

**RUPTURES IN ARCHITECTURE:
TOWARD AN ALTERNATIVE POST-FORDISM**

by

Phu Dinh

B. Arch. Sci., Ryerson University, 2013

A thesis project
presented to Ryerson University
in partial fulfillment of the
requirements for the degree of
Master of Architecture
in the program of
Architecture

Toronto, Ontario, Canada, 2019

© Phu Dinh, 2019

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 authorize Ryerson University to lend this thesis to other institutions or individuals for the purpose of scholarly research.

I further authorize Ryerson University to reproduce this thesis by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

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

RUPTURES IN ARCHITECTURE:
TOWARD AN ALTERNATIVE POST-FORDISM

Master of Architecture 2019

Phu Dinh

Architecture Program | Ryerson University

ABSTRACT

This thesis is a broad historical exploration of the nature and social function of architectural facades. In particular, the thesis examines the influence of Le Corbusier's universal structure of Maison Dom-ino on the subsequent development of post-Fordist facades designed to achieve a seamless interface between life in the buildings they adorn and streets given over to the automobile, an index of economic production. The thesis argues that this seamless interface between exterior and interior reduces human experience to the isolating anti-social perspective of the car window. In theorizing a rupture of the post-Fordist illusion of seamless space, the thesis cites the work of Le Corbusier's contemporaries: Loos, Mies van der Rohe and Hejduk. Their architectural designs support the development of an alternative life-enhancing post-Fordism, allowing people to experience the rich difference between interior and exterior, public and private. The project's design realizes the thesis' post-Fordism in a folly.

Keywords: post-Fordism, façade, rupture

ACKNOWLEDGEMENTS

Thank you, Arthur Wigglesworth, for your constant patience and encouragement in pushing my creative boundaries. Thank you, June Komisar, for the endless and supportive guidance since my first year at Ryerson University. Thank you, John Cirka, for the timeless and wonderful philosophical exchanges.

DEDICATION

To my loved ones.

TABLE OF CONTENTS

AUTHOR'S DECLARATION	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
DEDICATION	v
LIST OF FIGURES	viii
PROLOGUE	1
1. MODERNITY AS THE DIALECTIC OF FREEDOM AND SECURITY	4
Mill – The dialectic modified: freedom and the tyranny of the majority	5
2. PRE-FORDIST, FORDIST AND POST-FORDIST SOCIETY	9
Pre-Fordist Society.....	9
Fordist Society	13
Post-Fordist Society	17
Post Fordist Society: Its Post WWI Precursors	18
Since World War II	26
3. ARCHITECTURE AND FAÇADE, A HISTORY	32
Ancient Origins.....	32
Filippo Brunelleschi	33
Leon Battista Alberti	36
The Origins of the Modernist Facade in Fordist Society.....	40

The Fear of Glass – Modernism and a post-Fordist revolution in building materials.....	41
Le Corbusier – Reverse Façade.....	43
After Le Corbusier – What of the Architect.....	46
After Le Corbusier – The subject: from voyeur to victim of voyeurism.....	54
4. TOWARDS POST-FORDISM IN ARCHITECTURE	59
Ludwig Mies van der Rohe and the Anti-Façade.....	61
Adolf Loos: The aurality of the “Raumplan”	69
John Hejduk’s: flatness of the vertical wall.....	73
5. AN ARCHITECTURAL TOUR ON FOOT	80
EPILOGUE	103
REFERENCES	105

LIST OF FIGURES:

Fig. 1: Albert Kahn: interior photograph of Assembly Department, Detroit, 1917	14
Source: Marullo, Francesco. <i>Typical Plan: The Architecture of Labor and the Space of Production</i> . 2014. TUDelft, PhD dissertation, p. 113	
Fig. 2: Albert Kahn: Ford Highland Park Plant, General Layout, Detroit, 1914	16
Source: Marullo, Francesco. <i>Typical Plan: The Architecture of Labor and the Space of Production</i> . 2014. TUDelft, PhD dissertation, p. 102	
Fig. 3: Albert Kahn: Ford Highland Park Plant, Exterior Photograph, Detroit, 1910.....	16
Source: Marullo, Francesco. <i>Typical Plan: The Architecture of Labor and the Space of Production</i> . 2014. TUDelft, PhD dissertation, p. 109	
Fig. 4: Filippo Brunelleschi: Duomo, Florence, 1420	35
Source: https://www.metalocus.es/sites/default/files/styles/mopis_news_carousel_item_desktop/public/file-images/filippo-brunelleschi_the_dome_of_florence_metalocus_03_1280.png?itok=-EmN0MJd	
Fig. 5: Leon Battista Alberti: Palazzo Rucellai, Florence. c. 1453.....	38
Source: http://darquitectura.tumblr.com/post/137861789277/plmosley-leon-battista-alberti-palazzo	
Fig. 6: Le Corbusier: Drawing of Maison Dom-ino, (1914-1915)	43
Source: https://upload.wikimedia.org/wikipedia/en/f/f3/Charles-%C3%89douard_Jeanneret_%28Le_Corbusier%29%2C_1914-15%2C_Maison_Dom-Ino.jpg	
Fig. 7: Le Corbusier: Villa Savoye (1928/30)	45
Source: Marullo, Francesco. <i>Typical Plan: The Architecture of Labor and the Space of Production</i> . 2014. TUDelft, PhD dissertation, p. 113.	
Fig. 8: Pierre Koenig, Stahl House: LA, Photographed by Julius Shulman.....	50
Source: http://notapaperhouse.com/iconic-mid-century-house-in-los-angeles/	
Fig. 9: Architects Robert Venturi and Denise Scott Brown: during their famous 1968.....	51
Source: Wall Street Journal - https://www.wsj.com/articles/SB10001424052748703837004575013050739164236	

Fig. 10: Le Corbusier: Villa Savoye, Roof Garden	53
Source: https://i2.wp.com/misfitsarchitecture.com/wp-content/uploads/2015/08/le_corbusier_vol_1_1910_1929-185.jpeg?ssl=1	
Fig. 11: Franz Louis Catel: Schinkel in Napels, 1824	54
Source: https://commons.wikimedia.org/wiki/File:1824_Catel_Schinkel_in_Neapel_anagoria.JPG	
Fig. 12: Le Corbusier: Villa Le Lac horizontal window, 2010	56
Source: Galinsky - http://www.galinsky.com/buildings/lac/index.htm	
Fig. 13: Le Corbusier: Villa Savoye, Poissy, Jardin Suspendu, 1929	57
Source: Colomina, Beatriz. <i>Sexuality and Space</i> . New York: Princeton Architectural Press, 1992. p. 98	
Fig. 14: Ludwig Mies van der Rohe: Toronto-Dominion Centre, Toronto, c. 1969.....	61
Source: Canadian Center for Architecture - www.cca.qc.ca/en/search/details/collection/object/8234	
Fig. 15: Mies van der Rohe: Farnsworth House, Interior	62
Source: https://www.flickr.com/photos/thebrilliance/1989524911	
Fig. 16: Ludwig Mies van der Rohe: Toronto-Dominion Centre plan, Toronto, c. 1963.....	63
Source: MoMA - https://www.moma.org/collection/works/87482	
Fig. 17: TD Towers: intersection along King Street facing Bay Street.	68
Source: Google Maps Street View	
Fig. 18: Adolf Loos: Josephine Baker House Plans, Unbuilt, Paris, 1927.	70
Source: Harvard Design Magazine http://www.harvarddesignmagazine.org/issues/38/tuning-into-the-void-the-aurality-of-adolf-loos-architecture	
Fig. 19: John Hejduk: Diamond flattened into triangle, 1995	74
Source: Marullo, Francesco. <i>Typical Plan: The Architecture of Labor and the Space of Production</i> . 2014. TUDelft, PhD dissertation, p. 113.	
Fig. 20: John Hejduk: “The only perspective”	75

Source: He, Weiling. *Flatness transformed and otherness embodied: A study of John Hejduk's Diamond Museum and Wall House 2 across the media of painting, poetry, architectural drawing and architectural space*. 2005. Georgia Institute of Technology, PhD dissertation. p. 172.

Fig. 21: John Hejduk: "The only perspective"76

Source: He, Weiling. *Flatness transformed and otherness embodied: A study of John Hejduk's Diamond Museum and Wall House 2 across the media of painting, poetry, architectural drawing and architectural space*. 2005. Georgia Institute of Technology, PhD dissertation. p. 172.

Fig. 22: John Hejduk: Wall House 2, 1995.....77

Source: <http://profspevack.com/gdprinciples1/johnhejduk01/>

Fig. 23: John Hejduk: Wall House 2, from corridor looking into living room78

Source: He, Weiling. *Flatness transformed and otherness embodied: A study of John Hejduk's Diamond Museum and Wall House 2 across the media of painting, poetry, architectural drawing and architectural space*. 2005. Georgia Institute of Technology, PhD dissertation. p. 316.

Fig. 24: John Hejduk: Grandfather Wall House, 1966-7679

Source: Structures for the imagination - Scientific Figure on ResearchGate. Available from: https://www.researchgate.net/figure/John-Hejduk-Grandfather-Wall-House-1966-76_fig1_269405884 [accessed 28 Jan, 2019].

Fig. 25: Hideaway Park Folly: Context Plan, by Author80

Source: Phu Dinh

Fig. 26: Hideaway Park, existing conditions, by Author81

Source: Phu Dinh

Fig. 27: Hideaway Park Folly, Underpass Commons, by Author82

Source: Phu Dinh

Fig. 28: Hideaway Park Folly, Axonometric - SE Corner, by Author83

Source: Phu Dinh

Fig. 29: Hideaway Park Folly, Axonometric - NE Corner, by Author83

Source: Phu Dinh

Fig. 30: Hideaway Park Folly, Axonometric - NW Corner, by Author	84
Source: Phu Dinh	
Fig. 31: Hideaway Park Folly, Axonometric - SW Corner, by Author	84
Source: Phu Dinh	
Fig. 32: Hideaway Park Folly: Materials Palette.....	85
Source:	
1 – River Stone: www.prosperitycandle.com/products/riverstone-tealight	
2 – Gabion wall:	
www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwiM0JjwhJbgAhUIG6wKHdJsDOAQjhx6BAgBEAM&url=https%3A%2F%2Fwww.dreamstime.com%2Fdetail-gabion-wall-filled-stones-gabion-wall-image118984254&psig=AOvVaw06swbzo1vAhiMIFbFBeU1t&ust=15489559902503766	
3 – Metal Grate: www.flickr.com/photos/grungetextures/4109047382	
4 – Cast-in-place Concrete: https://evergreenculturalcentre.ca/get-involved/concrete/	
5 – Wooden Trusses: (FT Architects: Archery Hall & Boxing Club)	
https://i.pinimg.com/736x/3e/ce/49/3ece49eb7404c33c92b4a93a7fcefba9--wood-architecture-architecture-details.jpg	
6 – Cedar Roof Shingles (Jason Payne: “Rawhide” Project):	
www.google.com/search?q=bovine+jason+payne&safe=active&rlz=1C1GCEA_enCA824CA824&tbm=isch&source=iu&ictx=1&fir=vB9m8UebonQ-AM%253A%252CW9_FOeL5D4BynM%252C_&usg=AI4_-kR2xDDzAUz90qdMuceiBq8XS_9n6Q&sa=X&ved=2ahUKEwj1x5rqhZbgAhUBVd8KHSGfCMgQ9QEwCHoECAAQDg#imgsrc=YhMM340G41ABmM	
7 – Outdoor Curtains (OMA: Maison a Bordeaux):	
www.domusweb.it/en/architecture/2013/03/25/maison-a-bordeaux-a-textile-revisitation.html	
Fig. 33: Hideaway Park Folly, Roof Plan, by Author	86
Source: Phu Dinh	

