough detail and variety, identical modules can be replicated ad infinitum without appearing oppressively monolithic. It actually lends an appearance of grandeur as the massive scale of the building is complimented with a high degree of articulation. King's College Chapel at the University of Cambridge demonstrates this rhythmic effect. Twelve modules of nearly identical bays extend across a perfectly manicured lawn. Towering buttresses separate the segments, tapering to a point as they extend towards the

24. Christopher Alexander, Sara Ishikawa, and Murray Silverstein, *A Pattern Language: Towns, Buildings, Construction* (*New York*, NY: Oxford Univ. Pr., 1977), 1147-1148.

Fig. 2.18) King's College Chapel detail

Fig. 2.19) King's College Chapel south facade, Cambridge UK

heavens. Between these buttresses a whole host of ornament articulates the modules. A crown of decorative battlements is hollowed out by intricate voids of gothic geometries. The small heads of gargoyles peer down at the campus grounds. Quatrefoils feature in recessed wall openings and the tracery of the chapel windows. Generous moulding frames the stained glass into a point arch. The organization of elements gives an initial visual satisfaction, while the eye is drawn around the finer details for greater appreciation. The dozen repetitions do not create visual fatigue as one would expect, but rather produces as a harmonious assembly.

These articulations of ornament can also work hand in hand with modernism's obsessive functionalism by highlighting the vernacular elements that critical regionalism reveres. In the hot Middle Eastern climate, the mashrabiya not only provides ventilation and a shaded outdoor space to occupants, but its ornamentation designates its functional and cultural importance. The repeated use of certain details and patterns eventually gain cultural significance within a locale. These architectural elements, like the pitched

rooftops of cold climates or generous canopies in rainy cities, become a marker of regional identity worth celebrating through decoration.

While non-representational art has become a key feature of modern culture, traditional ornament made extensive use of figuration to create associations with subjects of importance. The most obvious example of this is the statuaries depicting religious or mythic iconography. Organic motifs proliferated traditional architecture as well to recall our place in nature. Even the most basic ornament used primitive geometries to invoke the mathematical structure of the universe. These systems of symbols could then be used to communicate cultural values or even tell stories. While the skill required to produce ornament was often used as displays of decorum, it also established objects of cultural significance. And that is fundamentally why ornament is such a meaningful part of architecture. In giving sense to the objects that it decorates, ornament serves to contextualize them in time and space, providing information about an objects historical and geographical location.[25]

The human search for meaning creates the imperative for expression and symbolism. Unfortunately, over the past century, the symbolic role of architecture has been neglected in the process of rationalization. But like patterns, we have the tendency to find meaning even when none is present.[26] By rejecting ornamentation, modernism rejected the most direct means of architectural communication. Its capacity to relate to faith, nature, or humanity was greatly constrained. Symbols and motifs that corresponded with certain cultures have been erased from architecture. People now find themselves unable to relate to their own cities, unable to orient themselves in such a rapidly globalizing world. Ornament, precisely due to its "unpractical" nature, stands as the most effective tool for architects to reintroduce meaning to the built environment.

In its quest for rationality, modernism expelled ornament as a hedonistic frivolity. This overtly literal definition of function neglects the many less quantifiable benefits of ornament. Any part of a building

25. Llewellyn Negrin, "Ornament and the Feminine," *Feminist Theory 7*, no. 2 (August 1, 2006): 221, https://doi.org/10.1177/1464700106064421.
26. Charles Jencks, The Language of Post-Modern Architecture (New York, NY: Rizzoli, 1980), 15.

that affects occupants serves a purpose. Ornament functions through modes of implication, suggesting forms, structures, and meanings for our minds to interpret. It makes the building more comprehendible, relatable, and significant. Without the dogma of modernism, ornament could be poised for a prominent return although many challenges will have to be overcome. Initial attempts will likely be labeled pastiche as we have been trained to think of ornament as a purely historical artifact. The dominance of modernism all but ended any natural progression that may have evolved from the Art Deco movement. There is a decades-long gap in knowledge that needs to be overcome, but with the proper cultural context and technology a truly successful contemporary ornamentation can emerge.

CHAPTER 3:
ON MATERIALITY

Fig. 3.1) Laneway driving in England

Driving through the lanes of the Cotswolds Area of Natural Beauty inspires a palpable sense of enticement. The slight incline builds the anticipation with every foot of altitude gained. Each twist and turn is blinded by a dense cocoon of vegetation enveloping the road. My safety at every perilous corner hinges on the opposing traffic staying within their narrow bounds. Occasionally the claustrophobia abruptly opens up to the sight of rolling green pastures, grass evenly trimmed down to stubs from grazing lambs. A few more turns and it is back to the foliage tunnel, this time steeply rising in elevation. At its zenith, the shrubbery dissipates to reveal an expansive panorama of the valley below. Hills of farmland extend to the misty horizon, their oddly shaped lots demarcated by lines of hedges. Fields are dotted with trees and the occasional farmhouse. Veering left, the destination seems ever closer. As the topography begins to plateau, staples of posh English recreation appear along the road: a golf course, rugby clubs, and a horse racing venue. I am clearly headed in the right direction.

Fig. 3.2) View of the city from the Avon River

The yellow bricks lining new housing developments on the outskirts foreshadow my destination. As the slope starts to dip, the houses get older. The street takes a hard right, the incline gets steeper, and the city starts to unfold in front of me. A cascade of brown rooftops step down the hillside, each supported by solid golden hued stone walls. Gleaming in the summer sun, the city's radiance welcomes me down the valley. After parking the car, I make my way onto the busy streets and walk to the central square. Ahead of me soars the exquisite gothic Abbey, to my right is the eponymous ancient roman spa. I bask in the warm light glancing off the buildings. I have finally arrived at the focus of my travels, the city of Bath.

The defining feature of Bath is its predominantly beige urban fabric. Its signature masonry is a limestone historically mined just outside the city. The limited means of travel in antiquity meant Bath was obliged to use the local stone as the most abundant and convenient source of building material. The physical properties of the sedimentary rock also made it well suited for construction. As a freestone, Bath Stone is

Fig. 3.3) Bath Abbey

Fig. 3.4) Typical Bath streetscape

Fig. 3.5) Unique corner condition

soft and uniform enough to be easily chiseled. Unlike the striated composition of metamorphic rocks (for example, marble and slate), Bath Stone's structure is composed of fine spherical grains that make it possible to carve in any direction. This made it ideal for the purposes of tracery and ornament.

The stone is the unifying feature that weaves through the urban fabric. Its warm colour and pale tone allows light to propagate through the streets. It ages with grace, gaining a depth of character as particulate accumulates with time. While a such a neutral and ubiquitous building material may seem destined to produce a dreary environment, its effect is quite the opposite. The street level facades are liberally built in a range of styles, colours, and materials. Large glazed storefronts are divided by moulded wood painted in an assortment of colours. While the ground plane is free to express itself in a variety of ways, the upper levels are all constrained to the honey-coloured stone. Monotony is further avoided through syncopated use of different ornament and building typologies. It also benefits from an adhoc urban plan full of curves and

diagonals that produce wonderfully eclectic lots. The stone's deployment creates a visual coherence to the city despite its medieval, neoclassical, and modern districts. It has gained such a cultural significance to the city that it has become a symbol for the region.

* * *

NATURE

Early human habitats were built entirely from natural materials. Whether they were formations of caves or primitive wooden huts, humans settled around running water, edible vegetation, and populations of prey. This was the case for hundreds of thousands of years, instilling us with aesthetic preferences that recalls our natural origins. As psychologist Roger Ulrich put it, "We are biologically predisposed to liking scenes with prominent natural elements."[27] It is on this basis that I propose greater consideration for the importance of natural materials in lieu of synthetics.

Natural materials are those that require little processing before they can be used in construction. Wood, stone, clay are all materials made from rudimentary means. This simplicity allows us to read them as coming from the earth, hearkening back to our place in nature. More importantly, they all relate back to their original locations. A red brick may indicate its source from an area especially rich in iron-oxide. White marble is a highly pure limestone, while magnesium-rich impurities in limestone produce a green marble. Various species of trees will produce different shades of wood with distinctive graining and knots. These natural processes which influence the final appearance of our building materials help us situate architecture within a geographic and geologic context.

Most metals are synthetic materials manufactured through a complex number of processes, often spanning various countries. Iron ore mined from one country will be sent to a foreign refinery, then shipped to a steel plant where it will be combined with other ingredients to produce steel. The same goes for other alloys, although naturally occurring metals like zinc and copper more closely resemble their raw ores.

27. Grant Hildebrand, *Origins of Architectural Pleasure* (Berkeley, CA: University of California Press, 1999), 15.

Concrete is the combination of sand, water, aggregate, and cement. This mixture may sound quite natural, but the inclusion of cement complicates the entire process. Cement is made by melting limestone, clay, and other elements at extreme temperatures, cooling the mixture until hardened and crushing it into a powder. Again, the numerous steps required to produce concrete remove it from any natural context. Especially when most concrete can be mixed and poured on-site, it is a truly placeless material.

It is almost absurd to discuss glass as a material. Its entire purpose is to be invisible. Its transparency, smooth finish, and reflectivity acts like a mirage. There is no grain, nor colour to place it to any location. The sand, sodium carbonate, and calcium carbonate are melted to such a clear state that their natural features are removed. Designers may use frits or films to make glass more expressive, but it is ultimately restricted by its flatness. Glass is an anti-material.

The industrial innovations of these materials, combined with their technical performance, made steel, concrete, and glass the holy trinity for modernist architecture. Their placeless nature was a perfect metaphor for the universal ambitions of the International Style. Their use would also produce some of the least energy efficient buildings possible, not to mention the unsustainable production of those materials. Obviously, they had no understanding of climate change at the time. And yet, even with the benefit of retrospect, architects continue to default to those wasteful materials especially as pollutive cargo shipping makes them cheaply available across the world.

* * *

CRAFT:

To counter the ambiguity of these placeless materials, today's architects often employ veneers of local materials in an attempt to situate a project. However, the purity of modernism demands that material expression be constrained to flat displays of colour and texture. By reducing material to an assortment of swatches, modern architects overlook an entire assortment of dimensions that ornament reveals through

its creation. Deductive processes remove material to create geometry but can leave indexical traces of production. Carving, cutting, chiseling all reveals the idiosyncratic properties of material like the direction or density of grain. Additive processes likewise reveal methodology. Terracotta can only produce certain geometries depending on whether it is extruded, pressed, or slipcasted. Ornamenting with masonry is an entirely different process, instead working at a modular scale to arrange individual bricks into patterns and protrusions. Or bricks can be moulded into new shapes, offering further decorative possibilities. Ornament does not "distract" from the natural qualities of a material, rather, it demonstrates the properties and limitations of materials more than flat swatches could ever achieve.