Fig. 34: Hideaway Park Folly: Washroom, by Author.....	87
Source: Phu Dinh	
Fig. 35: Hideaway Park Folly: South-East Corner, by Author	87
Source: Phu Dinh	
Fig. 36: Hideaway Park Folly: Main Pathways, by Author	88
Source: Phu Dinh	
Fig. 37: Hideaway Park Folly: East Entrance, by Author	89
Source: Phu Dinh	
Fig. 38: Hideaway Park Folly: Underpass looking north, by Author	90
Source: Phu Dinh	
Fig. 39: Hideaway Park Folly: Cylinder Staircase, by Author.....	91
Source: Phu Dinh	
Fig. 40: Hideaway Park Folly: plinth at first site, by Author.....	92
Source: Phu Dinh	
Fig. 41: Hideaway Park Folly: plinth at first site, by Author.....	93
Source: Phu Dinh	
Fig. 42: Hideaway Park Folly: plinth as stage, by Author.....	94
Source: Phu Dinh	
Fig. 43: Hideaway Park Folly: Traversing Ramp at west elevation, by Author.....	95
Source: Phu Dinh	
Fig. 44: Hideaway Park Folly, Traversing ramp at ribbon window, by Author.....	96
Source: Phu Dinh	
Fig. 45: Hideaway Park Folly: Traversing ramp at ribbon window, by Author.....	96
Source: Phu Dinh	
Fig. 46: Hideaway Park Folly: horizontal ribbon window, by Author	97
Source: Phu Dinh	
Fig. 47: Hideaway Park Folly: horizontal ribbon window, by Author	98
Source: Phu Dinh	

Fig. 48: Hideaway Park Folly, True East Elevations, by Author	98
Source: Phu Dinh	
Fig. 49: Hideaway Park Folly, True North Elevations, by Author	98
Source: Phu Dinh	
Fig. 50: Hideaway Park Folly: horizontal ribbon window, by Author	99
Source: Phu Dinh	
Fig. 51: Hideaway Park Folly, True West Elevations, by Author	99
Source: Phu Dinh	
Fig. 52: Hideaway Park Folly, True South Elevation, by Author	100
Source: Phu Dinh	
Fig. 53: Hideaway Park Folly: horizontal ribbon window, by Author	100
Source: Phu Dinh	
Fig. 54: Hideaway Park Folly, North Isometric View, by Author	101
Source: Phu Dinh	
Fig. 55: Hideaway Park Folly, SE exploded axonometric, by Author	102
Source: Phu Dinh	

PROLOGUE

This thesis is an analysis of contemporary architecture from the theoretical perspective I call post-Fordism. The term post-Fordism has broad use, though that use does not always seem to be consistent or even coherent. Therefore, it is important to start this thesis with a clear account of post-Fordism and the social/historical conditions to which it is a critical response.

There is little dispute that “the description of the socio-economic organization of capitalist societies in the decades immediately following the war is Fordist, named after the American automobile magnate Henry Ford and the management measures he introduced in his factories in the 1900s and 1910s”¹ to institute changes to the “accumulation regime”² by ensuring constant growth with economies of scale. Also, it is generally accepted almost that, in the 1970s saw the end of Fordist industrial capitalism and the transition to a post-industrial post-Fordist society³. However, there is some debate about the nature of this new post-Fordist society.

Typically, post-Fordist society has been characterized in terms of its extension and decentralization of Fordist productive practices with the following sociological results: the formation of knowledge economies, of niche markets and service industries having priority over mass markets and manufacturing, of a feminized work force, of information technologies, of flexible production, and of global financial markets. As the architectural critic, Siegfried Giedion nevertheless, argues that “however much a period may try to disguise itself, its real nature will still show through its architecture.”⁴ For Giedion and theorists like him, the typical description of post-Fordist society is representing a break from Fordist practices and is shown to be pretense. If anything, post-Fordist architecture embodies the acceleration and intensification of Ford’s centralizing practices and their tendency to produce a fully managed work force. It is a condition in which the economist, Christian Marazzi, describes as “biocapitalism”⁵ capable of eliminating the division between work and life begun by Ford, and of fully harnessing workers’ imagination

¹ Pribac, Igor. “Post-Fordism – a Contextualisation” in *Post-Fordism and its Discontents*, Ed., Kirn, Gal, AAAARG.ORG: LULU.com, 2018. p 24

² Pribac, Igor. p. 25

³ Berardi, Franco. *The Uprising: On Poetry and Finance*, Cambridge MA: The MIT Press, 2012. p. 94. (Berardi)

⁴ Giedion, Siegfried. *Space, Time and Architecture: The Growth of a New Tradition*. Cambridge, Massachusetts: Harvard University Press, 1967. p. 19

⁵ Marazzi, Christian. *The Violence of Financial Capitalism*, trans. Kristina Lebedeva and Jason Francis McGimsey. Los Angeles, CA: Semiotext(e), 2008. p. 64

and knowledge as “productive forces”,⁶ just as Ford harnessed their bodies. For the purpose of this thesis, this view of post-Fordist society as hyper-centralized is what I would call post-Fordism.

Primarily, post-Fordism is the body of a theory written within and critically observant of the post-Fordist society to which its theorists belong. As such, proponents of post-Fordism, including the media theorist, Franco Berardi⁷ and architect/educator, Pier Vittorio Aureli,⁸ speak to post-Fordist society, not from the stand-point of another society, but from a “knowledge and expressive power which is latent and needed in [their] society”⁹ and which shows itself, among other places in instances of post-Fordist architecture. From the perspective of post-Fordism, the 1970s heralded the “end of industrial capitalism and the beginning of a new age.”¹⁰ I concur with this view, but will dedicate much of the thesis to discussing how economic tendencies identifiable as post-Fordist were present as early as in the 1920s and foreshadowed the arrival of the post-Fordist age. Since that time, a universal consumer culture, managed increasingly by the commercial deployment of electronic technologies and a corporate sector reconfigured to take advantage of the new promotional culture, has simply been made more effective and more totalizing. For post-Fordism, what gets squeezed out of the seamless space between post-Fordist sites of production and consumption is the independence of the skilled workers, professionals and artists whose very imaginations have been harnessed to the demands of post-Fordist consumption. Now, indicated by the sociologist and philosopher Maurizio Lazzarato that, imaginative free play has been enthralled to an irresponsible consumerism where “we deserve everything and it is our duty to compulsively consume.”¹¹

All of the above is by way of saying that post-Fordism is less of a celebration of post-Fordist society than it is an expression, from within post-Fordist society, of critical concern, even dismay, over the post-Fordist tendency to hyper-consumption and, with it, hyper-objectification. In the case of post-Fordist architecture, hyper-objectification extends to its effects: the architectural industry’s growing tendency to “figurative excess”¹² identifies architecture

⁶ Marazzi, Christian. *Capital and Affects: From the new Economy to the War Economy*, trans. Gregory Conti. Los Angeles, CA: Semiotext(e), 2008.

⁷ Berardi, p. 7.

⁸ Aureli, Pier Vittorio. *The Project of Autonomy. Politics and Architecture within and against Capitalism*. New York: Forum, Princeton Architectural Press, 2008.

⁹ Northrop Frye, *Anatomy of Criticism: Four Essays* (Princeton: Princeton University Press, 1957. P. 54.

¹⁰ Berardi, p. 94.

¹¹ Lazzarato, Maurizio. *The Making of the Indebted Man: Essay on the Neoliberal Condition*, trans. by Joshu David Jordan. Los Angeles, California: Semiotext(e), 2012. p. 169-170.

¹² Aureli, Pier Vittorio. “More and More about Less and Less” in Log Vol. 16 (Summer 2009)

exclusively with its products, so that the practice of architecture becomes fully subservient to the architectural object, even invisible. Since post-Fordism sees post-Fordist society as an endpoint of modernity, post-Fordism must concern itself with the history and theory of modernity to see how post-Fordist society arises out of and as a condition of modern society and how it is the consequence of a Fordist or late modern society taken to its logical extremes. Whereas Fordist society saw the architectural object as subservient to architectural practices, as well as the needs of consumers, post-Fordist society subordinates both architectural practice and consumer need to the object as simply a commodity; that is, a commercial image of a life-style or promise of a society which is wholly illusory.

p. 1.

1. MODERNITY AS THE DIALECTIC OF FREEDOM AND SECURITY

The history of philosophical thought theorizing about the origins of modernity and its logical consequences can be said to begin with the English philosopher Thomas Hobbes, who argued that the development of modern societies is a logical offshoot of human nature. Written just after the English Civil War, Hobbes' seminal work, *Leviathan*, argues for human nature's paradoxical condition: any human state must be an expression of popular will; the populace always wills away its freedom in favour of a state whose power is absolute. How does Hobbes come to this conclusion? According to Hobbes, by nature, all humans are equally free to do whatever seems good to them.¹³ Unfortunately, in the original state of nature unbounded by political states or civilization, this absolute freedom of individuals must lead to universal conflict as, inevitably, they will all clash over things they mutually desire but cannot share¹⁴. Under this condition of universal conflict, what Hobbes calls the "warre (sic)" of "every man against every man"¹⁵, freedom's purpose (productive activity in aid of satisfying human desire) is undermined. Says Hobbes, the condition of war is one in which "there can be no security for any man"¹⁶ and, as a result of which, "there is no place for industry; because the fruit thereof is uncertain and consequently no culture of the earth; no navigation, nor use of the commodities that may be imported by sea, no commodious building; no instruments of moving and removing such things as require much force; no knowledge of the face of the Earth; no account of time; no arts; no letters; no society; and which is worst of all, continual fear (sic), and danger of violent death; and the life of man, solitary, poor, nasty, brutish and short"¹⁷.

As a natural consequence of war's stifling of productive activity, humans are bound to come together to keep the peace under an agreement that each man will "be contented with so much liberty against other men, as he would allow other men liberty against him."¹⁸ Understanding the disvalue of unenforced agreements, however, humans, according to Hobbes, will also agree to a mutual "laying down"¹⁹ of each individual's means to make war and "conferre

¹³ Hobbes, Thomas. *Leviathan*. Ed., C.B. MacPherson. London, Penguin Classics, 1988. p. 184 (Hobbes)

¹⁴ Hobbes, 184.

¹⁵ Hobbes, 185.

¹⁶ Hobbes, 190.

¹⁷ Hobbes, 186.

¹⁸ Hobbes, 190.

¹⁹ Hobbes, 354.

(sic) all their power and strength upon one man, or upon one assembly of men, that may reduce all their wills ... unto one will,"²⁰ and this man or assembly is "called [the] sovereign (sic)"²¹. The job of the sovereign, reasons Hobbes, will be to "defend [the people] from the invasion of forraigners (sic), and the injuries of one another; and thereby secure them in such sort as that by their own industry, and by the fruits of the earth, they may nourish themselves and live contentedly"²².

A logical consequence of Hobbes' condition of state-enforced peace is that people can satisfy their desires only by way of their own means or through voluntary, that is, mutually satisfying combinations with others. Thus, state-enforced peace must allow people to pursue productive activity, free from coercion by their neighbours or strangers. In effect, the state creates what could be called the voluntary society: for Hobbes, the only type of society in which the exercise of liberty and humanity's progress towards a commodious life for all go hand in hand.

The lesson to be derived from Hobbes' account of the rise of sovereign states is that unlimited freedom undermines freedom's value; that freedom's value is preserved only if the pursuit of freedom is tempered by a dedication to the maintenance of security. Freedom and security, then, are not mutually exclusive. For Hobbes, they are complementarily necessary to a flourishing society in which people realize the value of their natural condition of freedom.

Mill – The dialectic modified: freedom and the tyranny of the majority

The pursuit of productive activity in Hobbes' voluntary society, according to John Stuart Mill, is inadequate in providing the distinction needed for creative activity. That is, for Hobbes, a world in which only voluntary activity is permitted will be a world in which productive activity is maximized. It does not follow, however, that conditions maximizing productive activity will also maximize creative activity. For instance, people can voluntarily submit their time and labour to an employer who tells them what to do for a living. The result will be productive as it needs not be creative. It is the nineteenth-century philosopher, John Stuart Mill who recognizes that beyond the promotion of voluntary activity, there must also be the protection of non-harmful but deviant activity. For Mill, it is through deviance, the difference of an individual from other people, in which innovation and thus creativity is born. This, says Mill, is because it is the deviant, "the unlikeness

²⁰ Hobbes, 226.

²¹ Hobbes, 228.

²² Hobbes, 226.

of one person to another,” that “is generally the first thing which draws the attention of either to the imperfection of his own type and the superiority of another, or the possibility, by combining the advantages of both, of producing something better than either.”²³ In sum, granting liberty to deviance illuminates for us the way to progress. It follows that liberty’s value – the promotion of creativity out of which productive activity originates – is safeguarded by way of the protection and promotion of individual deviance from norms.

The question arises, however: from what does deviance need protection? Mill answers that deviance needs protection from what he calls, “the tyranny of the majority.”²⁴ For Mill, the majority of people are as Hobbes views them: they are anti-social. Unlike Hobbes, however, Mill is careful to list the deficiencies in the anti-social character. Mill says of the majority that they “are always a mass, that is to say, collective mediocrity. ... Their thinking is done for them by men much like themselves, addressing them or speaking in their name, on the spur of the moment, through the newspapers”.²⁵ Theirs is naught but the unthinking “ape-like ... imitation”²⁶ of custom. As a result, the majority “has, properly speaking, no history [no self-aware progress to a better condition], because the despotism of custom [over it] is complete”²⁷. The majority’s enthrallment to custom is anti-social, reasons Mill, because it drives the majority to “war against” individuality,²⁸ even though the utility of the majority derives from its society’s capacity for individuality.

For Mill, liberty’s value resides in its protection of individualism. Mill sees a society’s well-being as being imbricate in its capacity for improving innovations and inventions from which all its members benefit. However, Mill holds that the source of both arises from individuals whose thoughtfulness is evidenced in their refusal to participate with the majority in the thoughtless imitation of custom. Thus, when Mill says that liberty is “the only unfailing and permanent source of improvement ... since by [liberty] there are as many possible independent centers of improvement as there are individuals,”²⁹ he is arguing for a society that gives the liberty of individuals to be individual priority over the liberty of the majority to suppress individuality in favour of custom.

²³ Mill, John Stuart. *On Liberty*. in *Classics of Political and Moral Philosophy*. Ed., Steven M. Cahn. New York & Oxford: Oxford University Press, p. 963. (Mill)

²⁴ Mill, 929.

²⁵ Mill, 960.

²⁶ Mill, 956.

²⁷ Mill, 962.

²⁸ Mill, 963.

²⁹ Mill, 962.

In Mill's view, we therefore see an important elaboration on Hobbes' concern that there can be too much liberty with the result that a state is needed to secure liberty's blessings. This elaboration sees the need of the state to secure the freedom of individuals from the majority's liberty to tyrannize over them. Only then, will freedom result in the maximization of creative activity from which everyone, including the majority, must benefit. To protect the freedom of deviants, Mill says, the state must allow that everyone has perfect freedom to do whatever they like so long as they do not harm anyone else. It follows that, for Mill, "the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others."³⁰

Mill is clear that it is no use for the majority to argue that the presence of deviance is an "injury" because it represents "outrage to" and a "disregard" for their "feelings."³¹ Feelings of discomfort and disapproval (even if disapproval manifests as disgust or revulsion) do not constitute harm. People must be free to do whatever they feel is best for them, even to the extent of harming or killing themselves. Otherwise, freedom is not freedom at all, but rather the tyranny of the majority. We can also add that, for Mill, much of the majority's rationale for why particular deviant acts are harmful and thus to be forcibly curtailed is pure rationalization. When the majority does not like something, they seek reasons why it should be curtailed after the fact.

On the reasoning of Hobbes and Mill, we can, in turn, formulate what for them would be the two-part rule of modernity concerning freedom. The first part is that there can be too much liberty, in which case liberty's value is diminished. The second part aims at if the majority has too much liberty and impose their will on the minorities who differ from them in their behaviours, then the majority diminishes the value of liberty.

The modern tendency: the dialectic of deregulation and reregulation

While Hobbes and Mill stand as the foundations of modern thought concerning the dialectic of security and liberty; historically, their rule concerning the limits of liberty has, for the most part, been misinterpreted. In practice, modern societies have tended to institute the following distorted version of their rule: when certain people get too much liberty, especially those who we think of as outsiders, the perceived value of our freedom is diminished. This modern distortion of the rule of freedom manifests itself in an historic cycle in which extremes in the deregulation of productive

³⁰ Mill, 932.

³¹ Mill, 969-970.

activity are followed by extremes of reregulation in productive behaviour. The effect of this cycle is that periods of cultural and economic innovation tend to be followed by longer periods of cultural and economic retrenchment.

More often, periods of retrenchment are characterized by a crescendo of reregulation, always in the name of preserving both freedom and security. These crescendos result in a social condition where the majorities tyrannize over those minorities who deviate from current norms and are, in turn, tyrannized over by those minorities who benefit from the current norms. As the following account of Fordist and post-Fordist history will indicate, periods of retrenchment are instrumental to the rise of a hidden minority which presents itself as the “*progressive* element within the majority” (an oxymoron), capable of identifying threats to the majority’s freedom. The *solution* (a false one) offered by the hidden minority to the danger confronting the majority is the regulation that will curtail the freedom of actual minorities. This solution also entails the creation of bogus minorities: members of the progressive majority who gain their insight by virtue of their being part of an oppressed minority.

2. PRE-FORDIST, FORDIST AND POST-FORDIST SOCIETY

As we can see in the last chapter, the modern tendency to misinterpret the rule of freedom as formulated by Hobbes and Mill manifests itself in recurring cycles of deregulation followed by increasing reregulation. One of the most important and long lasting of these cycles could be called the era of pre-Fordist, Fordist and post-Fordist society. Generally speaking, this era involves and encompasses the history of the introduction of scientific disciplines and automation in industrial production in Western society (circa the late-seventeenth to the twenty-first centuries). The first part of this era was a time of deregulation in economic production and very quickly that part was displaced by a much longer era of reregulation as the impulse to freedom gave way to concerns over the security of those who had benefited from that freedom. The two great milestones in this period of reregulation were those of Fordist and post-Fordist society.

Pre-Fordist Society

James Watt – new disciplines

In England, the early eighteenth century saw the rise to prominence of the “blue coat” charity schools for children³² and university level dissenter academies,³³ established by non-conformist tutors (48, 57) and supported by subscriptions from sympathetic nobility and members of the emerging business class³⁴. Both the charity school and academy were to have a liberalizing influence on the traditional grammar school, forcing many grammar schools to include “non-classical” subjects,³⁵ while the academy became an important “rival” to traditional universities.³⁶ The purpose of these institutions was: first, to provide basic literacy and arithmetic education for the poor (the first aim was the province of the charity schools)³⁷; second, to offer commoners as well as children of the nobility religious training outside the Anglican confession; and third, to instruct students in the latest scientific and technological developments from the scientific revolution that had begun in the seventeenth century (the final two aims were the provinces of the

³² “Bluecoat Schools and Ragged Schools,” *Naked History*, July 21, 2016, in URL <http://www.historynaked.com/bluecoat-schools-ragged-schools/>

³³ Parker, Irene. *Dissenting Academies in England*. Cambridge: Cambridge University Press, 1914. (Parker)

³⁴ As, for instance was the academy established in 1753-5 by John Seddon (Parker, 105)

³⁵ Thompon, Richard, S. *Classics and Charity: The English Grammar School in the Eighteenth Century*. Washington DC: Department of Education (DHEW), 1966. p. 14.

³⁶ Parker, 56

³⁷ (Bluecoat Schools and Ragged Schools)

dissenting academies).³⁸ The establishment of what was really an extension of primary through to university learning that “opened doors to the people”³⁹ had the effect of providing the nobility and business class with workers capable of making technical improvements profitable to their estates and businesses. In part, the establishment of the dissenting academies was to get around the regulation of adult education by English universities, such as Oxford and Cambridge, whose student fees and expenses were prohibitive to most commoners,⁴⁰ and who were unwilling to hold studies in the new physical sciences and technologies, preferring instead to persist in their customary reliance on the ancient classics.⁴¹

By the mid-eighteenth century, at least a part of the skilled labour had undergone a revolution, as illustrated in the example of James Watt, the inventor of the steam engine. Like his father, a carpenter and shipwright,⁴² James Watt was considered a skilled labourer (Watt was an instrument maker). However, unlike his father, Watt was able to attend a grammar school free to labourers where he trained in Mathematics, Latin and Greek⁴³. Also, where Watt’s father was constrained by membership in a guild to practice his trade as it had been performed for hundreds of years, Watt, living in an age of unofficial deregulation, was able to take up an apprenticeship with a master in London, who did not adhere to guild regulations. In contravention of guild practice, Watt’s master allowed him to finish his apprenticeship in one year instead of the officially required seven-year term and to study modern innovations not condoned by the guilds.⁴⁴ This meant that Watt was able to afford training in modern instrument design, even though he did not have the money for a long apprenticeship. However, once he had finished his training, Watt found that, since his credentials did not conform to guild standards no businesses in his home-town of Glasgow would recognize them or grant him work.⁴⁵ Fortunately, for Watt, the deregulatory spirit of his age again came to his aid, and he was able to get business from relatives at the Scottish and therefore science-friendly University of Glasgow, outside of the city’s jurisdiction.⁴⁶ This business allowed Watts the income to experiment with innovations in machine manufacture which

³⁸ Parker, 132, 134

³⁹ Parker, 135

⁴⁰ Parker, 81-2

⁴¹ Parker, 132

⁴² Muirhead, James Patrick. *A Life of James Watt: With Selections from His Correspondance*. London: John Murray, Albemarle Street, 1859. p. 12 (Muirhead)

⁴³ Muirhead, 25

⁴⁴ Muirhead, 35-6

⁴⁵ Muirhead, 42

⁴⁶ Muirhead, 42-3

lead ultimately to his perfection of the piston steam engine⁴⁷. Watts became rich selling his steam engine to businesses in small communities such as Manchester, then only a hamlet with about 25,000 inhabitants in 1772⁴⁸, outside the jurisdiction of the guilds. The effect of his invention lied in the transformation of manufacture in Britain and of Manchester into England's second largest city with a population of 95,000 by 1800.⁴⁹ Ultimately, Manchester's transformation was the result of a deregulating intervention by a part of the nobility and the rising business class which allowed skilled labourers like Watts to circumvent "old fashioned guild protectionism"⁵⁰ as well as the educational monopolies of medieval schools and universities, and ultimately become modern industrialists.

During the deregulation of the eighteenth century, labourers were then given the freedom to innovate that resulted in the exponential increasing of industrial production and an according decrease in the cost of production⁵¹. The example of England was followed in revolutionary and post-revolutionary France, where many professions (most notably medicine was deregulated⁵², and where scientific and technical education was opened to labour in the form of the technical schools polytechniques)⁵³. As noted by Aureli, it was at the most famous of these, the Ecole Polytechnique, that the architect/educator Durand, demanded that his future workforce students master modern engineering techniques via borrowing the fifteenth century technique of 'syntactical architecture'⁵⁴ – an architecture in which every element strictly abides by an overall logic of classification of building *genres*, as the move to deregulation would be taken up in Europe's low-countries and in some western German states.