Craft has long been regarded as an important source of ornament's appeal. John Ruskin's *Seven Lamps of Architecture* staunchly outlined the importance of honesty and labour in the making of ornament. The Fifth Lamp of Architecture, that of Life, elucidates the importance of process in the act of creation. Ruskin first distinguishes what is a "true" life from what is "false". A true life is that which was created out of independent joy, whereas a false life is the many rote things we do in order to survive. "That life in which we do what we have not purposed, and speak what we do not mean, and assent to what we do not understand; that life which is overlaid by the weight of things external to it."[28] Ruskin even claims to be able capable of discerning if a stone has been carved with joy or dread, citing a Gothic church near Rouen as being competently executed but by craftsmen who evidently hated the work.[29] Under the Lamp of Life, Ruskin also applauds the natural inaccuracies that occur in manual labour, especially within buildings that have been constructed over long periods of time. The team of workers may change, the ground may shift under the weight of the building, solutions may have to be improvised. The imperfection lends a sense of vitality, and suggests the speed of a master craftsman whose impatience leads to spontaneous creativity.[30]

These principles would disqualify much of the architecture produced today through mass manufacturing and prefabrication. Ruskin finds an unlikely ally in Adolf Loos, whose condemnation of

28. John Ruskin, *Seven Lamps Of Architecture* (London, UK: Smith, Elder & Co., 1849), 143.
29. John Ruskin, *Seven Lamps Of Architecture*, 165-167.
30. John Ruskin, *Seven Lamps Of Architecture*, 150-153.

ornament was largely a reaction against the mass production of decorative objects. In the Lamp of Truth, Ruskin makes a case for the importance of authenticity of in architecture. He codifies this through three specific rules that ban:

> "1st. The suggestion of a mode of structure or support, other than the true one; as in pendants of late Gothic roofs.
>
> 2d. The painting of surfaces to represent some other material than that of which they actually consist (as in the marbling of wood), or the deceptive representation of sculptured ornament upon them.
>
> 3d. The use of cast or machine-made ornaments of any kind."[31]

While these sacraments seem theoretically sound by Ruskin's explanations, there are many examples that undermine his argument. The first rule outlaws ornamental structure, which can still serve an aesthetic purpose. It also seemingly condemns cantilevers as misleading extravagances; "Nothing can be worse, either as judged by the taste or the conscience, than affectedly inadequate supports – suspensions in the air, and other such tricks and vanities."[32] Yet the cantilever is now a widely popular architectural gesture. The second law is more agreeable, but even then, exceptions can be found. For example, the green painted cast iron pavilions of Paris' Art Nouveau metro entrances were meant to simulate a bronze patina. Of course, those entrances also broke Ruskin's third law of truth which stipulates all ornament must be handmade. However, they remain popular fixtures of Parisian architecture despite the "inauthenticity" of their material or production because they still provide the aesthetic and semiotic benefits of ornament.

Today the idea of craft itself seems to be evolving with computational technology, where programming and software works are appreciated like analog methods. In 2018, a portrait painted by artificial intelligence was auctioned at Christie's for a selling price of $432,000.[33] There is growing recognition for the mental toil of digital methods rather than the traditionally physical labour of crafting an artifact. And

31. John Ruskin, Seven Lamps Of Architecture (London, UK: Smith, Elder & Co., 1849), 39.
32. John Ruskin, Seven Lamps Of Architecture, 41-42.
33. Gabe Cohn, "AI Art at Christie's Sells for $432,500," The New York Times, October 25, 2018, https://www.nytimes.com/2018/10/25/arts/design/ai-art-sold-christies.html.

with machine learning making rapid advancements, robots will soon be able to replicate human labour – imperfections included. So for all the charm that well crafted objects provide, I do not believe that the success of a building's ornament depends solely on hand made craftsmanship. It is a convenient excuse for opponents of ornament to cite, especially given the dearth of tradespeople after modernism drove so many traditional skills to extinction. Instead of fixating on a possibly outdated conception of craft, I would much rather focus on the tangible benefits of ornament as a scaling, rhythmizing, and signifying element.

But Ruskin's aversion to metal is not solely based on its detachment from artisanry. He, too, invokes human origin in explaining the appeal of natural materials. "Its first existence and its earliest laws must, therefore, depend upon the use of materials accessible in quantity, and on the surface of the earth; that is to say, clay, wood, or stone: and as I think it cannot but be generally felt that one of the chief dignities of architecture is its historical use; and since the latter is partly dependent on consistency of style, it will be felt right to retain as far as may be, even in periods of more advanced science, the materials and principles of earlier ages."[34]

* * *

REGIONALISM:

Given the homogenous appearance of buildings across the world, its wasteful disposability, and the general unsatisfaction the public feels towards contemporary architecture it seems new principles are required to counter the influence of the modernist palette.

1. Local over global. Make use of nearby resources to cultivate a regionally identifiable palette.

2. Natural over synthetic. The more processed a material's manufacturing, the less familiar it becomes.

3. Durable over disposable. Certain materials improve with age while others must be replaced within decades. Not only is this wasteful but it prevents buildings from entering our collective memory as their image is constantly revised.

34. John Ruskin, Seven Lamps Of Architecture (London, UK: Smith, Elder & Co., 1849), 44.

4. Cohesion over chaos. A consistency in material treatment allows for a harmonious urban environment when properly varied with an assortment of building typologies and articulation. Deviations should be reserved for landmarks so that atypical materials denote important cultural, spiritual, or civic buildings.
5. Ornamented over plain. Reveal the internal qualities of materials through articulating them into finely detailed forms.

That is not to say that metal and concrete should be eliminated from specification sheets, or that distinctive buildings have no place in cities. But as architects continue to design more masterplanned communities than ever, it is imperative that those neighbourhoods find as much long-term success as the old cities we go out of our way to visit.

CASE STUDY 01:

One such community is the Accordia housing development in Cambridge, recipient of the 2008 RIBA Stirling Prize for the best new project in the United Kingdom. While the design work for indivdual buildings was split between three architecture firms, led by Feilden Clegg Bradley Architects with contributions from Maccreanor Lavington and Alison Brooks Architects, the entire development manages to work together as a cohesive neighbourhood with sympathetic nods to historic Cambridge. Covering the low-rise buildings is a cream coloured brick which dominates the material palette. However, there are a variety of building typologies to break up the uniformity. Residences are offered from one-bedroom flats all the way to five-bedroom homes. The neighbourhood itself is also a diverse mix of people, with 30% of homes dedicated to affordable housing and visually indistinguishable from market units.

Sitting on gabion walls of grey stones to disguise the parking garage, four storeys of copper clad residences ameliorate by the day as the metal patinas to darker shades. A faceted five storey building covered in brass has lost its youthful gold lustre, maturing to a rich brown finish. While these metal structures

Fig. 3.6) Alleyway in historic Cambridge, UK

Fig. 3.7) Accordia Housing Development in Cambridge, UK

are a stylistic departure from the more charming brick homes (especially the brass building which looks particularly out of place), their intelligent use of oxidizing metals means they should have lasting appeal. The use of metals also helps distinguish the mid-rise buildings from their low-rise brick neighbours while wood accents add a material motif across the site.

Notably absent from the envelopes of these buildings, like most contemporary architecture, is ornament. While certainly some of the buildings suffer the monolithic appearance symptomatic of minimalism, the project was also blessed with a mature site of tall trees and lush greenery that softens the severity of the brick volumes. The lack of ornament is also probably the cause of the brass building's arbitrary form, which opted for cantilevered corners and faceted walls to articulate the large mass.

Much can be learned from these precedents, both historical and contemporary. They highlight the capacity for materials to construct a regional identity out of simple blocks of stone and brick. As globalism

continues to dilute cultural identities through mass manufacturing and international conglomerates, the role of architects as cultural ambassadors is being undermined by their uncritical servitude to capitalism. But projects like Accordia show that thoughtful design, within a comprehensive but rigid planning framework, can still produce contextual architecture under the typical developer-led model. This effect is only possible on aggregate, which requires a certain level on consensus and cooperation among designers. This is evident in Cambridge, where three London firms each known for their personal aesthetic were able to buy into a holistic vision. Whether adobe or rammed earth, brick or terracotta, marble or granite, oak or bamboo, each material tells the story of its native state. It is up to architects to find that resonance in their surrounding milieu.

Fig. 3.8) Accordia Housing Development brick and brass buildings

Fig. 4.1) Ancient Roman Ionic column capital in Baiae, Italy

CHAPTER 4:
ECONOMICS OF ORNAMENT

For much of history ornament was closely associated with economy. In Ancient Rome for example, ornament was treated as an investment to be bought and sold or passed down like an heirloom. Ornament's status as neither permanent nor temporary, existing somewhere between a building and furniture, made it an attractive asset to collect. A law passed by the Roman Senate in 44 AD banned the selling of ornament to limit its dispersal, reconstituting ornament as a public adornment to be enjoyed by everyone. As such, ornament was to be progressively accrued across the urban environment, providing an ever-richer public realm for Romans.[35] Ornaments from demolished buildings were reintegrated into new buildings as spolia, or simply left as stand-alone decoration. Later sumptuary laws further restricted spending on extravagant luxuries, characterizing excessive consumption as a threat to personal and state economy. In practice, these laws controlled capital and social mobility by prescribing permissable levels of luxury for every class.

Adolf Loos recognized the intrinsic relationship of ornament to economy, writing "it is a crime against the national economy that it should result in a waste of human labour, money, and material."[36] This was in large part a reaction against the over-abundance of kitschy ornament that early industrialism produced. The ease with which ornament could be endlessly reproduced diminished its meaning and devalued the labour that formerly crafted ornament. In passage from *Ornament and Crime* that has proven as erroneous as any other part of his essay:

> "Omission of ornament results in a reduction in the manufacturing time and an increase in wages. The Chinese carver works for sixteen hours, the American worker for eight. If I pay as much for a smooth cigarette case as for an ornamented one, the difference in the working time belongs to the worker. And if there were no ornament at all – a situation that may perhaps come about in some thousands of years – man would only have to work for four hours instead of eight, because half of the work done today is devoted to ornament. Ornament is wasted labour power and hence wasted health."[37]

35. Antoine Picon, *Ornament: The Politics of Architecture and Subjectivity* (Somerset: Wiley, 2014), 104-105.
36. Adolf Loos, "Ornament and Crime," trans. Michael Bullock, in *Programs and Manifestos on 20th-Century Architecture*, ed. Ulrich Conrads (Cambridge, MA: MIT Press, 1975), 21.
37. Adolf Loos, "Ornament and Crime," 22.

His economic rational against ornament demonstrates a naïve understanding of capitalism. The difference in time does not belong to the worker, it belongs to the company. Rather than the employee enjoying half the working hours (and somehow still making the same wage?), the manager would simply fire half the workforce. The extra profit made from selling plain cigarette cases would never reach the workers – it would go straight to the business owners and investors. This is exactly how it played out in the modern era. Skilled ornamental trades like stone masons, plasterers, and bricklayers were put out of work as their services were no longer required. However, Loos' influence on mainstream architecture would not be seen until decades later. In fact, ornament continued to feature across the decorative arts even during the years of the Great Depression.

* * *

CASE STUDY 02:

Hidden among the canyon of corporate monoliths that constitute Toronto's financial district stands a diminutive giant. The 1931 art deco masterpiece, designed by York and Sawyer with Canadian firm Darling and Pearson, is a remarkable emblem of its era. Once the tallest building in all the Commonwealth, Commerce Court North has long since been overshadowed by neighbouring Bay Street towers. The building dwarfs me, receding into the sky as the massing steps back in tiers. It is perhaps the perfect metaphor for the stratified structure of corporate hierarchies. At the its peak, colossal faces of stoic men gaze into the distant horizon.

Vast walls of limestone are punctuated by lines of skillfully carved ornament. The solidity of the exterior doubles as climate protection as the sparing use of glass limits thermal leakage in the winter cold. Rows of paired rectangular fenestrations are crowned by arched windows at the podium's apex. A trio of decorative circles rest above each window, subdividing space into a satisfying polyrhythm. A snaking

Fig. 4.2) View of Commerce Court North tower in Toronto (built 1931)

Fig. 4.3) View of Commerce Court North podium

Fig. 4.4) View of Commerce Court North curb moulding

meandros lines the top of the limestone wall, capped by an aging copper flashing turned green with time.

Down at street level the building meets the ground with equal grace. A generous granite curb reaches just under my eye level, curved mouldings jut in and out to define the tower's base. This gives the building an instant relatability as my mind subconsciously conjectures distances according to the familiar unit of human height. Moving further down to ever smaller units, the inch-wide trim between curved portions of the moulding adds another level of scalability. Now the building becomes legible from the scale of my fingers to my height and beyond. The imposing mass has been fragmented into organized compartments that make it intuitively understandable as an object.

Access into the tower is unambiguous as a grand archway announces the building entrance on King Street. Rising three stories, the layers of nested portals recall the great cathedrals of Europe. The first layer is a simple frame of twisting columns wrapping around the arch like a rope. The second layer is a wide band of intricate imagery featuring Canadian wildlife from bears and beavers to squirrels and roosters. Stepping back once more, a third arch focuses on iconic flora; maple and oak leaves, sunflowers and the fleur de lys. Finally, the central mural encapsulates the spirit of the building. Standing at the forefront the Roman god of commerce, Mercury, is lifting the

Fig. 4.5) View of Commerce Court North entrance archway

caduceus. Two snakes run along the staff in negotiation. On his left are the era's industrial icons: a ship and lighthouse, a towering smokestack, and a silhouette of Commerce Court itself. A toga-clad woman holds parchment with one hand and a quill in the other. To Mercury's right a flock of geese fly down the air to be met by the newest feat of human engineering. The airplane is held up to the sky by another draped lady. The whole world rests at the god's winged feet.

Passage through the building is a sequence of carefully choreographed spaces. Walking through the cramped vestibule, I make my way to an entry lobby with a flat gridded ceiling. Moving towards the elevators, the ceiling takes on a vaulted profile. A large arched window at the hall's end invites me forward with warm southern light. The procession of ceilings reaches a dramatic climax as I walk through another set of doors to the central atrium. I am greeted by a massive vaulted ceiling of glittering gold rising some 50 feet in the air, embossed with octagonal coffers reminiscent ancient Rome's Basilica of Maxentius. The gilded frames are

Fig. 4.6) View of Commerce Court North atrium

patterned by elaborate weavings Celtic knots. Large chandeliers hang from circular plates marked with an inscribed mantra. INDVSTRY. INTEGRITY. PRVDENCE. COMMERCE.

Just as the ornament makes the tower physically legible through a graduating scales and distinguished edges, the building becomes culturally legible through its decorative iconography. While Art Deco was the first truly international style, the possibilities of ornament allowed regional variations to develop. History is tracked back all the way to the origins of Western civilization in Rome. British heritage is acknowledged through Celtic knots and cathedral allusions. The natural imagery situates the project to a very specific Canadian context. The purpose of the building as a hub of industry and commerce is made explicit. The cultural forces of technology in the 1920's influence the form of the building, as the speed of cars and planes are embodied through the tapered mass launching into the sky. Every portion of the building speaks to the time and place it was made.

Commerce Court's appearance also communicates much about the laissez-faire economy that produced it. The building setbacks may imply a hierarchical society, although the tiered massing benefited the public by allowing sunlight to reach the surrounding streets. By developing their own property, the building's very existence shows a long-term investment in the bank's company and community. The public displays of art through sculpture and murals and the beautifully ornamented buildings of the Art Deco period reveals something about the values of 1920's capitalists. Executives were once viewed as trustees of public institutions (the companies) that served not just investors but also their workers, suppliers, and the community.[38] That same sense of civic duty is evident in the institutions that now bear the names of tycoons like Carnegie, Vanderbilt, and the Rockefellers. Most revealingly, the luxurious use of ornament and materials mirrored the wealth inequality caused by the Laissez-Faire economy that precipitated the Great Depression. Only once that reckless capitalism was reeled in through the government intervention of the New Deal in the United States did the Art Deco movement lose momentum.

38. Lynn A. Stout, *The Shareholder Value Myth: How Putting Shareholders First Harms Investors, Corporations, and the Public* (San Francisco: Berrett-Koehler, 2013), 2-4.

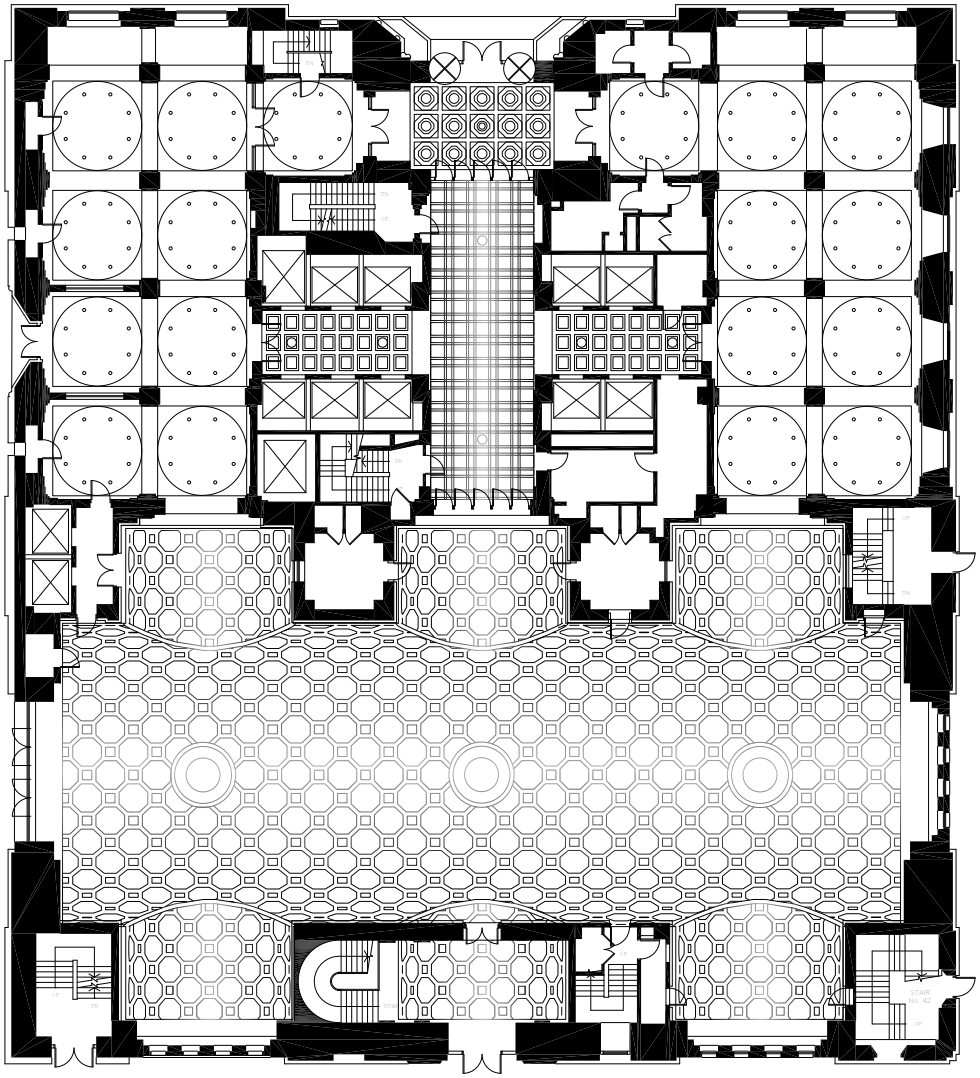

Fig. 4.7) Reflected Ceiling Plan

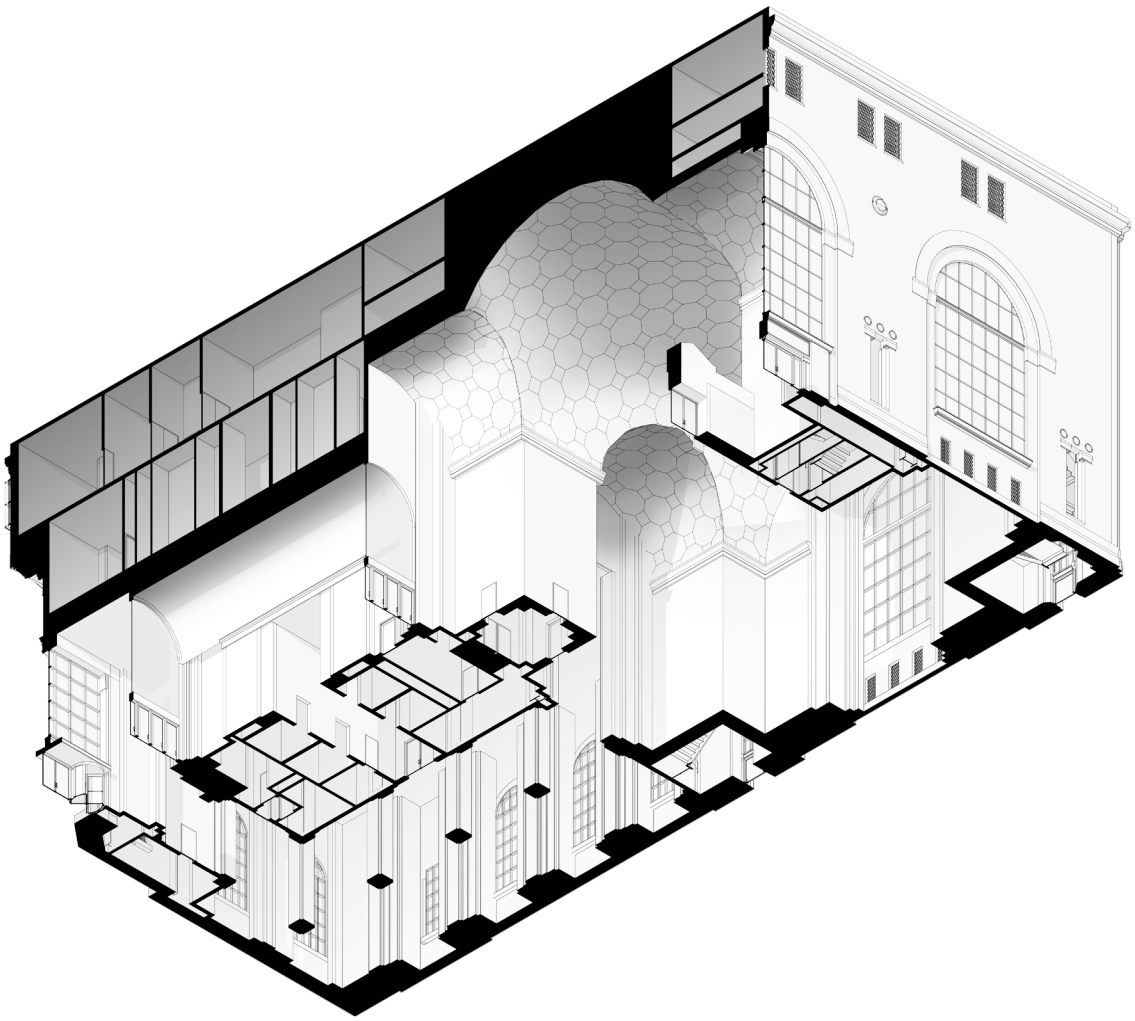

Fig. 4.8) Worm's Eye Axonometric Section

* * *

Following the disruption of the Second World War, countries and the global economy found itself in need of complete reconstruction. The rapid and cost-effective construction that Brutalism and the International Style afforded were perfectly suited to both the social and cultural needs following the war. An age of global cooperation was epitomized by the establishment of the United Nations fittingly headquartered in an International Style building. A competition of economic ideology between far left communism in the Soviet states and first world capitalism moderated attitudes of the free market and pressured western governments to expand social programs.[39] The utopian ambitions of modernism were implemented through a plethora of social housing projects. But while modernism was being embraced for social causes across the world, another alliance was being formed in Chicago, Illinois. The unofficial formation of a "Chicago School of Economics" advocating for market deregulation ran counter to the predominant Keynesian economics of the time. Around this same time and place, Mies Van Der Rohe was teaching at the Illinois Institute of Technology while his architecture became fully embraced by corporate America. The modern style allowed corporations to appear modest as the public remained skeptical of corporations following the Great Depression and profiteering during the World Wars. The glazed envelopes gave the illusion of contextualism by reflecting their surroundings, but in reality, represented an imbalanced power dynamic where one could see out but not in.[40] The socialist ideals of modernism were appropriated by capitalism to disguise their profits.