As one would expect, the deregulation and liberalization of mass-production in the late eighteenth century had the effect of making those innovators such as Watt, who were able to capitalize on their innovations (i.e. the steam engine) very wealthy. In fact, they became so

⁴⁷ Durant, Will and Durant, Ariel. *Rousseau and Revolution: Volume XI in The Story of Civilization*. New York: Simon And Schuster, 1967. pp. 675-676. (Durant)

⁴⁸ Simkin, John. *Manchester*. Spartacus-Educational, August 2014, <http://spartacus-educational.com/ITmanchester.htm> (Simkin)

⁴⁹ Simkin

⁵⁰ Strong, Roy. *The Story of Britain: A People's History*. London: Pimlico, 1998. p. 331. (Strong)

⁵¹ Durant, 676

⁵² Ossola, Alexandra. "Revolutionary Medicine and the Medical Revolution," *Hamilton*.2010, URL <https://www.hamilton.edu/news/story/revolutionary-medicine-and-the-medical-revolution>

⁵³ Langins, Janis. "The Ecole Polytechnique and the French Revolution: Merit, Militarization and Mathematics," *LLULL*, Vol. 13, 1990. P. 94

⁵⁴ Aureli, Pier Vittorio. *The Thickness of the Façade*, in *El Croquis* N 166 Caruso St John. p. 25 (Aureli)

wealthy that their wealth started to rival that of the nobility that patronized their educations. When it came time to educate the next generation of labourer, the industrialist families that had benefited from deregulation were determined that it would be their children who had a competitive edge. Thus, the new industrialist or bourgeoisie lobbied for the reintroduction of the regulation to keep down labourers who might otherwise compete with their sons. In the nineteenth-century Britain, the tendency to re-regulation began with the formal parliamentary abolition of mandatory apprenticeships in 1814⁵⁵, followed closely by the early Factory Statutes, which extended workplace protections to women and children but not to working men.⁵⁶ These statutes allowed employers to employ children as permanently unskilled workers with no obligation to support apprenticeship training. Moreover, that there would be no moral outrage at their employing women and children, who worked for much lower wages than men. The securing of the female/child workforce for factory employment meant that working men, especially the skilled craftsmen who remained in the cottage industries would not be able to compete at their current wage rates.⁵⁷ For the craftsmen, this signaled the end of their way of life; and for adult men in the factories, it resulted in the roll back of their wages. Finally, by leaving men unprotected, the Factory Acts allowed owners to make men work long shifts, with no time to pursue schooling.⁵⁸ Such moves ensured that the workers of early nineteenth century England would not be able to repeat the transformation in social and economic status achieved by the likes of Watts. Another later and similar example is that of the nineteenth-century chemists.

Going hand from hand with the bourgeoisie's re-regulation of skilled labour, was the use of technological innovations designed to de-skill labour. For the most part, all nineteenth century automation of the physical labour had the desired effect of allowing weaker and unskilled workers, most notably women and children, to do jobs that were hitherto the exclusive province of skilled craftsmen.⁵⁹ The result was that skilled practices lost their value and disappeared; and also that workers could be more easily replaced so that their bargaining power, and thus their wages and working conditions deteriorated drastically. In effect, in nineteenth-century Western Europe, many laboring families passed from servility to feudal landlords to wage slavery under the modern

⁵⁵ Derry, T.K. "The Repeal of The Apprenticeship Clauses of the Statute of Apprentices" *The Economic History Review*, vol. a3, issue 1, 1931. p. 67

⁵⁶ Marshall, T.H. "Citizenship and Social Class," in *Citizenship and Social Class: and Other Essays by T.H. Marshall*. Cambridge: The University Press, 1950. p. 33 (Marshall)

⁵⁷ Marshall, 24

⁵⁸ Marshall, 25

⁵⁹ Marshall, 46

capitalist bourgeoisie. In the age of nineteenth-century reregulation, automation, advertised as the means to freedom from crushing physical labour, was experienced by workers as the inevitability of becoming a mere “appendage to the machinery”⁶⁰ of the new economy – usually under labor conditions that were unsafe and poorly paid.

The tendency, established in the nineteenth century, to the re-accreditation of skilled labour and the de-skilling of unaccredited labour has continued into the twentieth and twenty-first centuries. It is with the innovations in production by Henry Ford, however, that the re-regulation of industrial society undergoes another important sea-change.

Fordist Society

If, in the nineteenth century society, the unskilled labourer was reduced to being an appendage of the machine in a factory, then under Ford, in the early twentieth century, the unskilled worker became part of the machinery; and Ford, a skilled craftsman turned entrepreneur, exploited the innovation of the time-management specialist, Frederick W. Taylor to conflate the interests of the American public with the promotion of his private self-interest. It is under Ford the assembly line was instituted to automobile production in 1913.⁶¹ Under this system, workers were transformed from members of semi-skilled teams who build automobiles from scratch, one at a time, to mechanisms performing one specific action or motion contributing to the assembly of a single part. In effect, the worker assembled no complete automobile but, rather, he had a specific role mandated by the assembly line on which he worked in the assembly of the same part for hundreds, even thousands, of the same model of automobile. As a member of an assembly line, the worker had the same freedom of motion as did a cog in any part of the production that was fully automated. He was the machinery, not a machine operator.

⁶⁰ Marx, Karl and Engels, Friedrich. “*The Communist Manifesto*” (2004) edited and trans. by L. M. Findlay Broadview Press Ltd.: 2004. p. 68

⁶¹ Nye, David E. *America’s Assembly Line*. Cambridge, MA, London: MIT Press, 2013. p. 13 (Nye)



Fig. 1: Albert Kahn: interior photograph of Assembly Department, Detroit, 1917

How did Henry Ford rationalize this change to the worker? In common with nineteenth century rationalizations for reregulation, Ford argued on the basis of security. The worker would trade their freedom of motion in the workplace for a higher wage (in 1914, Ford paid his workers double the going industrial rate at 5 dollars per day).⁶² They would also trade freedom for a cleaner and safer workplace. Finally, workers would trade their freedom of motion for the new product their labour produced – the Ford Model T was assembly cheaply enough that workers could afford to own one on the high salary they made working for Ford motors. Freedom, for workers, became the freedom of motion during leisure time that the ownership of a car brings. Of course, what Ford Motors gave with one hand, it took away with another. Even though, the working shifts at the Ford assembly plants were so long that workers had little leisure time, but under the architecture of Albert Kahn, combined with a “Taylorized” production model, Ford had established a successful exploiting the “docility” of the workers as parts of the productive machinery (Fig. 1). A research that was thoroughly discussed by Francesco Marullo in his PhD

⁶² Nye, 30.

Dissertation on the Typical Plan, “The Daylight Factory as ‘first fruit’ of the new age: the rhetorics of light, order and hygiene against the threat of the working class discontent.”⁶³

Ford’s way became the American way, though it did not follow that American prosperity matched the increase witnessed in Ford’s prosperity. In effect, Ford became part of what I would term a “new hidden minority”. Posing as a member of the majority, invested in increasing the prosperity of the majority, Ford actually employed the ideas of what Mill would call the innovative minority to set himself up as part of a new governing minority – the populist capitalist who conflates his prosperity with that of the American public as a whole. Under the governance of the new or hidden managerial minority of a company, every innovation it offers must become the norm for the majority of Americans. In effect, the new minority regulates and so defines the majority of which it claims to be a part.

Thus, the Fordist society of the twentieth century saw an increase in the type of regulation pioneered in the nineteenth century. This increase in regulation also involved an increase in kinds of regulation. Not only was the accreditation of workers regulated, the manner in which work was conducted was regulated more thoroughly as well. Part of an assembly line, the worker no longer operated machines. Rather, in line with the time and motion studies of Frederick Winslow Taylor and factory designs of the architect, Albert Kahn (Fig. 1), the machine on the assembly line presented the worker with tasks, and the manner of presentation determined down to the minutest of the worker’s physical actions of how he would execute that task.

Ford’s innovation in production went beyond reducing his workers to servitude. In effect, Ford also transformed the automobile from a luxury for the rich into a necessity for the majority of urban and a sizable minority of rural Americans, with ramifications for road construction and the need for filling stations as part of a new national infrastructure to service the automobile. Off the job, life is also defined as participation in an America so regulated by the auto-industry that its urban and rural landscapes have been reshaped to meet its demands, creating the possibility of the “Taylorized” efficient home-maker suburban lifestyle such as Levittown.⁶⁴ Even the home, that supposed sanctuary from work, was to be transformed in accordance with Le Corbusier’s, vision

⁶³ Marullo, Francesco. *Typical Plan: The Architecture of Labor and the Space of Production*. 2014. TUDelft, PhD dissertation. Institutional Repository. <https://doi.org/10.4233/uuid:5b7faa1f-a2a7-46e2-974d-7b77c13836f3>

⁶⁴ Hayden, Dolores. *Grand Domestic Revolution*. Cambridge, MA: MIT Press, 1983. p. 275

of the “house as a living machine”⁶⁵. In Fordist society, to be an American was to become part of the machinery producing and consuming the products off the assembly lines of Ford INC. and a host of other corporations employing the same technologies of production. Of importance here is the internal operation and organizational structure of where Kahn’s own architectural practice with unprecedented groupings of sub-consultants consisting engineers and accounting departments, was mapping the internal organization structure of Ford factories.

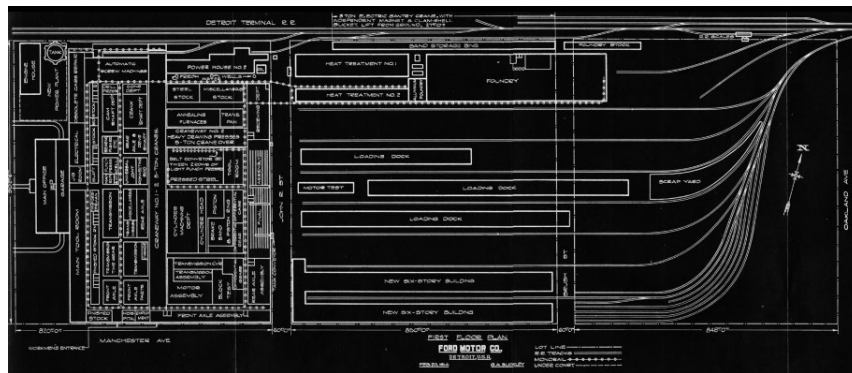


Fig. 2: Albert Kahn: Ford Highland Park Plant, General Layout, Detroit, 1914

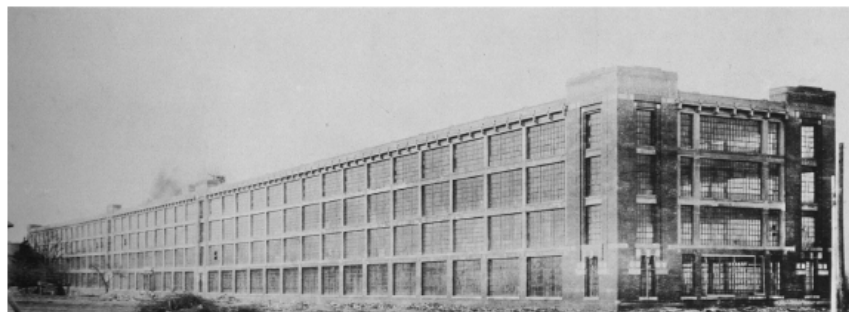


Fig. 3: Albert Kahn: Ford Highland Park Plant, Exterior Photograph, Detroit, 1910

The spatial apparatus that Albert Kahn established for the Ford production line optimized the efficiency of what Rem Koolhaas today would theorize as the “typical plan”, a plan (Fig. 2) stripped of all its qualities and reduced to calculated relations between discreet elements, in which anyone could simply be and perform himself⁶⁶. In 1914, the same year Le Corbusier published *Maison Dom-ino*, Kahn coincidentally realized the first daylight factories for Ford INC

⁶⁵ Jeanneret, Charles Edouard. *Vers une Architecture*, Paris: Edition Cres, 1923. p. 151

⁶⁶ Koolhaas, Rem, “Typical Plan” (1994), in S, M, L, XL. New York, Monacelli Press: 1995, p. 334–353.

in the United States to produce the Model T. It required a territorial distribution of discrete entities of both material and immaterial labour, assembled in conjunction with the whole, the production plant itself.

At the end of the process in wresting creative control from skilled manual labour by members of the creative minority, in turn became the leaders of a hidden or managerial minority. “Hidden” because they pretended, like Citizen Kane, to be a voice of the majority when, in fact, they were dictating to the majority what to do, think and say. Remember Ford, Albert Kahn and their ilk were creative, but they used their creativity and “orchestrated” that of others to control the majority and the creative minorities in the trades.