The conservative revolution of the 1980's had a profound impact on architecture. The dismantling of social programs by Ronald Reagan in America and Margaret Thatcher in the UK put an end to optimistic public housing projects. As a result, postmodern architecture is often viewed as corporatist. Postmodernism was not only a response against the dogma of modernism but also the product of fiscal policies. The slumping economy of 1970's stagflation led to huge unemployment within the architecture industry. The difficult

39. André Albuquerque Sant'Anna and Leonardo Weller, "The Threat of Communism during the Cold War: A Constraint to Income Inequality?," *Comparative Politics*, February 2019, https://doi.org/10.5129/001041519x15615651139989.
40 Robert Twombly, *Power and Style: A Critique of Twentieth-Century Architecture in the United States* (New York, NY: Hill and Wang, 1997), 77-78.

job market steered many architects towards academia, offering the perfect opportunity to formulate a critique against modernism. By the time the economy started improving in the 80's, these academics were finally able to turn theory into praxis while incorporating wider cultural influences.[41] The playful motifs and sense of irony drew influence from the Pop Art movement. The renewed interest in both conserving and reinterpreting history synced perfectly with the conservative political climate. Conversely, the gratuitous tax cuts and financial deregulation created huge amounts of surplus private capital. The bright colours and use of ornament therefore perfectly reflected the excesses of the time. Of course, postmodernism did not find sustained relevance - its populist ideals were contradicted by its academic intellectualism, and the appropriation of ancient Roman or Egyptian motifs were jarringly anachronistic.

* * *

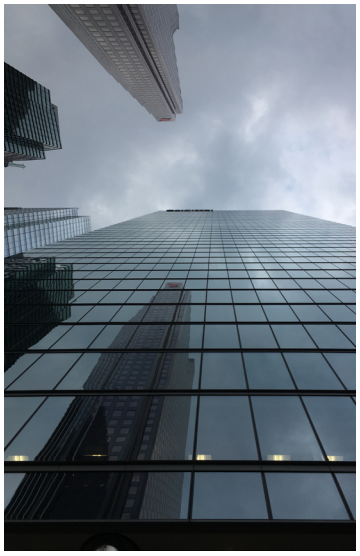

Fig. 4.9) Bay Adelaide Centre in Toronto by KPMB Architects (built 2016)

NEOLIBERALISM:

The neomodern style that now dominates mainstream architecture has developed in sync with the rise of another movement, one which has defined political and economic policy since the 1990's. Neoliberalism is an economic ideology which builds on the traditional framework of liberalism by promoting privatization and deregulated markets, but adds modern policies of globalized free-trade and shareholder primacy which has consolidated profit to a handful of societal elites. Another feature of neoliberalism has been the steady decline of the public sector so that more money can remain in private hands. These policies of economic austerity naturally lead to a commensurate architectural austerity.

41. Mary Mcleod, "Architecture and Politics in the Reagan Era: From Postmodernism to Deconstructivism," *Assemblage*, no.8 (1989): 27.

Neomodernism has proven to be the perfect architectural foil for neoliberalism especially in the wake of globalization. Economists have championed globalism as an unmitigated success. It has lifted millions people in developing nations out of poverty. It optimizes market efficiency as each country can specialize in production; educated nations have moved towards service industries while poorer countries with lower wages absorb manufacturing jobs. This efficiency has allowed for high quality goods to be produced at relatively low prices, even as inflation rises. Additionally, the interdependence of national economies promotes global cooperation (it is difficult to go to war with your neighbour if they provide you food or energy).

But globalization has not come without any drawbacks. The sudden restructuring of developed economies has worsened inequality and destabilized governments. The increased consumerism and the reliance on international shipping has accelerated global warming. Most pertinent to architecture, mass communication and access to international markets has led to a homogenization of culture. With trade barriers reduced and shipping networks expanded, the cost of synthetic materials like steel, concrete, and glass has plummeted, leading to their widespread use. Architecture firms themselves adapted to the new global economy, with many American and European firms taking on work across the globe. As architectural design is outsourced to remote offices, the resulting projects inevitably fail to reflect the culture and customs that make up the region. The "starchitect" phenomenon has further detached architecture, as firms leverage their brand identity to impose a personal aesthetic regardless of local context. The capability for ornament to give architecture a geographic placement runs against these globalist aspirations.

However, the most damaging feature of neoliberalism has been shareholder primacy. This policy has led corporations to abdicate responsibilities to their employees, suppliers, and the greater community in order to focus solely on stockholders.[42] This reprioritization has permeated into every industry as the race to inflate stock prices forced firms to adapt or perish. Architecture was not spared from this transformation, as

42. Milton Friedman, "The Social Responsibility of Business Is to Increase Its Profits," T*he New York Times*, September 13, 1970, accessed November 5, 2018, https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-thesocial-responsibility-of-business-is-to.html.

the commodification of real estate turned the places we live and work into an asset class. In commodifying real estate, we begin to see housing treated as a purely financial asset.

Just as stock buy-backs artificially inflate stock prices by reducing supply, real estate investors and private equiy firms purchasing multiple properties reduce the number of housing available on the market. Investors then leverage the equity from their owned properties to purchase even more homes with additional mortgaging. Parallel to dividends that a stock might pay out is the monthly revenue from renting these properties. And just as profits from selling stock are subject to capital gains taxes, which are much lower than typical income tax, the sale of properties likewise qualifies as capital gain. The treatment of real estate as investment vehicle means the quality of design and construction is no longer subject to consumer desire, as units are sold to people or companies with no intention of occupying the building. Therefore the logic of design no longer reflects any kind of personal or cultural expression but the mere tabulation of numbers on a spreadsheet.

The focus on short-term gains also means that corporations no longer want to commit to long-term investments. Architecture is one such investment. Companies now rarely purchase or develop their own offices. The idea of "core-competencies" has relegated all real estate matters to developers. In order to appeal to as many tenants as possible, all traces of character are removed from the building exterior. Corporate headquarters use to be an opportunity for companies to enshrine their values in architecture, even engage the community they're to be a part of for decades. Now it is a rotating game of musical chairs as tenants move from one glass box to another.

* * *

OBSOLESCENCE:

The commodification of architecture has inflicted upon it a disease more commonly associated with consumer goods. While planned obsolescence makes todays products readily expendable, its history

traces back to a century ago. The advent of the skyscraper at the turn of the century dramatically changed the discourse surrounding real estate development, as low-rise buildings now occupied land whose financial value could be multiplied by a tower. In 1918 the United States permitted obsolescence to account in the depreciation allowance that property owners could use to reduce their corporate income taxes, but the set lifespan of a building had not yet been set. From that point it was important for the National Association of Building Owners and Managers (NABOM) to lobby the government for the shortest possible lifespan. That effort paid off in 1931, when the Bureau of Internal Revenue set the estimated office building lifespan to just forty years thus allowing greater tax subsidies to building owners.[43]

The Great Depression brought further attention to obsolescence. One real estate broker, Bernard London, saw the mentality of scarcity as the source of the depression's prolongation. The uncertainty of the economy led people to live in a constant state of saving leading to a mass drop in consumption (what we now measure as "consumer confience"). What London proposed was a solution which he coined "planned obsolescence". In his 1932 pamphlet titled *Ending the Depression Through Planned Obsolescence* he wrote: "We must work on the principle of nature, which creates and destroys, and carries the process of elimination and replacement through the ages."[44] The designed failure of products, and buildings, would then force people to replace their possessions thereby increasing consumer demand. The architectural origin of planned obsolescence was not lost on Vance Packard, whose novel *The Waste Makers* begins with a marketing executive's lucid vision for a city of consumption. "In Cornucopia City, as I understand it, all the buildings will be made of a special papier-mache. These houses can be torn down and rebuilt every spring and fall at housecleaning time."[45]

As planned obsolescence became standard practice in the consumer market it has also crept into architecture. The 25-year lifespans of building envelopes now reflect the same disposable attitude that Vance Packard described in *The Waste Maker*s. Cheap construction with rapidly deteriorating materials moves

43. Daniel M. Abramson, "Obsolescence: Notes towards a History," in *Building Systems: Design Technology and Society*, by Kiel Moe, ed. Ryan E. Smith (London, UK: Routledge, 2012), 164.
44. Abramson, "Obsolescence: Notes towards a History," 163.
45. Vance Packard, *The Waste Makers* (Philadelphia, PA: David McKay Publications, 1960), 4.

the burden of maintenance onto the eventual occupants, saddling tenants and condominium boards with onerous maintenance fees. Any investment in ornament or decoration becomes financially unjustifiable in this model, as within a few decades entire building facades get refitted.

* * *

The fragmentation of the construction industry into more specialized roles has largely reduced the architect's scope to massing and envelope design. Our increasing focus on facades should lead to greater interest in ornament as one of our last sources of design influence. Especially as building types continue to grow in scale for data centers, warehouses, malls, and museums.[46] Real estate speculation has artificially increased the price of land, requiring bigger and taller buildings for developers to recoup the cost of acquisition. Larger floor plates, especially for office buildings, have become highly desirable as creative industries seek uninterrupted collaboration. Ornament is needed more than ever to articulate these imposing masses into relatable, human-scaled environments.

Unfortunately, the ideology of late stage capitalism finds itself in direct opposition to ornament. The values of Neoliberalism share much overlap with the principles of modernism - reverence for modularity, efficiency, and rationality offers capitalism a theoretical framework to manufacture a globalized architecture. Ornament, in all its irrational and excessive glory, stands at odds with these core tenets.

People around the world are becoming more aware to the inequities of this system. From the United States to the United Kingdom populist movements are manifesting their anger against an unjust economy responsible for rising levels of wealth inequality. And architects have been complicit in designing the glass monuments for Neoliberalism. The placeless universality of contemporary architecture has left no room for citizens to identify with their own environment. The rationality that Neoliberalism demands of its buildings offers no cultural meaning to be interpreted. The dialogue between the architect and the public further echoes the rise of populism, as elite architects rationalize their work with professional jargon.

46. Farshid Moussavi, The Function of Ornament (Barcelona: Actar, 2009), 5–11.

Fig. 5.1) St. Martin-in-the-Fields, London (built 1726)

CHAPTER 5:
CALVINIST CAPITALISM & MODERNITY

Fig. 5.2) Sant' Agnese in Piazza Navona, Rome (built 1652-1668)

St. Martin-in-the-Fields on the edge of London's Trafalgar Square is described by British architect Sir Terry Farrell as exemplary of the stripped-down architecture that Protestant churches employed in reaction to the excess and exuberance of the Baroque.[47] The church, completed in 1726, sparingly incorporates ornament throughout, and especially is restrained towards the base of the spire. In fact, without the presence of a spire the building would appear more likely a courthouse or museum than an Anglican church. Compare this to the flamboyance of Rome's Sant'Agnese in Piazza Navona, a 17th century Catholic

47. Terry Farrell and Adam Nathaniel Furman, *Revisiting Postmodernism* (Newcastle Upon Tyne: Royal Institute of British Architects, 2018), 5.

church partly designed by seminal Baroque architect Francesco Borromini. Flanking Bernini's Fontana dei Quattro Fiumi, the church facade is a fluid composition of straight projections and curved recessions, tiers of mouldings, ribbons of garlands, and twin bell towers framing an impressive dome. Both buildings capture in form the cultural values of each denomination, values that have catalyzed the development of capitalism and laid the foundations for modern architecture's genesis centuries after the Christian schism.

Following Reformation in the 1500's we see a distinct difference in how each faith processed information. Protestants revered the text whereas Catholics favoured sensory experience. Catholics continued their iconographic traditions, embodying the word of God through the built form of their churches. The frescos, mosaics, sculptures, and stained-glass windows visually depicted Biblical stories while building form itself symbolized Catholic beliefs about Jesus, heaven, and the human body. By contrast, early Protestant churches were almost anti-buildings: initially open-air fields for gathering and later quite inconspicuous parishes. The defining aesthetic of Protestant architecture was humble and austere. An artistic interpretation of these same values can be also found in Grant Wood's iconic 1930 painting "American Gothic".

The modest Lutheran architecture also parallels the cultural values that allowed capitalism to succeed in various nations across the world. In his 1905 book *The Protestant Ethic and the Spirit of Capitalism*, sociologist Max Weber posits the development of capitalism as a result of Protestantism. He explains that many of the distinguishing features of Calvinist Protestantism worked in favour of a capitalist economy.[48] The first is what he characterizes as the Protestant ethic, an obsession with work as a way to prove oneself to God. Calvinism redefined "holy work" as being any kind of work, no longer the sole domain of priests and monks. If your labour was a boon to society then it was deemed pious. This glorification of labour invigorated the religious work force and encouraged greater productivity.

48. Max Weber, *Protestant Ethic and the Spirit of Capitalism* (London, UK: Routledge, 1930).

The second feature is the existential guilt of Calvinists. Unlike Catholics, Protestants have no possibility for confession. This belief is based on the principle that no mortal can forgive sins, and only when you die and face with God will He judge your life's work. Without that relief, feelings of guilt can accumulate indefinitely. This spurs people to be more productive and make greater contributions to society, as a way of proving their worth before the final judgement.

Another distinction is a reconsideration for the importance of family. Catholic tradition placed great priority on the idea of family. Calvinism was critical of this, as it was considered selfish to help and care for only your relatives. A focus on family effectively promoted nepotism to concentrate good jobs and wealth only to well-connected families instead of the most deserving or qualified people. Protestants therefore prioritized the community as a whole, using their skills to the benefit of society.

Finally, Calvinists repudiated the existence of miracles. To this day the belief in miracles still features heavily in the Catholic faith, for example canonization into Sainthood requires evidence of the performance of miracles. Weber saw the rejection of miracles as a step towards the increasing rationalization and intellectualization of society, a process which he called the "disenchantment of the world."[49] Without miracles as convenient explanations for the world order, there was a greater focus on scientific reasoning to find answers. This interest in science would eventually contribute to technological progress and innovation, further accelerating the Industrial Age. Additionally, this disenchantment also promoted the Protestant work ethic as financial success could no longer be attributed to divine intervention, and could only be seen as the result of hard work and discipline. These various divergent cultural values following Reformation explain for Weber why Protestant nations – Germany, England, America, and the Netherlands were so economically successful and remain so in present day.

Contrast this with struggling economies of Catholic South American, African, and Mediterranean

49. Max Weber, "Science as a Vocation," accessed July 16, 2019, http://www.wisdom.weizmann.ac.il/~oded/X/WeberScienceVocation.pdf.

countries (France being the primary exception). In fact, the Catholic church spent the centuries preceding Reformation actively discouraging capitalism. The church opposed many capitalist practices by citing Biblical stores like the Cleansing of the Temple in which Jesus banished merchants from a place of worship. Capitalism was equated with greed, one of the Seven Deadly Sins. In the 13th century, Saint Thomas Aquinas classified interest rates as a form of usury which eventually led the church to outlaw charging interest on debt.[50]

Economic and technological breakthroughs then sparked the period of the Renaissance. Religious attitudes towards capitalism began changing around this period, allowing banking families to amass huge fortunes to fund artistic and architectural endeavours. Luca Pacioli's publishing of *Summa de Arithmetica* in 1494 codified double-entry bookkeeping and revolutionized accounting standards.[51] The invention of the printing press helped disseminate this knowledge, in addition to rediscovered ancient texts. This drastically altered architecture by reintroducing classical principles and ornamentation from Vitruvius' *De architectura*, birthing Renaissance architecture and later Baroque works like Sant' Agnese. However, much of this architectural innovation depended on the financing of wealthy patrons of the arts for public or religious projects. Following Reformation, the opposing attitudes towards capitalism can be found in the built form of their respective churches. For Catholics, the lavish cathedrals showed that the fruits of your labour should be returned in service to God. For Protestants, the humble parishes showed that your personal success was in itself a service to God.

Of course, it is misleading to credit economic success or failure based solely on religious values. There are innumerable factors that contribute the national prosperity – geography, natural resources, education, etc. Weber's theory also largely ignores Asian countries, yet the influence of Confucian philosophy can help explain the recent success of the Chinese, Korean, and Japanese economies following their introduction to capitalism. What Weber's theory demonstrates is with a combination of certain cultural

50. Thomas Aquinas, *The Summa Theologica*, trans. Fathers of the English Dominican Province, accessed February 26, 2019, https://resources.saylor.org/wwwresources/archived/site/wp-content/uploads/2012/06/ECON301-2.1.2-2nd.pdf.
51. Frank J. Swetz and Victor J. Katz, "Mathematical Treasures - Pacioli's Summa," MAA, January 2011, accessed March 26, 2019, https://www.maa.org/press/periodicals/convergence/mathematical-treasures-paciolis-summa.

values and proper economic opportunity, countries can capitalize on those opportunities to create lasting prosperity.

Weber's writings also do not mention the opposing approaches to information which happened at Reformation. The importance that Protestants placed on the written word caused the Catholic church to blacklist prominent Protestant scholars, eventually formalizing a list of restricted texts in the Index Librorum Prohibitorum. Conversely, Calvinist leaders encouraged the removal of religious imagery during the iconoclasm of the 16th century. Both religions engaged in the censorship of rival propaganda, with Catholics destroying the written word through book burnings and Protestant mobs attacking the iconography of sculptures and paintings. The differing approaches to knowledge was not only limited to the forms of information but also the structures of power. Catholicism operates under a centralized hierarchy where theology is set by the Vatican and disseminated to followers through sermons. Protestants operate under no such hierarchy, encouraging individuals to read and interpret the Bible for themselves. This individualist approach further promoted capitalism as an economic system that thrives on the entrepreneurial spirit.

Cross referencing this with the previously established stark Protestant aesthetic, it is perhaps no surprise the austere architecture of high modernism would be born at the Bauhaus school in Germany. The disruptive methods of modernism, with its theses and manifestos, even paralleled the Lutheran rebellion as a revolution against the status quo. Those shared Protestant values would also allow the style to culturally translate as Bauhaus instructors moved to America to escape World War II, or to Lutheran Nordic countries following the war. It also foreshadows capitalism's cooption of modernism as the default corporate architecture stemming from their shared origins. The puritanical asceticism of Protestant architecture laid the ideological groundwork for the International Style to eventually blossom. This legacy has only gained momentum as the countless minimalist glass towers under construction will come to dominate city skylines for decades longer.

Fig. 6.1) Fascist modernism of the Palazzo della Civilita Italiana in Rome (built 1942)

CHAPTER 6:
POLITICS OF ORNAMENT

In a surprising denouncement of the Postmodern style that brought him to prominence, Sean Griffiths of FAT architects wrote in warning against the resurgence of postmodernism: "If your building looks fascistic, I'm afraid it is ripe for appropriation by values that are fascistic."[52] According to Griffiths, the rise in far-right extremism across the world should force architects to reconsider the use of ornament in their architecture lest they be appropriated for immoral purposes. However, by associating ornament with conservatism, Griffiths oversimplifies the complex contradictions of ornament and perpetuates the myth of ornament as naturally fascistic.

Ornamental architecture has long been tied to oppressive regimes. Ornament's reputation was sealed when Nazi Germany forced the Bauhaus to shutter, cementing the false dichotomy that ornament was inherently fascistic while modernism was given the moral high ground. Nevermind the fact that Italian fascism's style of choice was a purely rational modern aesthetic. Benito Mussolini's fascist regime readily appropriated modernism, resulting in buildings like the Palazzo della Civilita Italiana in Rome. Griffiths himself points out, "As all good postmodernists know, signifiers – the vessels that convey meanings – have a tendency to become untethered from their mooring."[52] This ignores architecture's role itself as a signifier, where any look or style can be coopted by the powers that be.

The politics of ornament has gained greater relevance as governments trend increasingly rightwards. Conservative messaging frequently hearkens back to traditional values, architecture included, as a callback to imaginary "good old days". This is effectively depicted in pop culture, where the television adaptation of The Handmaid's Tale couples the regressive state of Gilead with backdrops of historic architecture. Lavish Victorian manors become prisons for the captive maids, shackling women back to domesticity. However, this moralization of style is especially misguided given that the banishment of ornament was undoubtably the product of latent misogyny.

52. Sean Griffiths, "'Now Is Not the Time to Be Indulging in Postmodern Revivalism,'" Dezeen (Dezeen, October 30, 2017), https://www.dezeen.com/2017/10/30/sean-griffiths-fat-postmodern-revivalism-dangerous-times-opinion/.

Fig. 6.2) *Victorian architecture in The Handmaid's Tale*

The association between ornament and femininity goes back millennia to classical antiquity. The stark and stout appearance of the Doric order was characterized as masculine, while the more elaborate Ionic and Corinthian orders were gendered as feminine. In *Ornament and Crime,* Loos remarks the binary sexes of ornament. "The first ornament that was born, the cross, was erotic in origin. The first work of art, the first artistic act which the first artist, in order to rid himself of his surplus energy, smeared on the

wall. A horizontal dash: the prone woman. A vertical dash, the man penetrating her."[53] His article on *Ladies Fashion* more explicitly condemns feminine ornament, stating "The clothing of the woman is distinguished externally from that of the man by the preference for the ornamental and colourful effects and by the long skirt that covers the legs completely. These two factors demonstrate to us that woman has fallen behind sharply in her development in recent centuries."[54]

Men were deemed rational while women were painted as irrational, often "hysterical" beings. Ornament was viewed as the product of this behaviour, a frivolous desire to make things look pretty without contributing to their functional purposes. Even the idea of beauty itself has been reserved as a feminine quality, whereas men are commended as "handsome". The progressive curriculum of the Bauhaus, as one of the few academic institutions to admit female students, was not enough to challenge these stereotypes. Women were barred from studying architecture, restricted to domestic subjects of textile design, ceramics, and industrial design for household objects. Despite the clearly prejudiced basis for modernism's removal of ornament, the style continues to be championed as an ideologically neutral, even virtuous movement.

There lies the problem with uncritically evaluating architecture through Manichean duality: reducing tradition as right wing and modernism as left wing does a disservice to the complexity of the issue. While the association between ornament and oppression as suggested by Griffiths has clearly been established, from the fictional world of Gilead to the reality of 1930's Germany, there are many other lenses with which to view the matter.

The socialist origins of modernism, especially as a result of the Bauhaus' influence, seems to have followed the movement even to present day. Perhaps it was martyred as such, closed by the Nazi regime for its links to communist ideology. Ironic, that Walter Gropius and company would find the most bourgeois appointments in the halls of the Ivey League elites. Lest we forget that the modern art movement only

53. Adolf Loos, "Ornament and Crime," trans. Michael Bullock, in *Programs and Manifestos on 20th-Century Architecture*, ed. Ulrich Conrads (Cambridge, MA: MIT Press, 1975), 19.
54. Llewellyn Negrin, "Ornament and the Feminine," Feminist Theory 7, no. 2 (August 1, 2006): 225, https://doi.org/10.1177/1464700106064421.