The nineteenth century saw the wresting of creative control from skilled craftsmen by way of an innovative minority educated in the modern scientific method and techniques of production. This innovative minority restructured the workplace so that skilled craftsmen could be replaced with unskilled workers. What ensued was the transformation of unskilled workers into a managed majority whose every action and activity, both on and off the job, was determined by the innovative minority, now transformed into the managerial class of nations. The ultimate control of the managed majority was made palatable by wage increases [and greater opportunities for consumption]. Ford doubled workers’ daily wages from \$2.50 to \$5.00, and the production of the Ford Model T allowed workers automobile ownership for the first time in history. What Ford gave with one hand, however, he took away with the other. The new dominance of the automobile as a mode of worker transportation started to squeeze out alternatives – horse-drawn buggies, public transportation. More and more, the automobile went from being a new transport opportunity to a working necessity. Still, Ford Inc. and the new companies functioning as Ford did were able to present themselves as progressive influences on a society working to extend prosperity to all its members, when in fact, they were creating a monopoly on creative control.

Post-Fordist Society

The innovations by Ford and other industrialists who created and embraced assembly line innovations created a new majority of workers capable of supplanting those elements of creative minorities (skilled craftsmen and workmen with the freedom to complete tasks in accordance with their own methods and procedures) whom the industrialism of the nineteenth century had not yet swept from the factories. Under the tyranny of this new majority, managed by Ford and other assembly line owners, creative minorities lost all control over the manner in which they worked and were forced to join the majority if they were to work at all. Thus, did Fordist society’s

regulation by the standardization of production procedures reserve freedom to innovate solely for the owners and managers of industry? From the perspective of Ford and other owners, this proscription on the freedom of workers to innovate was justified in the name of efficiency. For Ford, worker freedom led to inefficiency which constituted an unjustified drag on his company's profitability. As such, any worker freedom was too much freedom. The only solution was for Ford to monopolize creative control for himself. In so doing, Ford and "other captains of industry" became part of a hidden minority with the power to shape the majority's actions, desires and opinions.

Ford's proscription of worker freedom in the name of efficiency, however, would come back to haunt him. After all, Ford, himself was a member of the creative minority he suppressed. Educated as an engineer, Ford employed his advanced knowledge in that field to "re-engineer" manual labour within the modern workplace. But Ford extended his monopoly on creative control to fields beyond his expertise as well, especially in marketing his products (Ford is famous for saying, "Any customers can have a car painted any colour that he wants so long as it's black")⁶⁷. It was Ford's tendency to exercise control over fields outside his expertise, especially in marketing, which created the inefficiencies that would cause the younger generation of Ford's to gradually limit the power of the old man.

In Ford's stead, the younger Ford's turned the job of managing marketing over to professional marketers and investors who, in turn, standardized managerial procedurals so they would cohere with the new role taken by marketing in industrial operations. In effect, the new generation of Ford's and their contemporaries in other industries created a "post-Fordist" society which did for owners and managers what Ford had done for manual laborers: it reduced them to part of the managed majority.

Post Fordist Society: Its Post WWI Precursors

The shift to a post-Fordist society coincided with and complemented the desire by political, properties and managerial classes in modern states to redefine democracy as an adjunct of consumer markets. Traditionally, democracy was a revolutionary force encouraging the people's

⁶⁷ Ford, Henry in collaboration with Crowther, Samuel. *My Life and Work*. Garden City, NY: Doubleday, Page & Company 1923. p. 72

dissatisfaction with authoritarian governments which called on them to overthrow in favour of popular rule and then to defend against its enemies. The popular rule for which citizens were called on to fight was one in which all citizens enjoyed equal political rights. In the 1920s, however, it behooved members of established political elites to argue that the fight for democracy had been won in the Great War. As such, the goal of democracy should be changed to encourage the people's satisfaction with their victorious governments. In place of the pursuit of political rights and freedom, the people should be encouraged to pursue economic freedom as consumers of the material prosperity that their government's defense of free markets guaranteed. Under this "revised" notion of democracy, equality was to be realized in the ability even of individuals from the working classes to purchase the kind of consumer goods that previously had been preserved exclusively for the wealthy. Likewise, the old notion that, under a democracy, individuals should be free to make what they wanted of themselves through their work was replaced by the new idea that individuals should be free to define themselves by their purchases. As such, consumer consumption ceased to be promoted as simply serving the individual's needs. Now individuals were encouraged to think of consumption as a means of self-realization. As examined in Tom Wilkinson's *Brick and Mortals*, the post-war period in the Western societies saw an emergence of "advertisement and pop culture used to eroticize labour and consumption in the home"⁶⁸ in a perverted fulfilment of Ford.

The premise of the new democratic thinking was that what people want is not simply to be rich, but to be like the rich. And, to be like the rich was to be a trendsetter. Trend setting has been a badge of wealth since the early Renaissance, when overland trade to medieval Europe gave way in importance to trade by way of the new sea lanes. As argosies from China, India, the spice islands and the new world brought yearly shipments of new luxuries, either previously unknown or scarcely attainable even to Europe's princes, wealthy nobles and merchants made rich by the new trade adorned themselves and their homes with the newest fashions. In the process, wealth became a display to excite not only the envy but also the imagination of one's neighbours so that the wealthy of Europe now seemed to be what previously only the gods were thought to be: the embodiment of a blessed condition to which the rest of humanity could only aspire. In the 1920s, the development of mass advertising, which promoted all consumer goods as fashion accessories, seemed to promise all consumers the luxury of feeling that they could keep abreast

⁶⁸ See: Wilkinson, Tom. *"Bricks and Mortals: Ten Great Buildings and the People They Made "*. (London: Bloomsbury, 2014).

of the newest trends simply by buying those products most recently advertised. Ownership of the newest product introduced by advertisers allowed consumers to act as trend setters in their own right. For instance, as the first individuals in their “set” to wear the latest frock; the one whose eye for style allowed them to mix and match new fashions to the envy of all in original and imaginative ways.

The advent of consumer culture, then, was not simply in aid of people’s enjoyment of material wealth or the alleviation of misery that the consumption of material wealth was meant to serve. Consumer culture was also about the vicarious experience of celebrity status: the purchase of products promised the opportunity for consumers to experience feelings of identification with the celebrities that endorsed them. And, no one understood the selling power of consumer identification better than Eduard Bernays, the nephew of Sigmund Freud.

In his uncle’s insight that much of human behaviour is motivated by the unconscious mind, Bernays recognized the possibility and value of advertising based on the power of suggestion. The breakthrough technologies that would make advertising by suggestion possible were commercial home radio, photojournalism and the four reel (long playing) movie. They would provide the packaging for the products advertised, making a repeated emotional appeal to listeners, readers and viewers by associating the products with the satisfaction of deep seated desires – for sexual satisfaction, for social status and, most especially, for the personal fulfilment that comes of the simultaneous possession of absolute security and absolute freedom. To this end, radio advertisements became narratives associating products with lifestyles in which consumers deep seated desires would be realized. Newspapers and movies could also suggest like promotional narratives in photographic form through the staging of news events accompanied by photos of celebrities using the products to be advertised. The effect of celebrity endorsement was to create in consumers a Pavlovian response: in keeping with this response the advertisements suggested a direct association between the product advertised and participation in the lifestyle embodied by the celebrities that endorsed it. In essence, however, all the advertising methods advocated by Bernays aimed at creating this same Pavlovian response in viewers. From now on, every product advertised would be packaged as an adornment of the lifestyles of the rich and famous portrayed in the papers, on the radio and in the movies. And,

advertisements would, by turns manufacture desire and appeal to the fears of the populace in order to turn them into consumers.⁶⁹

For Ford and the other automotive producers, Bernays' strategies produced a sales bonanza. Product placements via media events and movies, jingles and slogans made ubiquitous by radio advertisements and billboards, and showroom displays in dealerships across America fixed the image of the car in the public imagination as an essential feature of the modern middle-class lifestyle. The result was that by 1932, one in five Americans owned a car – the highest percentage for any nation on Earth, and this was at the height of the great depression⁷⁰.

Bernays' goal was primarily to make advertising more effective; in essence, what F.W. Taylor did for industrial production, Bernays' did for commercial promotion. Other conservative thinkers, however, saw Bernays' methods as serving the broader political purpose described at the beginning of this section – the de-politicizing of a democratic people. For instance, the conservative journalist, Walter Lippman argued that, since a democratic government was securely in place in America, the politicization of the masses in aid of a fight against tyranny was no longer necessary to the establishment or defense of democracy. If the masses were being politicized, then it must have been for anti-democratic ends: the aims of a communist's agitators, for instance. For Lippman then, what government now owed its people was good administration as well as the opportunity to fully pursue and explore the benefits of a capitalist society which were to be popularized by advertising. Under this new post-Fordist regime, the democratic struggle was to be transformed from that for political freedom by way of political action into the struggle for personal freedom by way of the economic consumption made possible by economic prosperity. In Bernays' work, Lippman saw the mechanism (advertising) by which the people's sense of their democratic mission would be transformed⁷¹.

The need for pacifying a populace radicalized by the catastrophic trauma of the Great War was recognized also by leading conservative politicians such as President Warren Harding and his Secretary of State, Herbert Hoover. Harding's coining of the term "normalcy" and his call for

⁶⁹ <http://theconversation.com/the-manipulation-of-the-american-mind-edward-bernays-and-the-birth-of-public-relations-44393>

⁷⁰ Evans, Richard J. *The Third Reich in Power*. New York: Penguin Books, 2005, p. 325

⁷¹ Greene, Frederick. "Working in the World of Propaganda: Creel, Lippmann & Bernays". Found in <http://www.movietrailers101.com/working-in-the-world-of-propaganda-creel-lippmann-bernays/>

American society to “return to normalcy”⁷² in the post-war period implied a concern that Americans, both as individuals and as a polity, should retreat from their calamitous involvement in international and class politics brought on by America’s participation in the war. Americans, Harding thought, should return to the business of earning a living and content themselves with life in a world run by those who knew business best: the captains of industry. In aid of industry’s leaders, Hoover acting first under the Harding-Coolidge administration, as President in his own right promised low taxes and limited government management of social ills almost exclusively to the task of coordinating and promoting charitable efforts by the private sector. To this effort, however, Hoover brought the service of experts from all scholarly fields. If government was to coordinate efforts at building a great society its coordination would be informed by the best advice. So armed, Hoover used his position in government as a bully pulpit from which to reassure the populace that, with private industry in charge of America, they were in good hands. Of course, Bernays would see that the hands of private industry were aided in their management of the populace by clever advertising aimed at reducing it to passivity.

Commonly known to all of the above-mentioned conservative thinkers was the idea that the populace should be managed from above and that management should largely be in the hands of private industry; also that the populace should be promised the kind of prosperity enjoyed by a new class of managers and immaterial workers to whom Alfred Chandler coined the term “The Visible Hand”⁷³ governing their society; and that the illusion should be created that their consumption of consumer goods would allow them to participate in this prosperity. What the popular would actually receive was an adulterated version of what they wanted: enough to make the illusion of prosperity seem real; but not enough to eat into corporate profit margins or challenge the corporate monopoly on creative control of production in the economy and government.

As we have seen, for the Ford family, post-Fordist society’s opening of the middle-class consumer culture to members of the working-class meant that the car, like so many other consumer products, had become a fashion statement to surface a new kind of value, that of “aesthetic value”, which is considered by Haug in the *Critique of commodity aesthetics* to exceed both exchange and use value. The unique attribute of aesthetic value is in its autonomy to

⁷² History.com Editors. “Warren G. Harding”. 2009. in <https://www.history.com/topics/us-presidents/warren-g-harding>

⁷³ Chandler, Alfred D. *The Visible Hand: The Managerial Revolution in American Business*. Cambridge, MA: Harvard University Press, 1997.

generate more and more commodities that serve nothing but the beautification of the world and the hedonistic life. Haug made the case in point with the example that the spatial impact of the open-plan office landscape changes the appearances of how female employees dress.⁷⁴

Each year, starting with the front grill, car models had to change to become more ornate. Likewise, a wide range of colours and changing chassies had to become available at prices workers could afford. In post-Fordist society, it would not do for workers simply to own a well-running easily-maintained automobile. As trend setting consumers, living the same American dream as their wealthier counterparts in the middle-classes, workers had to have the opportunity to keep up with the latest in car fashions. By the late 1920s, the purchase of a new car every two or three years was becoming “de rigueur” even for urban workers on fairly modest budgets. Since wages were not keeping up with the new purchasing opportunities, credit was made to be much easier for workers to obtain. The effect was that it was increasingly common for a worker in 1928 to have a new car, as well as an apartment sporting the latest in electrical household appliances and all of it was bought on time.