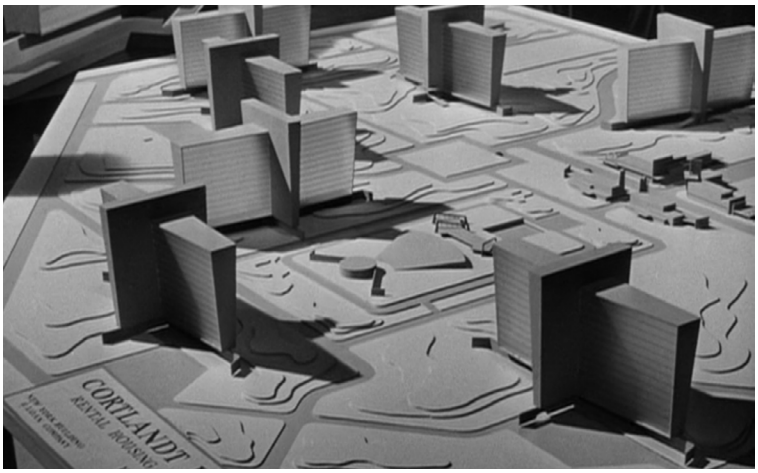

Fig. 6.2) *Cortlandt Homes*

gained steam in America once officially sanctioned by the Museum of Modern Art in New York, an institution founded and funded by capitalist John D. Rockefeller.[55] Surely impressed and envious of the avant-garde art scene of Europe, the Rockefellers sought to import the movement to the United States. While perhaps not intentional, one must wonder if such a wealthy businessman foresaw the influence of modernism as the celebration of manufacturing it truly is, a movement that would eventually erode the demand for skilled labour in favour of increased mechanization.

In stark contrast to architecture's dalliance with social causes, Ayn Rand's *The Fountainhead* utilizes the architect as a vehicle for her Objectivist philosophy. The openly selfish hero of the story, Howard Roarke, operates as an egocentric modernist architect which in many ways accurately characterizes contemporary architecture. He designs the affordable housing project of Cortlandt Homes not because he would like to help struggling families, he does not even do it for the money. He does it only for the satisfaction of having

55. Tom Wolfe, *From Bauhaus to Our House* (New York, NY: Picador, 2009), 41–42.

designed it. The buildings feature no ornament and is described, more or less, as a "tower-in-the-park" model in the spirit of Le Corbusier.[56] Of course, those towers would likely stand today as vertical slums with its occupants segregated from the urban fabric, unable to contribute to any street life. So demonstrates the folly of novelty, which rejects centuries of lessons from history in favour of endless newness. Especially with regards to architecture, where projects create a lasting physical presence, novelty turns the lives of very real people into guinea pig experiments.

Unlike present day associations, Rand uses ornament as a symbol of socialism while minimalism was championed as freedom from the collective: "A building needs no beauty, no ornament and no theme."[57] The book's antagonist, Ellsworth Toohey, is a staunch proponent of traditional architecture. And yet, he is also a socialist who represents a collectivist society. As an architectural critic, he positions himself as the voice of the people, a public that seeks a certain level of continuity and coherence in its urban environment. What collectivism amounts to is a bottom-up approach to architecture, built on an inclusive dialogue between architects and the public they are meant to serve. For Rand, these selfless attributes constitute the cardinal sin of compromise.

Meanwhile, Howard Roarke embodies the top-down role of the architect in the modern age. The intrepid and innovative hero stands accountable only to himself and his wealthy capitalist clients. Todays architecture firms are led by pseudo-Howard Roarkes who have disassociated from history to search for novelty. Contemporary architecture is replete with mavericks whose careers are built upon exporting their trademark style to new locales. At its conclusion, *The Fountainhead*'s parting wisdom to architects is to build "a monument to that spirit which is yours."[58] This rings all too true in the era of "starchitects", where buildings have become monuments of ego that ignore the will or needs of the public who must ultimately deal with the consequences of the construction.

56. Ayn Rand, *The Fountainhead* (New York: New American Library, 2017), 443.
57. Ayn Rand, *The Fountainhead*, 355.
58. Ayn Rand, *The Fountainhead*, 520.

No architect has been a greater proponent of this Libertarian ideology than Patrick Schumacher, partner at the globally renowned firm Zaha Hadid Architects. He has advocated for the eradication of all social housing, the privatization of all public space, and the complete deregulation of the housing market.[59] This belief in the unimpeachable wisdom of free markets is an idea that goes back to economist Friedrich Hayek and has since informed the Neoliberal economy of today. Unfortunately, this is the same economy that has exacerbated wealth inequality and destabilized governments around the world as angry populations have their wages suppressed while their housing costs skyrocket, as inevitably happens when shelter is treated like a commodity.

Schumacher's architecture reflects this individualistic spirit as curvaceous alien forms touch down in city centers. These often make for spectacular showpiece buildings, drawing attention to the prestigious institution or ultra luxury residences housed inside. But how would this work as deployed at the scale of a city? What we currently have is idiosyncratic architects designing according to their whims, offering no coherence or continuity to a public that is looking for belonging. While now archaic, the pattern books employed by architects for centuries offered a shared language of ornament for common builders to work with, an evolving template that produced the most scenic cities in the world. In this age of disruption, there is something to be said for gradual evolution rather than dramatic reinventions.

Contemporary architects, most of whom subscribe to modernist principles, may believe that ornamental architecture is no longer possible in the heterogenous populations of 21st century cities. However, 19th century architecture offers precedents for approaches to pluralist ornament. The rapidly changing technologies and ideals of the Industrial Revolution in the 19th century necessitated new architectures. Building construction moved away from palaces and churches as public monuments and towards museums and railroad stations. Novel approaches to ornament were required as the increased awareness of Asian and African architecture challenged Greco-Roman orthodoxy as the sole origin of

59. Amy Frearson, "Patrik Schumacher Calls for Social Housing and Public Space to Be Scrapped," Dezeen (Dezeen, November 18, 2016), https://www.dezeen.com/2016/11/18/patrik-schumacher-social-housing-public-space-scrapped-london-world-architecture-festival-2016/.

Fig. 6.3) Detail view of the Guaranty building in Buffalo by Louis Sullivan (built 1896)

architecture. While many architects collaged historical elements into new combinations, notable figures like Louis Sullivan and Victor Ruprich-Robert searched for new conventions away from the gothic and classical, developing methods of naturalizing geometries to create forms of inclusive ornament.[60]

Counter to prevailing attitudes, a return to ornament does not equate to regressive architecture. So the flawed logic goes: old buildings were built in times of discrimination, old buildings have ornament,

60. Kent Bloomer, The Nature of Ornament : A Study of Western Ornament (New York: W.W. Norton, 2000), 49–56.

therefore ornament is oppressive. Ornament in isolation is a neutral agent, and the suggestion that fascist governments would weaponize ornament conveniently disregards the many examples of modernism working in service of tyranny. Simply put, the rich and powerful will employ whatever architecture is most advantageous to them, regardless of style.

Jonathan Haidt's research into the moral roots of progressives and conservatives further challenges conventional wisdom. In Moral Foundations Theory, five principles guide the ethical beliefs of people. The five foundations are care, fairness, ingroup loyalty, authority, and purity. As his surveys demonstrate, the major difference between progressives and conservative attitudes lay in their prioritization of these five factors. While there is cross-spectrum consensus on the importance of caring for others and striving for fairness, only conservatives place value on loyalty, authority, and purity.[61] This last category presents the greatest implications for modern architecture, whose core tenet demands the purity of form. What is the impetus for sanctifying minimalism? This is especially interesting given the shared history between capitalism, modernism, and Protestantism as established in Chapter 5. While this past has remained overlooked by modern architects, it is quite likely that the puritanical asceticism of the Protestant Church has imparted modern architecture with its conservative values.

Then there is the category of ingroup loyalty, where ideological conformity is used to confirm who is in or out of the group. The way architects object to ornament acts like an effective litmus test to segregate themselves from the uncultured masses. The tribal nature of ingroup loyalty often leads people to mould their identities according to that group. This is especially apparent in architecture schools and offices. Markers of modernism are made conspicuous in the uniform of black clothing and black circular glasses as architects sip black coffee and check their minimalist timepieces. As a result, admission that modernist principles might be wrong is not just a simple error, it threatens their very sense of being. This behaviour goes

61. Jonathan Haidt, The Righteous Mind : Why Good People Are Divided by Politics and Religion (New York: Pantheon Books, 2012), 103–36.

a long way to explain modernism's enduring influence. And when the public justifiably complain about the cold or sterile appearance of modern buildings, they are lectured for not understanding the sophistication of contemporary architecture. An appeal to authority is made, as architects use their status as experts to dismiss objections. This form of outgroup derogation only worsens the polarization of opinion, pushing each group to greater ideological extremes.

During these politically divisive times, it is important not to simplify architecture with the binary logic of Sean Griffiths' article. The characterization of ornament as intrinsically regressive is a trite argument used to shut down dissenting opinion in the name of progress. While conservativism does generally strive to conserve tradition, ornament is not necessarily a feature of right-wing architecture. The popular support for ornament reveals the intuitive desire for a human scaled architecture to produce cohesive urban environments. This actually reflects a leftist position. In fact, it is a right-wing libertarian architecture, working in service of global capitalism, that has deprived the public of any local identity in order to build Neoliberal playgrounds like Hudson Yards in New York. Over the recent decades, contemporary architects have been working as individualists to carry out their personal "vision" of architecture. The spirit of individualism is part and parcel of Neoliberal ideology, which purports to bolster personal freedoms by cutting regulations, taxes, and social services. On the other end of the spectrum, the historical use of pattern books and languages to create cohesive neighbours represents a collective approach to design. Therefore, as global protests mount against the inequities of Neoliberalism, the popular appeal of ornament could be harnessed to bring architecture back to its collective roots.

Fig. 7.1) City of London skyline

CHAPTER 6:
POST-BREXIT ARCHITECTURE

For hundreds of years, England sat comfortably at the throne of an empire. Britons felt secure in their command of global affairs. However, the increasing permeability of borders brought on by European Union has turned the tables, as many Brits feel increasingly powerless to the unflappable march of globalization. The sovereignty of the United Kingdom is also restricted by the legislative structure of the European Union. More so than the rational numbers and statistics that favour EU membership, it is these emotional issues about identity and agency that have disrupted the status quo.

The story of Brexit, while geographically centered on the United Kingdom, has far reaching implications. It is the story of a population feeling neglected by societal elites, which has profited from globalism while swathes of the country are increasingly disenfranchised. The Brexit vote was, in many respects, a referendum on globalization. That same economic angst is now shaping politics across the world, from the yellow vest protests in France to the election of Donald Trump in America to the far-right governments of Brazil, the Philippines, Hungary, Japan, Italy, and more.

Today's political upheaval is not without notice, as then UN Secretary General Kofi Anaan warned in a 2002 speech: "over the past few years, I and others have urged greater consideration for the potential political backlash if the social - as well as the economic - consequences of globalization, if they are left unattended."[62]

Globalization has made a direct impact on the lives of working-class people, especially for the manufacturing jobs of industrial cities. The influx of low skilled labour has depreciated wages while increased competition from immigrants in the housing market has raised the cost of living. The influence of wealthy local and foreign speculators has distorted the real estate market while urgently needed housing is left empty by absentee owners. Salaries have remained stagnant even as productivity increases, leading to record corporate profits. But while these structural changes to the economy have also happened during the

62. Kofi Anaan, "Transcript of Q&A with Kofi Annan, UN Secretary-General," Yale, 2015, https://yaleglobal.yale.edu/content/transcript-qa-kofi-annan-un-secretary-general.

rise of automation, which has undoubtedly contributed to these issues, the media narrative has pointed to globalization as the sole culprit.

The problem is not inherent to globalism, but rather how it has been implemented at a political and cultural level. In terms of economic policy, not enough has been done to compensate the "losers" of globalism's redistributive effects. The societal benefits of globalism have taken a backseat to the Neoliberal agenda, as exemplified by the annual summit in Davos. Globalism is perceived to benefit only the rich.

While the socioeconomic policies necessary to moderate the disruptive effects of globalization are obviously beyond the purview of architects, there is a cultural dimension to the problem that designers have neglected. Architecture has been homogenized by globalism resulting in the proliferation of identical glass towers from Seattle to Shenzhen. This is problematic because architects have unwittingly designed towers as symbols of the elite ruining cherished cityscapes. To the average Brit, this is especially egregious given the proud traditions of Gothic, Tudor, Georgian, Edwardian, and Victorian architecture in England.

In the face of this rich cultural history, modern architecture has not been able to provide the sort of familiarity that is required for people to identify with their cities. There is the maligned yet still noteworthy influence of brutalism which was used extensively in Britain. The most recent "national" style of High-Tech architecture has garnered acclaim for British architects like Norman Foster, Richard Rogers, and Nicholas Grimshaw, yet its machinic aesthetic makes it quite placeless. The international scale of those practices underscores its universality. Now with leading schools like the Architectural Association and the Bartlett, young architects have championed parametric design as the newest British style. Or perhaps the minimalist brick complexes of the so called "New London Vernacular" is the solution to contemporary regionalism. But both new styles have received backlash from the public, not because they are afraid of change (although that may play a part), but because the architecture is so devoid of human proportion.

* * *

Fig. 7.2) Sainsbury Wing in London by Robert Venturi and Denise Scott-Brown (built 1991)

BUILDING BETTER, BUILDING BEAUTIFUL:

In 1982 a competition was launched by the National Gallery of Britain to design an addition to the existing neoclassical building. The winning entry was a modernist extension designed by Ahrends, Burton, and Koralek which featured a prominent glass and steel tower literally overshadowing the historical structure. Two years later, in a speech to the Royal Institute of British Architects, Prince Charles excoriated the proposal by describing it as a "monstrous carbuncle on the face of a much-loved friend". He admonished its stark appearance and remarked that "it is possible, and important in human terms, to respect old buildings, street plans and traditional scales and at the same time not to feel guilty about a preference for facades, ornaments and soft materials."[63] The Prince's objections were enough to drop the scheme, prompting another competition that would produce the postmodern Sainsbury Wing by Robert Venturi and Denise Scott-Brown.

63. Prince Charles, "A Speech by HRH the Prince of Wales at the 150th Anniversary of the Royal Institute of British Architects (RIBA), Royal Gala Evening at Hampton Court Palace," Prince of Wales, accessed June 25, 2019, https://www.princeofwales.gov.uk/speechesandarticles/a_speech_by_hrh_the_prince_of_wales_at_the_150th_anniversary_1876801621.html.

In cheeky reference to that infamous speech, Building Design magazine's annual "Carbuncle Cup" was launched in 2006 to crown the ugliest building of the year completed in the United Kingdom. The "winner" is selected from a shortlist of projects based on nominations from the general public. For example, the 2015 recipient 20 Fenchurch Street (nicknamed by locals as the Walkie-Talkie) is a rotund building with squat proportions, no street level articulation, and a curving, car-melting curtain wall façade. The sole pretense of public benefit is a "sky-garden" which is only freely available during working hours – assuming you've booked three days in advance. Or the 2017 winner, Nova Victoria, a jagged combination of aluminum, glass, and red spandrel incising the city fabric like a bloody razor. It is an unfortunate first impression as you exit the grand historic Victoria train station. Just as the Brexit vote revealed displeasure against globalization, the Carbuncle Cup shows the anger of the public against high-minded architects producing incongruous buildings that permanently mar the urban environment.

Fig. 7.3) Nova Victoria in London by PLP Architecture (built 2017)

Such is the contentious context surrounding the 2018 formation of the "Building Better, Building Beautiful Commission" (BBBBC) that was established by Theresa May's Conservative administration. The influx of immigration as well as increasing urbanization has required hundreds of thousands of new residences to be built every year. The commission is to propose changes to process of development in the UK, with special interest in raising the standard of design quality for new buildings. The commission was formed

on the premise that if new buildings were more beautiful, they would face less local opposition and acquire building permits more quickly thus satisfying market demand sooner. The other benefit to beautiful housing is a greater longevity for projects, with less need for refurbishment and a lower chance of neighbourhood deterioration. While at face value these objectives seem noble, the commission's ulterior motives have come under scrutiny.

The commission has been widely criticized for promoting a return to traditional architecture. Prior to the BBBBC's establishment, an unofficial report published by centre-right think thank Policy Exchange titled "How design and style can unlock the housing crisis" freely admits this: "We believe the noted aesthetic needs are more easily met through traditional forms of architecture."[64] This stands at odds with the professional consensus regarding neohistoricism which rightfully argues that replicating historical architecture devalues the very buildings it is supposed to celebrate by prompting confusion between what is truly heritage and what is not. The report purports to provide objective data to support its claims, but clearly biased survey questions delegitimize any findings. For example, the report asks members of the public whether they prefer "Traditional terraces with tree lined streets" or "Housing developments or estates in a modern style."[65] Disregarding the language to describe modern "developments" instead of traditional "terraces" (are modern terraces not possible?) but the needless inclusion of "tree lined streets" is clearly meant to bolster votes for tradition.

Much of this research comes from Create Streets, an organization created by Nicholas Boys Smith who also sits on the Building Better commission. The foundation's mission is to replace new developments, especially public housing renewals, from the conventional tower model to high density mid-rise plans. According to Boys Smith, London's undesirable public housing estates contain about 360,000 units but his schemes could maximize that number to 620,000 homes.[66] The shorter buildings would provide more

64. Jack Airey, Sir Roger Scruton, and Sir Robin Wales, "Building More, Building Beautiful: How Design and Style Can Unlock the Housing Crisis," *Policy Exchange* (Policy Exchange, June 20, 2018), 34.
65. Jack Airey, Sir Roger Scruton, and Sir Robin Wales, "Building More, Building Beautiful: How Design and Style Can Unlock the Housing Crisis," 13.
66. Dave Hill, "Should London Embrace the Vision of Create Streets?," *The Guardian* (The Guardian, July 10, 2019), https://www.theguardian.com/uk-news/davehillblog/2015/feb/18/should-london-embrace-the-vision-of-create-streets.

sunlight and greater connectivity to the streets at more affordable construction budgets.

While this sounds promising, the schemes Create Streets have presented for projects like the Mount Pleasant Royal Mail site are unapologetically traditional in style. This is where the research component of Create Streets factors in. Boys Smith cites image surveys the think tank conducts, asking laypeople to choose their preferred building style from pastiche terraces to modern brick row homes and daring contemporary projects. This method seems too unreliable to produce objective data, as any number of factors can affect what makes the most desirable image from the weather conditions to the presence of people and trees. Despite this, Create Streets concludes that people prefer traditional architecture and therefore more should be produced.

Then there is the fact that the head of the commission, Sir Roger Scruton, was fired for allegedly making bigoted comments in an interview that disparaged Muslims, Chinese people, and the LGBT community. Critics have used this as proof that traditional architecture is intrinsically a tool for oppression. However, I would disagree with that reductive logic as discussed in Chapter 5: The Politics of Ornament. Scruton was eventually reinstated after it was proven that his comments were deliberately edited and taken out of context by the interviewer.

For architects, the Building Better, Building Beautiful Commission represents political interference to stifle architectural innovation and appease the masses. They have accused it of being a fascistic attempt at mandating neotraditional architecture.[67] Others have criticized the commission for unfairly shifting blame from developers to architects. However, the vitriolic response from designers seems more the result of taking personal offence at having the quality of their work scrutinized than a genuine critique of the commission. Many of the listed concerns are not present, or minor points, in the first official commission publication.

The interim report, titled "Creating space for beauty", is not the assault on architecture as feared.

67. Sam Jacob, "'The Beautiful Buildings Commission Is Just a Front for the Continuing Attack on Progressive Ideas,'" Dezeen, November 14, 2018, https://www.dezeen.com/2018/11/14/opinion-building-better-building-beautiful-commission-sam-jacob/.

For example, the report seems to go out of its way to praise neomodern brick projects like Accordia in Cambridge and The Malings in Newcastle.[68] It also compliments some neotraditional developments, but the report is hardly the historicist manifesto it's been made out to be. Out of all the policy proposals, few directly affect architects. There is the sensible suggestion of incorporating better historical education in architecture schools. A more drastic proposal calls for "co-design"; whereby architects should participate in early schematic design charettes with community stakeholders to proactively meet the needs of the public.

The report actually spends the majority of text diagnosing and reforming the convoluted UK planning system. It notes that budget cuts have left planning departments woefully underfunded. The introduction of the five-year housing supply test has also had undesirable side effects. It requires local councils to adopt a local plan which identifies development sites to meet housing needs for the next five years. However, many understaffed planning authorities have not been able to produce this updated local plan. Without meeting that five-year target, national planning policy overrules the local plan and basically rubberstamps development proposals to meeting housing goals. As a result, municipalities have less control on the quality of developments in their communities. The report also dedicates a section to promote form-based codes as a method of planning more cohesive neighbourhoods.

Developers are also criticized as operating without incentive for place-making or beauty, building as cheap as possible to maximize their profits. The increasing consolidation of real estate development has left many small, more locally minded developers unable to compete. The report also laments the government's lack of leadership as a developer itself. While governments used to act as patrons for flagship architecture, public projects continue to disappoint due to a misguided assumption that producing beautiful buildings would upset taxpayers.

While nothing proposed so far is necessarily cause for alarm, the full report has yet to be released. Section 8.1 of "Creating space for beauty" opens the opportunity for historicism by noting metathesiophobia

68. "Creating Space for Beauty: Interim Report" (Ministry of Housing, Communities & Local Government, July 9, 2019), 16.

(or the fear of change) as something to consider in development.[69] Future sections elaborating on "beautiful buildings" promises to consider fenestration, building heights, space requirements, and materials. These are the kinds of policies that architects fear will be used to prescribe neotraditionalism. While that's yet to be seen, the political climate in England has already threatened to censor architectural expression.

* * *

CASE STUDY 03:

A white stone tower rises above a modest brick neighbourhood. Its lucent quality draws me down a leafy street as the curving road takes a sharp left. Rounding the corner, I am faced with a modern ruin. A rigid grid of cubic windows is framed by wide expanses of raw limestone. Some pieces are left entirely bare, ancient ammonite fossils dotting the rough surface of sedimentary rock. Some members are striated, deep grooves bored through the stone during excavation. Other portions are smoothed out to a flat finish in a more typical modern fashion. The material expression produces a building that appears frozen in a perpetual state of becoming. At the base of the building a carved ionic capital emerges out of a piece of fallen stone like the remnant of lost architecture.

The edifice stands on the site of a long-gone nunnery, built in the 11th century after the Norman conquest. The Normans brought

Fig. 7.4) Saint James church in Clerkenwell

69. Creating Space for Beauty: Interim Report, 36.

Fig. 7.5) Carved ionic column

Fig. 7.6) 15 Clerkenwell Close in London by Groupwork + Amin Taha Architects (built 2017)

Fig. 7.7) Elevation view of 15 Clerkenwell Close

Fig. 7.8) Detail view of 15 Clerkenwell Close

with them their customary limestone, which they employed to build both the nunnery and the abbey tower across the road.[70] As such, the new building's stone, sourced from a quarry in Normandy, creates not just a visual connection to the nearby abbey but also a link back to the site's history. Looking forward, the exterior will undoubtably improve with age as the stone weathers, brass accents patina, and crawling vines climb the skeleton.

15 Clerkenwell Close is a mixed-use building located in the London borough of Islington, design by Amin Taha with his firm Groupwork and completed in 2017. Besides enriching the historical fabric of the neighbourhood, the building offers substantial benefits to the community. It includes a lower-floor office space and six stories of residential apartments. A small strip park to the south provides greenery and appropriately hosts tutorials for stone mason apprentices. A lush rooftop garden attenuates as much as 90% of annual rain fall, hydrating a diverse collection of plants and bees. And the load-bearing stone structure embodies a fraction of the carbon footprint compared to a typical a concrete framed building. The building faithfully performs its social, cultural, and environmental duties.

And yet, due to the increasing politicization of architecture, the building's existence is under threat. In its dialogue with the limestone abbey across the street, the building evidently rebuffs the

70. Rowan Moore, "15 Clerkenwell Close: Poetry Set in Stone," *The Guardian* (The Guardian, August 29, 2018), https://www.theguardian.com/artanddesign/2018/aug/19/amin-taha-15-clerkenwell-close-miesian-flintstone-poetry.

brick veneered neighbours that make up much of Clerkenwell. Despite its many accolades and the sorely needed residences it offers to a housing market in crisis, the project was ordered to be demolished within a year of its completion.