What workers were buying actually, then, were facades, both literally and figuratively, as their purchases gave them the outward appearance of the middle-class affluence. But, this appearance was belied by the actual quality of the products purchased and the terms of their purchase, both of which were indicative of the economic precariousness that had always been the condition of the working class. The car that the American worker purchased in 1929 was substantively the same as the one purchased in 1921. Because both had been purchased on installment plans,⁷⁵ they saddled the worker to a regime of monthly payments without end. In the end, the worker was what he had always been, a renter dressed in shoddy. Only the appearance of things had changed.

It was to hide the façade-like nature of their prosperity from workers that the mass advertising of Bernays had to become so ubiquitous. What workers purchased on the assurance from advertisers that they were getting the newest thing was actually cheaply made (and cheap in quality) versions of what wealthier consumers had been able to get for some time. Also, from

⁷⁴ Haug, Wolfgang Fritz. *Critique of commodity aesthetics: Appearance, Sexuality, and Advertising in Capitalist Society*. Cambridge: Polity Press, 1971. p 164

⁷⁵ Kennedy, David M. *Freedom From Fear: The American People in Depression and War, 1929-1945*. New York, Oxford: Oxford University Press, 1999. p. 42

whom were workers encouraged to borrow that they might give the appearance of having what the properties classes had? The Ford worker who bought a car with a loan from a Ford dealership so that he could drive to work at a Ford plant was no more a property owner than had been his parents. Now, however, his rents – multiplied in the form of consumer loan payments – were subsidizing the operations of his employer. During the Fordist era, at least workers had received a real increase in wages, as well as the acquisition of goods never before available to them. In the post-Fordist world, inflation and loan payments ate up wage gains. The consumer purchases simply replaced what workers already had, though under the guise of offering what was new. Thus, post-Fordist society brought to a halt the real material progress that workers of the Fordist era had obtained by sacrificing their creative control over production.

If post-Fordist society represented a loss for workers, it did also for owner-producers such as Henry Ford, himself. For men of his type, however, the loss was of the creative control over production that he had launched the revolution in automated production to win. With the advent of post-Fordist society, engineering decisions became increasingly less important in terms of determining what would be produced and sold by Ford in any given year. More and more, such decisions became the province of marketers following the strategies of Bernays. Design decisions came to refer to the car's appearance rather than the way in which the car's inner workings functioned.

In the 1890s, Ford rushed to get his version of the gas-powered piston engine into his cars and onto the market. In order that he could do this even more quickly, in 1915, Ford installed assembly lines in his plant based on the principles of the time management guru F. W. Taylor. That's how money was made in the Fordist era. Not so for Ford's children, however. For them, the rush to production was driven, not by the desire to introduce new technologies so much as by the need for cars with a new look. In fact, under this post-Fordist regime, the rollout of new developments in automobile technology was often delayed. Better to let someone else do it first and there went the corporate thinking: "See if they can succeed and the new gadget is a safe bet. Wait until it can be made more cheaply, steal the process and undercut the competitor."

What we saw in the 1920s, then, was the development prescient of a post-Fordist facade that cut both ways. The workers bought the facade of access to an ever-increasing middle-class prosperity. Ford Ltd., not Henry Ford, sold them the facade of the new. Creative control effectively passed out of the old man's hands and into those of the professional marketers hired by his children, whose expertise was not in automotive engineering, but rather in managing changes in market style in order to maintain control of the company's market share. As decisions governing

production became about managing a look, the role of the administrative generalist capable of running any and all types of industry came to force. His, seldom her, ability to manipulate the look of things in aid of insuring sales made the new administrator essential to guaranteeing the investments of shareholders in all companies across all industries. Thus, as cars, chewing gum, chocolate sweets, cigarettes, in fact, as all products came to be sold in the same manner, so too did the companies that sold them come to be run in the same manner.

What was required of the new managers was a touch for inducting the uneducated masses into the world of fashion. Working class consumers were uneducated about fashion trends because they were new to the consumption of commercial culture and certainly had not been trained to follow its fads as had middle-class consumers over the past century. Like all uneducated consumers, those of the working-class tended to alternate between a conservative longing for the familiar and boredom with what they were currently being sold. Thus, the new marketers became adept at catering to both impulses: recycling the forgotten while adorning it with just enough of something new that consumers would not recognize the extent to which they had seen it all before. Under Bernays' guidance, managers presented every product as having a very short shelf-life: in a short time, it was suggested, any product would lose its sheen as the latest example of modern technological progress. The signal that a product had outlived its attraction was advertising introducing yet a newer model of the same thing. In effect, the advertising invoked in consumers the conditioned reflex to buy what was advertised as new.

By promoting the virtues of the new and the innovative, companies across the economy ended up creating a society of consumers sporting an essentially homogeneous look: the result of everyone rushing to purchase the same products at the same time. But this meant that the new advertising also dissolved the distinction between use and consumption. From now on, all products would be purchased as things to be consumed, so that the concern with buying replacements would become ever present. Everything would always be changing; everybody would always look the same. That there seem to be different looks in post-Fordist society is due to the illusion of choice manufactured by marketers exploiting all the competitive divisions created by age-old prejudices and conflicts in order to maintain the allegiance of consumers from different demographics (as in, the kids will buy it because their parents will hate it). All these choices, however, amount to the same promise on which none of the products can deliver: that is

participation in the imagined excitement and vitality possessed by the very rich as portrayed in popular culture; life as an adventure undisturbed by the drudgery which is the worker's lot.⁷⁶

As we have just seen, however, the management structures of post-Fordist companies became homogeneous, as well. Just as workers lost creative control over production in Fordist society, so did the owner/producers of Fordist times lose it to the professional managers of post-Fordist society. In post-Fordist society, the "visible hand" completed its separation from and complete control over society's creative and innovative minority.

Since World War II

Since the end of the Second World War, new developments in technology have been crucial in the expansion of the post-Fordist facade. Now the facade seems so extensive and seamless that it is experienced as a second nature – something we are in the habit of responding to as reality. A primary effect of the facade's expansion is the extension of the illusion of accessibility to sections of the population hitherto excluded from participation in the social mainstream. Buttressing of this illusion is the extent to which people have been sold on the idea of conformity and the need for evermore extensive regulations to guarantee conformity.

With the end of the second great war, the re-pacification of populations politicized yet again by their involvement in military conflict required of post-Fordist society that it appeared to make good on the prewar promise of universal access to prosperity put on hold during the war years. To this end, the welfare state was popularized as was unparalleled state involvement in the peacetime business world, with governments running beyond the Keynesian "compensatory fiscal policy" deficits designed to prime-pump⁷⁷ and so revive slumping economies. But even government activism was deemed insufficient to placate the expectant masses. The fashion and advertising industries also were harnessed to ensure that everyone appeared to be equally prosperous. For the first time, workers' clothing became fashion accessories as blue jeans and t-

⁷⁶ Horkheimer, Max and Adorno, Theodor W. *Dialectic of Enlightenment: Philosophical Fragments*; edited by Gunzelin Schmid Noerr; trans. by Edmund Jephcott. Stanford, CA: Stanford University Press, 2002. p. 122

⁷⁷ Murad, Anatol. *What Keynes Means: A Critical Clarification of the Economic Theories of John Maynard Keynes*. New Haven, Conn.: College & University Press, 1964. p. 182

shirts, sport shirts, and canvas shoes were advertised as the new uniform of North America's younger generation.⁷⁸

Neither did this innovation turn out to be a passing fad. Today, innovations on the same working-class styles, especially blue jeans, are sold to all classes so that they are no longer automatic indicators of economic status. Also, the development of generations of new synthetic materials have allowed for the production of clothing labels that mimic the look and feel of more expensive fashions but at a much lower price. The effect has been that dress design tends increasingly to mask rather than accentuate class differences: no doubt, this is why designer labels have acquired such importance in contemporary fashion. Of course, since the war, the post-Fordist fascination with celebrity figures (in the movies, music, entertainment and politics) and the addiction to celebrity endorsements has continued to be fostered. But each new celebrity fashion statement simply creates new opportunities for the marketing of cheap knock offs.⁷⁹

The illusion of "prosperity shared equally" extends even to what we eat. So that everyone, not just the elite, can be seen to have fresh fruit and vegetables all year around, and hybrids with a long shelf life have been developed. Sadly, the lengthened shelf-life comes at the cost of almost anything by way of distinct texture or flavour. As a result, everyone can have fresh produce, so long as all produce is without taste. In this new post-Fordist age of equality, the fact that most everything purchased is a cheap knock off of something better complements the original post-Fordist notion that no style should have a long shelf life. Now, products are purchased to be replaced not simply because they are soon to be out of style but because they wear out so quickly. And when they do, it is cheaper to replace them than to fix them.

Today, the habit of upgrading has become so ingrained that few consumers wait for products to wear out before replacing them. This trend is especially evident in the purchase of electronic entertainment systems, which, since their introduction into every North American home, has led to the homogenizing of leisure activity that spans all classes. Since the advent of television for the home market in the late 1940s, electronic entertainment has promised viewers that "the world will be brought into their own living-rooms"⁸⁰ (eventually, into every room in the

⁷⁸ Miller, Daniel and Woodward, Sophie. *Blue Jeans: The Art of the Ordinary*. Berkeley and Los Angeles, California: University of California Press, 2012. p. 182

⁷⁹ Jordan, Laura A. "Is There Anything Wrong With Knock-Off Fashion?", 2017. in <https://graziadaily.co.uk/fashion/news/knock-fashion-debate-gucci-forever-21/>

⁸⁰ Curtis, Adam. *The Century of the Self*. Rockford, Ill.: BN Pub., 2006.

house) with an increasingly realist immediacy. Later, in the 1990s, the commercializing of the personal computer by way of the internet has seemed to realize McLuhan's promise of a new human being whose electronically extended nervous system allowed him/her to experience a virtual presence instantly and everywhere⁸¹. Both promises are facades covering the simultaneous isolation and loss of privacy that comes of living through a computer screen. Now that everyone has a smartphone, everyone is getting into the habit of sending and receiving messages that are indistinguishable from anything that a computer could produce. It is as if the "smart" technologies of post-Fordist society have guaranteed that computers will be able to pass the Turing test⁸² by making humans unintelligent enough for computers to imitate.

This electronic dumbing down of consumers by post-Fordist society guarantees a continued demand by mass audiences for entertainment that is simply adjuncts to the fashion and accessory industries. Thus, casts in every mainstream movie will continue to feature six models for every trained actor (who, in any case, is their only to give what is essentially a fashion show the obligatory patina of dramatic interest). Likewise, those mainstays of network broadcasting, professional sports and, more recently, reality television, go on simply to dispense with the need for talent by having their teams and casts behave as if they are part of a carnival entertaining show. In this respect, televised sports and reality television are like the ubiquitous celebrity magazines in supermarkets: they cater to the negligible aggression of minds that is short of imaginative, emotional and creative substance. That both media prosper is indicative of how uniformly and successfully the cultural equivalent of shortage rations have been sold as quality entertainment across the whole of post-Fordist society.

If post-Fordist society hides its cultural penury in an abundance of entertainment distraction, then also does it '*mask*' the increasing alienation of workers with important sounding titles. Especially in the retail and fast food sectors, workers bear the titles of sales associate, corporate team member, or floor manager as euphemistic covers for the reality that they have been given more responsibility, less authority and the same minimum wage working conditions that they had before. In office work settings, administrative assistants now require a college diploma or university degree to do the same job for which office clerks and secretaries of old

⁸¹ McLuhan, Marshal. *Understanding Media: The Extensions of Man*. New York, London, Sydney, Toronto: McGraw-Hill Book Company, 1964. p. 43

⁸² Turing, Allan M. Computing Machinery and Intelligence, in *Mind* 59, 1950. p. 433-60

required a high school education. Thus, the university education, still seen by students as the means of social and career advancement, has become just another financial burden. So expensive that they must buy it on credit, many graduates from a university education spend their best working years paying off their student loans. In the end, the degree becomes like so many other consumer purchases: it promises workers the trappings of middle-class affluence but ensures only that workers will incorrectly identify themselves as part of the middle-class, especially when employment opportunities are on contract basis and temporary workers. When those who cannot afford even the cheap knock-offs which post-Fordist society produces, they will be precarious⁸³ and ultimately deployable. When everyone looks the same, how can they be recognized? As non-consumers, such individuals are absent from the idealized world with which post-Fordist consumer culture surrounds us. Even if they beg on the city streets, therefore, they will be beneath our notice; or, if we choose to notice them, they will become the opportunity for another consumer purchase: slipping them a coin or two, we purchase a “feel good” moment without having to acknowledge any further responsibility to them.

Since the end of the Second World War, the post-Fordist tendency has then been aiming towards a technology-driven conformity which gives the appearance of a society in which all commercial and cultural goods are available to everyone. The egalitarianism of this post-Fordist appearance gives rise to the sentiment that no one should be excluded from commercial and cultural consumption. This is the sentiment that gave rise to the civil rights movement and the integration of what had been segregated cultural institutions serving Afro-Americans and Canadians into cultural institutions of the mainstream. Subsequently, the move to integration saw an increasing move of women into institutions and consumer markets previously opened only to men. As well, it saw the rise of major consumer markets catering to youth. Of late, this tendency has given the appearance of opening shop, in the name of accessibility, such as workplace and institutional doors to all minorities, immigrants, members of the LGBTQ communities and those who are especially able. As a result, freedom, as in liberation from oppression promised by

⁸³ As noted by Marullo, Francesco. *Typical Plan: The Architecture of Labor and the Space of Production*. 2014. TUDelft, PhD dissertation. p. 375-376

In 1918, the term “prekär” was defined by Max Weber, in his lecture *Science as a Vocation*, as the particular condition of the young German scholars wishing to undertake an academic career. To him, this was a status of uncertainty for the scholars on which the German universities: can condemned researchers to unpaid short-term contracts work, meanwhile ensured an robust apparatus of continuously new research development with the turnover rates of the scholars. See: Gerth, H.H. and Mills, C. Wright in Max Weber, *Essays in Sociology*, (New York: Oxford University Press, 1946), pp. 129-156.

democracies, has come to be redefined as a universal right of access to commercial and cultural goods.

Historically, the redefinition of freedom as accessibility has made its impact felt through the courts. As different groups brought lawsuits against institutions on the charge that they had violated their right of access, courts were increasingly called on to remedy exclusionary practices by mandating inclusive ones. Once practices became mandated as official remedies, however, there was a tendency by institutions to see any independent attempt to develop alternative remedies as risky – as leaving institutions open to charges of dereliction of duty. Since nothing spreads like fear, this tendency to risk aversion has spread across the board to practices which have nothing to do with making institutions more accessible to minorities. For example, in the building industry, the right of everyone to have access to safe dwellings and workplaces requires officially that the construction of any built projects must be comprised of many compartmentalized layers and elements - i.e. the “50 Divisions” of construction information as defined by the Construction Specifications Institute, each of which serves a distinct function and which must be constructed by a tradesman certified to construct that particular component.⁸⁴ While laudable in many ways, the effect of this requirement is that no members of the building trades are likely to be expert at the building of an entire project, therefore, none of its members will be in a position to freely innovate beyond the boundaries set out by the institute without taking on the risks and liabilities which can ultimately jeopardize ownership of the certificate of professional practice. And even if they were, the industry is geared to compliance with the official building code, so that innovative practices would therefore be more expensive when it comes to professional liability. By necessity, then, all the tradesmen and professionals must do their part in a process which is ever the same. They will build projects that are constructed to be safe, but with the built-in obsolescence which ensures the mechanism of production and consumption.

Under the guise of accessibility, creative control is then effectively wrested from those members of the creative minority who traditionally belonged to the professional and managerial classes and taken over by the new “visible hand” specializing in marketing, venture finance and administration. Under the management of this new minority, everyone is promised free access to a secure and prosperous world of the middle-class whose standard of living rivals that of the kings

⁸⁴ See: Miller, Kevin and S Newitt, Jay. MasterFormat 2004 Impact on Construction Organizations. 2019.

of old. What everyone gets is a homogenous facade reproduced to hide the differences in wealth and power which persist in post-Fordist society, as well as the great cost involved in maintaining those differences. The hidden truth of post-Fordist society is the determination of the visible hand to limit everyone else's freedom – especially their creative freedom – that their own freedom should be guaranteed. Historically, architecture has been at the forefront in the development of facades as “representation” since Leon Battista Alberti of the Renaissance. An understanding of architecture's role in the development of the post-Fordist facade is essential to understand whether architecture can have a hand in its undoing – and, if it can, then how?

3. ARCHITECTURE AND FAÇADE, A HISTORY

“Everything else remained hidden. While a great burst of movement sweeps across the façade, no movement is perceptible within the building. Thus there is almost no correspondence between the interior and the movement in the exterior – another factor that manifests this architecture’s contrast with Gothic.”⁸⁵

- Alois Riegl

Since Alberti, architectural facades acted as “representation”. The facade exterior in which the building was wrapped promoted the illusion that its package contained a structure more costly, grand, commodious, and novel than was actually the case. Thus, it advertised to the world that its owner(s) lived in an enviable magnificence which they did not actually possess. Predictably, post-Fordist society would use building facades to advertise a modern democratization of affluence which has not actually been achieved. As we saw in previous chapters, however, post-Fordist society has also applied the architectural concept of the promotional facade to the exterior appearance of its non-architectural consumer products and then, electronically, to the staged settings in which its consumer products appear. The end product of this post-Fordist innovation is that now, every commodity promotion (by advertising or popular culture more broadly defined) entails the creation of a facade, which is to say, reality itself has become wrapped in the facade of a virtual reality from which, seemingly, no one could escape, even if they wanted to.

Still, if the promotional facade has transcended its architectural employ, it is in architecture that the technique of fashioning promotional facades has its roots. It is to architecture, then, that we must look to answer the following questions. Were facades ever art-worthy, or have they all been products of ideology through and through? Could facades have about them an emancipatory impulse, however latent, which could free architecture from post-Fordist ideology; or are they simply part and parcel of the post-Fordist illusion? The answers are to be found in the history of Western architecture’s affairs with the facade.

Ancient Origins

⁸⁵ Riegl, Alois. *Historical Grammar of the Visual Arts*, trans. Jacqueline E. Jung. New York: Zone Books, 2004, p. 170

In *The Twelve Caesars*, Suetonius quotes Caesar Augustus as proclaiming that he transformed Rome, as the city he “found it of brick, but left it of marble”.⁸⁶ Augustus’s boast inferred the transformation of Rome into a city attaining the glories of classical Greek architecture, where the dominant structure of public building was the row of marble columns (the stoa) supporting the marble lintels on which the roof was seated. Of course, no such transformation had occurred: the number of authentically column supported buildings constructed during Augustus’ reign was very small; and, far from dominating the Roman cityscape, they were obscured by surrounding buildings. In Rome, buildings constructed of cement or brick were covered with a laminate of marble stucco. In truth, Rome’s architectural tendencies were away from classical Greek tendencies towards the use of masonry in walls and tiers of arches towering to heights beyond impossible to achieve using Greek methods; a result of a fundamental difference between the ethos of the two cultures is a “transformation from the haptic to the optic realm”⁸⁷. For the Greek, the word *techne*, connotes technology – the art of making that fundamental to the praxis involved in cultural production; an understanding present in the Vitruvian triad of *firmitas*, *venustas* and *utilitas*⁸⁸. Still, the Roman use of *wall* architectural was of a piece with their subsequent use in the renaissance and modern west façade. That is, the Roman architectonic implication of *techne* was imbued with the values of culture where “representation” or resemblance was a formative theme in the renaissance architectural movement of façade, this formal development was observed and described by the art historian Alois Riegl as the “subjective planarity”,⁸⁹ a concept which will be further explored in the following sections. Thus, the Roman wall was a way of giving buildings the appearance of a level of impression and cultural sophistication to which individual owners and cities aspired, even if they could not afford its substance. In Western architecture, the importance of the façade conflation into the wall would be resurfaced with the Roman revival by Filippo Brunelleschi and theorized by Leon Battista Alberti in the early Italian renaissance.

Filippo Brunelleschi

⁸⁶ Suetonius. *The Twelve Caesars*, trans. Alexander Thomson, edited by T. Forester. New York: The Floating Press, 2009, p. 146.

⁸⁷ Hartoonian, Gevork. *Mies: The Window Framed in Fabrications: The Journal of the Society of Architectural Historians*, Australia and New Zealand 18, no. 2 (December 2008), p. 30.

⁸⁸ Hartoonian, Gevork. *Crisis of the Object: The architecture of theatricality*. New York: Routledge, 2006, p. 10.

⁸⁹ Hartoonian, Gevork. *Mies: The Window Framed in Fabrications: The Journal of the Society of Architectural Historians*, Australia and New Zealand 18, no. 2 (December 2008), p. 30.

It was Brunelleschi who introduced the columns of Greco-Roman architecture to that of the Renaissance. His use of advances in geometry and the accurate representation of perspective in which all parallel lines in a design tended towards a single vanishing point allowed Brunelleschi to design buildings whose simplicity of a “modularity in which singular ornamental elements are used to visually confirm their relationship with each other and with the entire system”,⁹⁰ showcased the perfection of their right angles while allowing them also to serve as harmonious backdrops for columned facades. This organization of the loggia in “the ideal of pure circles, squares, and cubes to determined the proportions of the arcades across the front”⁹¹ allowed Brunelleschi to set the columns at regular intervals, with all pairs of columns supporting arches of the same width and height, which opened on sheltered spaces of equal depth. As Pier Vittorio Aureli observed in the L’Ospedale Degli Innocenti, Brunelleschi employed the standardized decorative columns and arches to exhibit the loggia that faces the plaza to establish visual syntax that “can be expand ad infinitum”.⁹² The effect was that the front of the loggia appeared to have been ordered into a succession of archways in accordance with a regular rhythmic progression. This spatializing of rhythmic regularity was emphasized when viewers, standing beside but facing any one of the columns, would see that it perfectly concealed the row of columns behind it so that, from the viewer’s vantage point, the column was indistinguishable from the end of a solid wall. Just as all the rhythmic devices in a musical composition are seen to resolve into one song or piece as it comes to an end, so does the rhythmic progression of arches coalesce into a single and seemingly solid structure the closer a viewer gets to it.

By way of its geometric organizational grid, the loggia’s columns and arches then appear to be the most dynamic and dominant supports in the structure of the entire building; and by contrast, the walls of the hospital onto which the loggia fronts are plain at perfect rectangle. In this, Brunelleschi’s columns and arches seemed to serve much the same function as the pillars in many Romanesque cathedrals which stood out as their buildings’ most interesting and noteworthy supports. What Brunelleschi achieved, with the L’Ospedale Degli Innocenti, however, was a clever illusion created by the architect. His columns and arches allowed him, the architect “to control the building process by reducing the role of the builders to the execution of a predefined

⁹⁰ Aureli, 25

⁹¹ Roth, Leland M. *Understanding Architecture: Its Elements, History, and Meaning*. Philadelphia, PA: Westview Press, 2007, p. 362.

⁹² Aureli, 25

scheme”.⁹³ They were only frontal supports for the loggia and the back of which was supported by its attachment to the hospital wall. As a result, Brunelleschi’s columns were able to emulate the visual effect of being powerful supports for a grand structure, as were the pillars of a Romanesque cathedral, but since, in actual fact, they carried much less weight, they could give this appearance at a much lower cost.

As his hospital design illustrated, the inspiration Brunelleschi drew from the newest discoveries in geometry and the study of the Roman ruins would allow him to develop facades capable of a legible grand architectural appearance reminiscent of classical glories. These facades could be erected in a fraction of the time and for a fraction of the cost required for the great constructions of medieval Europe. Neither were his constructions so topography or material dependent as their medieval antecedents.