The problems began as soon as the scaffolding descended to reveal to finished building. The drawings posted to the council online portal showed an earlier permit application for a brick façade which gave the public the expectation of a new brick neighbour. A later application amended the drawings to include the proposed limestone super-structure, but was never posted publicly. Despite this fact, Islington Council issued a demolition notice to the building so that it could be replaced with brick. This order was later withdrawn after the architect's legal team sent a letter requesting details of the council committee that sanctioned the notice. It's likely the council realized the limestone application had indeed been submitted and approved.

However, that was not the end of the dispute. Another notice of demolition was issued, this time because the approved permit drawings did not show the limestone to be roughly textured or feature embedded fossils. That unrefined appearance was deemed to be ill fitting for a heritage conservation area. The architects contended that their submitted documents clearly illustrated the stone texture, yet the council was adamant that they did not possess such drawings. This second notice was clearly a way for the council to save face after starting this very public feud based on their own administrative incompetence.

Months afterwards, a friend of the architect visited the planning department and requested to view the approved planning documents. Much to their surprise, they were shown drawings of the design that included photos of the proposed stone texture and the inclusion of fossils. So while it is now clear that the raw limestone proposal had indeed been approved, the council remained stubborn. The demolition notice stayed in place while the appeal process continued, though I did my part to email the council in support of the building.

On August 15 of 2019, two years after the initial demolition notice, the long battle culminated. The appeal was successful as the planning office concluded the built work was in general accordance with approved drawings. Disturbingly, it seems the entire ordeal was commandeered by a single member of the planning team with a personal dislike of the building. The project architect claims that this planner was responsible for ordering the demolition notice and concealing the approval information regarding the building's finishes. According to Taha, "It took all the way to the planning inquiry for the enforcement officer to admit under cross-examination he had redacted that information; had it been left in no breach would have occurred."[71]

What this entire tale demonstrates is the slippery slope of government legislated beauty. A handful of opponents in public office can wield enough power to threaten a building that offers so much to the community, never mind the colossal waste of embodied energy a demolition would cause.

This resistance stands in stark contrast to the warm welcome another Amin Taha project has received, again in the borough of Islington at 168 Upper Street. The project completes a block of terraces that line Upper Street, reproducing a version of the building which stood on the corner before its destruction during the Second World War. The four-storey terrace is made of poured concrete, acting as both a load-bearing structure and interior/exterior finishes.

After preliminary archival research, the original building was digitally reproduced by 3D scanning an identical but mirrored counterpart at the other end of the block. Casts made from this digital model were filled with terracotta-hued concrete, capturing every dentil, pediment, capital, and pilaster in high resolution. Rather than identically reproducing the building, the deliberate misplacement of windows and doors create a haphazard arrangement. The concrete retains its own imperfections, the holes of form ties left as an index to its production. The entire building speaks to the subjectivity of history, flawed in its own way by reconstructing pasts from biased narratives and selective memories shoehorned (like the building

71. Lizzie Crook, "'The Battle Is Over' Says Amin Taha as 15 Clerkenwell Close Is Saved from Demolition," Dezeen (Dezeen, August 15, 2019), https://www.dezeen.com/2019/08/15/15-clerkenwell-close-saved-demolition-amin-taha/.

Fig. 7.9) 168 Upper Street in London by Groupwork + Amin Taha Architects (built 2017)

Fig. 7.10) Detail view of 168 Upper Street

windows) to fit a present day viewpoint.[72] It is earnest in its use of ornament, without the irony that made postmodernism so obfuscated. There is a musicality to the project in sampling a piece of architecture and remixing it into something new, in much the same way that contemporary pop music operates. The building feels refreshingly old and new simultaneously.

While 168 Upper Street enjoys near-unanimous praise, the Clerkenwell project was both a RIBA award winner and a finalist for the Carbuncle Cup. The bipolar reception of these projects highlights the chasm between public opinion and expert testimony. Both buildings exhibit an intimate knowledge of their respective sites but address the themes of history and memory in vastly different executions. The difference mainly lies in their forms, where Clerkenwell has pared down its massing to a modernist grid to give prominence to its materials. 168 Upper Street benefits from the reproduced ornament which offers a base level of visual stimulation and complexity to observers. This is a valuable insight into why the public may prefer traditional architecture.

Historical architecture was able to marry visual complexity with a conceptual rigor. The theory supporting classical or gothic styles could be learned and understood by any passionate admirer because their ideologies shaped a common form language. For example, the

72. Rowan Moore, "15 Clerkenwell Close: Poetry Set in Stone," The Guardian (The Guardian, August 29, 2018), https://www.theguardian.com/artanddesign/2018/aug/19/amin-taha-15-clerkenwell-close-miesian-flintstone-poetry.

study of a single Gothic cathedral would be enough to understand the basis for most other Gothic churches. An inquisitive mind would be rewarded with a breadth of applicable knowledge. However, this version of intellectual beauty is impossible to achieve in contemporary architecture, where every individual project comes with a unique conceptual framework. As architects we love to seek out the rationale for exciting new architecture, but it is unreasonable to ask the public to research every project's parti to understand the conceptual beauty of contemporary buildings. The prevelance of diagrams to explain building proposals is a feeble attempt at communication and again undermines architectural expression by excusing aesthetic choices with functional concerns. This is an important source of architecture's public relations problem. At the very least, ornament provides the base level of visual information needed for the aesthetic pleasure that the public intuitively understands.

* * *

In his speech, Kofi Anaan invokes architectural imagery to express his mission statement. "We need to rethink what belonging means, and what community means, in order to be able to embrace the fate of distant peoples, and realize that globalization's glass house must be open to all if it is to remain secure."[73] The glass house, in this case, refers to an openness and transparency for globalism to benefit everybody. In reality, the glass houses and skyscrapers have become symbols for exactly the type of exclusive globalism that Anaan warned against. The political interference in architecture from Prince Charles to the Building Better, Building Beautiful Commission all stems from the same populist anger. Anti-establishment fervor has extended to architectural elites who continue to neglect public pleas for more cohesive architecture.

The placeless architecture of globalism offers no sympathy to the human scale and leaves no opportunity for cultural orientation. The complicated and individualistic theory used to substantiate contemporary architecture is not accessible to the average person. Rather than wasting thousands of dollars

73. Kofi Anaan, "Transcript of Q&A with Kofi Annan, UN Secretary-General," Yale, 2015, https://yaleglobal.yale.edu/content/transcript-qa-kofi-annan-un-secretary-general.

on “public education” as many architectural associations have done, perhaps architects could simply design more visually approachable buildings. Of course, the solution should not repackage historicism as an appeal to nationalism. There exists infinite possibilities for architecture to explore articulation and embellishment in a progressive manner. The fine detail of ornament is capable of turning imposing monoliths into human scaled experiences. Ornament, as a rhythmizing and organizing element can produce ordered environments that assuage the fear of chaos. Ornament makes buildings legible. It bridges the divide between intellectual architects and a visceral public. And with any success, ornament has the power to convey cultural meaning among the population, inspiring pride amongst locals and a symbol of belonging for new residents.

As the United Kingdom grapples with the uncertainty of Brexit it may have no choice but regionalism. Without any trade deals in place, high tariffs on imports will necessitate the use of local materials. As foreign investment falls so too might the speculative development that treats architecture as a commodity rather than culture. A drop in immigration would also slow housing demand and development from its current breakneck pace. Perhaps this could lead to more considered architecture, although that assumes there will be any development at all in what could be a serious economic downturn. Meanwhile, architects across the world should view the current events in Britain as a warning to the effects of placeless inhumane architecture. In the “post-truth” world we now occupy, stories matter more than ever. The story of British sovereignty beat out the truth of economic statistics. In the name of modernity, architects have ignored the steady appropriation of their work by capitalism. The rationalism of architecture was supposed to lend a moral neutrality to the work, but the consequences of that architecture can no longer be ignored as it continues to serve capitalism to the detriment of the public. Architects now have the opportunity to forge a new, inclusive narrative by reconsidering the most communicative element of architecture: ornament.

CONCLUSION

Adolf Loos was right; ornament is a primal desire. But its loss does not indicate a greater level of cultural evolution. Ornament is as much a primal urge as the desire for food. No amount of "enlightenment" can surmount the malaise that rejecting those cravings would cause. And yet, we are being culturally starved by the deprivation of ornament as a legacy of modernism. People tend to get angry when they are hungry. That anger is evident not just in their dissatisfaction with contemporary architecture but the entire economic system that funds it. The public is demonstrating that anger, lashing out politically their disoriented states. Perhaps its finally time to acknowledge that natural impulse and nourish it.

It is also erroneous to think of ornament as without purpose. Ornament does not loudly proclaim its functions. It implies purpose, working through the subtle means of suggestion to affect observers. Ornament makes objects intuitively understandable by delineating borders through areas of detail and contrast. It organizes those objects through rhythm and hierarchies and satisfies our pattern seeking behaviour. Ornament breaks down the imposing masses of buildings to the human scale. Shared decoration establishes visual relationships between discrete objects. Ornament offers the chance to exhibit material properties through the process of production, and helps us understand the integrity of a building by embellishing structural members.

At the semiotic level, ornament has the unique ability to communicate architectural narratives. It is capable of naturalizing human constructs through the introduction of organic imagery. It anthropomorphizes architecture, allowing us to identify with buildings. Most important of all, ornament is the means by which we identify objects of cultural significance. By making architecture physically and culturally legible, ornament has the potential to bridge the gap between elite architects and the public, mitigating the homogenizing effects of globalism.

Ornament, precisely due to its excessive nature, holds promise as a means to return architecture to its expressive obligations. Unburdened by practical or structural requirements, ornament is free to explore

endless modes of meaning. It represents an investment in the public realm, a dedication to humanizing buildings that has continuously been discounted as frivolous and unimportant. The moralizing of this neutral element distracts from new possibilities, as slippery slope arguments are invoked to paint ornament as an agent of oppression. It is time to reconsider these false narratives which benefits wealthy developers who stand to profit from austerity while punishing the communities that will ultimately have to coexist with the architecture.

There are signs that cultural tides may be turning in favour of a return to ornament. Populist movements may force companies and architects to better accommodate public demand. National economies are trending towards more regional models due to climate change policies, volatile oil and shipping prices, and increasing automation technology allowing for more local manufacturing.[74] On the architecture front those same technologies make possible for ornament to be computationally modeled and 3D printed as the work of architects like Benjamin Dillenburger and Michael Hansmeyer explores. Political will is building to ban curtain wall envelopes.[75] If that ever happens, one has to wonder how architects would articulate the resulting expanses of solid wall. While the question remains as to what a contemporary ornament might resemble, that answer will never be realized if ornament's status as a pariah persists.

As architect Robert Levit succinctly wrote: "Modernist tradition would like to uncouple building from symbolic practices - to make buildings simply real. Yet these practices are stubbornly the product of minds that arrange things in meaningful ways, which is not the same as useful ways...Ornament, in other words, if it is to be redefined, is not some sort of added doodad, but the condition of architecture itself."[76]

74. Finbarr Livesey, *From Global to Local: The Making of Things and the End of Globalisation* (New York, NY: Pantheon Books, 2017).
75. James Tapper, "Experts Call for Ban on Glass Skyscrapers to Save Energy in Climate Crisis," *The Guardian* (The Guardian, July 28, 2019), https://www.theguardian.com/environment/2019/jul/28/ban-all-glass-skscrapers-to-save-energy-in-climate-crisis.
76. Robert Levit, "Contemporary Ornament: A Return of the Symbolic Repressed," *Harvard Design Magazine* no. 28 (2008): 85.

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