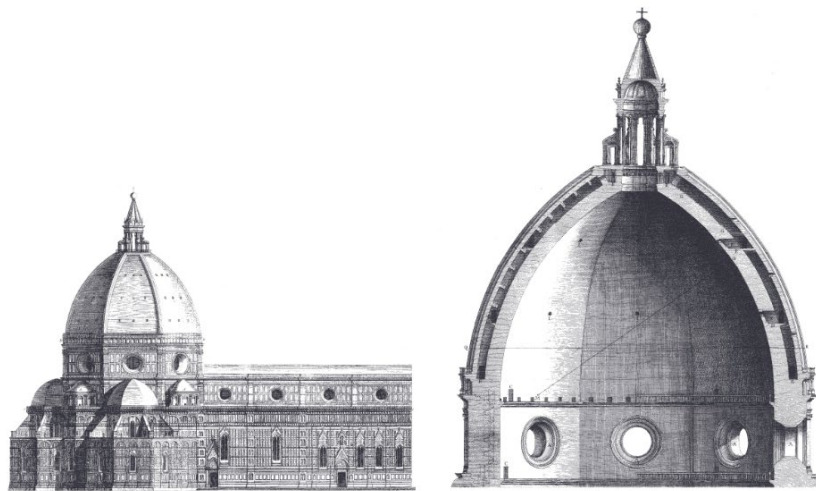


Fig. 4: Filippo Brunelleschi: Duomo, Florence, 1420

When Brunelleschi built a great cathedral structure – his dome of Santa Maria del Fiore in Florence (Fig. 4) – his mastery of depth measurement, geometry, materials and Roman methods learned from Vitruvius allowed Brunelleschi to create a vault with dimensions greater even than the Pantheon’s on which his work was based. Brunelleschi’s organization of vertical supports for the dome into the shape of converging longitudinal lines on a hemisphere allowed him to construct his dome without the use of buttresses. As result, once Brunelleschi’s supports had been covered in overlapping herringbone stone, his dome took on the appearance of a self-supporting solid structure. Thus, his dome successfully mimicked the look of the Pantheon dome which was

⁹³ Aureli, 25

constructed entirely of unreinforced concrete but, as his was larger, seemed to do so in grander style. Also, Brunelleschi's dome allowed for the inclusion of a window at the top of the vault augmenting the windows ringing the support walls beneath the dome in their illumination of an accurate portrait of the ascending rings of heaven painted on the dome ceiling. The effect was to make the domed-space seem larger even than it actually was. In a sense, Brunelleschi's dome was yet another clever facade. It had only the appearance of solid stone, not the substance – and not the unreinforced weight. Thus, his dome could extend to dimensions that were impossible for an unreinforced concrete or stone structure to reach. For all that his work was a facade, however, it was clearly one over which Brunelleschi had creative, that is, artistic control. Brunelleschi won the competition to build a dome that no one else could build; but he was never a recognized architect. But as a gold smith, Brunelleschi was a talented manipulator of instruments and materials, using the newest discoveries in mathematics and previously lost Roman methods to fashion gold adornments so that they seemed as integral parts of the doors and furniture to which they were attached. In this respect, Brunelleschi was a very early version of what we have seen to be a pre-Fordist innovator in the manner of James Watt, using modern discoveries and techniques to open traditional professions to talented outsiders.

Leon Battista Alberti

"...And it is no trifle that visitors at every step meet yet another façade, or that the entrance to and view from every house should face directly onto the street"⁹⁴

What Brunelleschi brought to the great religious buildings of the Renaissance, Alberti extended, though in less expensive form, to the houses of the Renaissance nobility and bourgeoisie. Central to Alberti's proposition on architecture is the architectural drawing itself, as it is the first sight of form, conceptualized in the mind then expressed in drawings and that the building is an analogue of the drawing.

⁹⁴ Alberti, Leon Battista. *On The Art of Building in Ten Books*, trans. Joseph Rykwert, Neil Leach and Robert Tavernor, 4th edition. Cambridge: The MIT Press, 1988, p. 106

*"It is quite possible to project whole forms in the mind without any recourse to the material, by designating and determining a fixed orientation and conjunction for the various lines and angles. Since that is the case, let lineaments to be the precise and correct outline, conceived in the mind, made up of lines and angles, and perfected in the learned intellect and imagination."*⁹⁵

⁹⁵ Alberti, Leon Battista. *On The Art of Building in Ten Books*, trans. Joseph Rykwert, Neil Leach and Robert Tavernor, 4th edition. Cambridge: The MIT Press, 1988, p. 7



Fig. 5: Leon Battista Alberti: Palazzo Rucellai, Florence. c. 1453

Thus, the resurrection of façades as ornament was Alberti's attempt to conflate the tropes of Greek classical architecture ordinance – the idea of orders in the wall, the column, and the entablature – into the Renaissance's "*wall architecture*" to link architecture with politics and

“morality” of the city.⁹⁶ To do so, Alberti had to strategically dissociate the rounded column, which he considered as *ornament par excellence*, from the tectonic of Greek tropes and adapted to the flat “wall architecture”⁹⁷ in the form of the pilaster – the flattened relief of a column added on to a masonry wall. As first suggested by Rudolf Wittkover in *Architectural Principles in the Age of Humanism*, the transition from column to pilaster on the façade of Palazzo Rucellai (Fig. 5) is a case in point. The pilaster gave the great houses of Alberti’s Florence the appearance of structures supported by grand columns and lintels like those that held up the temples of Greek antiquity. Large second floor windows placed at regular intervals around the town house or villa gave them the kind of rhythmic “part and whole” effect realized by Brunelleschi’s Ospedale degli Innocenti loggia. As well, Alberti’s addition of classical facades to Italian street fronts and housing surrounding city squares gave secular buildings on the cityscape a new appearance of confidence. No longer did the burgers of Florence and other Italian cities hide their houses behind windowless masonry walls whose plainness was broken only by the presence of doorways made small and obscure for security reasons. But their points of entry became advertised and surrounded as if they were by the architectural symbols of classical wealth and strength. The façade then *represented* a sense of power, born of great wealth, which transcended the need for locked doors and forbidding walls. Of course, the effect was illusory. The front of the house remained as impenetrable as ever (the big regularly spaced windows graced only the upper floors and were therefore safely out of reach).

Moreover, Alberti’s facade was eminently affordable to budgets more modest than that of a Caesar, even if it was designed to convey the same status on its houses inhabitants. Finally, the pilasters were easily positioned on the house wall and could therefore be used to produce an accurate imitation, not only of Greek columns but also of their organization in a classical stoa. The use of Alberti’s facade allowed for the design of the Medici’s villa outside of Florence and so extended the look of the Roman nobility’s villas to the country houses used by wealthy renaissance bankers. Like Brunelleschi, Alberti’s creative genius was inspired by knowledge of the Roman architecture and aided by his use of new materials. In bringing the illusion of Roman city life to Renaissance homes, Alberti did what none before him was able to do. However, such disbandment of corporeality in the wall for the façade raised skepticism among nineteenth-century

⁹⁶ Borsi, Franco. *Leon Battista Alberti: The Complete*. New York: Electra: Rizzoli, 1989. p, 221.

⁹⁷ Damisch, Joseph. “Inheritance or Tradition” in “Leon Battista Alberti,” ed. Joseph Rykwert, special issue, *Architecture Design* 49, nos. 5-6 (1979), 4.

art historians such as Alois Riegl and Gottfried Semper. The emergence of the façade replaces the haptic experience of architecture given by the relationship between form and surface with what Riegl calls “subjective planarity”, parallels Semper’s concern with the façade’s cohesiveness with the visible framework had put considerable limitations on the artistic embellishment of the art-form of the building (Semper’s concern).⁹⁸ As we shall see, late twentieth century projects like that of Mies van der Rohe’s project in the details between columns and roof would restore the tectonics in architecture, which the tendency to employ façade has hitherto replaced entirely with the visual.

The Origins of the Modernist Facade in Fordist Society

The two centuries following Palladio saw the spread of Italian innovation in the construction of classical facades to the whole of Western countries and beyond that to the Americas. But it was the industrial revolution of the nineteenth century that would introduce a new age in facade production. With the development of carbon steel and the girders into which carbon steel could be fashioned, nineteenth century architects were able to create a new type of facade – one of “*brick veneer*” as an example. Whereas the “solid masonry” walls of earlier centuries had been the supports for classical facades, nineteenth century buildings allowed for a structure of steel girders and even wood frame walls supporting a single layer of brick, of stone slabs, or other heavy looking frontings.⁹⁹ The effect was that the wall had all the appearance of being brick except that it could also seem to evidence a kind of weightlessness impossible for true brick walls. For instance, the brick facade could have windows that were not nearly so deep set as would be necessary in a brick wall.

According to cultural critic, Walter Benjamin, however, the steel structure also had the potential to deliver architecture from what he saw as the tyranny of the facade; to introduce a new kind of design which celebrated the new building material and the class of workers who built with it. In his *Paris Arcade Project*, Benjamin identified the arcade as a break with classicism; the steel supports of the arcade were fully exposed and supported an envelope not of brick but of glass.

⁹⁸ Hartoonian, Gevork. *Mies: The Window Framed in Fabrications: The Journal of the Society of Architectural Historians*, Australia and New Zealand 18, no. 2 (December 2008), p. 30

⁹⁹ Brunskill, R. and Clifton-Taylor, A., *Brickwork*, Van Nostrand Reinhold Company, London, 1977, p. 40-3, 75.

The transparency of the arcade's glass roof created an outdoor space, protected from the weather, where, in all seasons, the bourgeois population could showcase the fashions they had just purchased in the arcade's shops. In this, they were able to outdo the well-dressed nobles of earlier centuries, whose public promenades could be conducted only in good weather. But, if the nineteenth century bourgeoisie were able to outdo the ancient nobility in their displays of fashion, their debt to the workers who built the arcade was equally on display in the form of the steel girders supporting the bourgeois showcase.

Unfortunately for the aspirations of Benjamin, steel could not be long exposed to the elements before it started to corrode. The steel structures of the nineteenth century would have to be covered, and they were covered by brick or stone in imitation of classical forms turned colossal even by the standards of ancient Rome. The arcade's use of glass would however, still capture the imagination of artists and architects alike and sparking, for better or worse, would become a twentieth century modernist revolution.

The Fear of Glass – Modernism and a post-Fordist revolution in building materials

Increasingly, glass panes could be made larger and cheaper (especially since 1890, with the development of methods for producing rolled glass panes); hence, the possibility of buildings with bigger windows letting in more light became common. Since Vitruvius, Western architecture had always seen the well-lit space as a necessary feature of human habitation. In the early twentieth century, windows with large glass panels started to replace wallpaper as the main medium for brightening rooms in middle-class houses and apartments.

But glass carries with it another architectural value. More than wallpaper, the glass surface embodies the appearance of a clean environment – a truly modern aspiration and one made possible by the technological advances of Fordist and post-Fordist societies. Whereas preindustrial protestant societies valued a clean house as a sign of the virtuous character of its inhabitants; its cleanliness evidenced the hard and honest toil of the housewife in aid of attaining for her family a condition that was seen as next to Godliness. In contrast, the modern concern with cleanliness was not one of ethics but of hygiene, born of the scientific discovery of disease bearing microbes and their presence on household surfaces. This concern with hygiene gave value to the new and easy to clean materials out of which household surfaces could be made. The earliest of these to be pioneered in Germany, where the link between scientific discovery and the German quest for great power status gave scientific discovery added prestige, were large

reinforced glass panes and chrome: both glass and chrome surfaces reflected dirt clearly and were easy to clean leaving a healthy and shiny look. Thus, they became mainstays of modern architectural design especially in the art deco movement of the early twentieth century. So, whereas Victorian houses were decorated with richly coloured wallpaper and brick-a-brack clutter – evidence both of its family's material prosperity and the industrious and ingenuity of the housewife who was able to maintain the brick-a-brack clutter without it appearing simply untidy – the art deco space of the twentieth century sported a sparse look emphasized by light coloured walls, big windows and chrome surfaces, on the premise that clutter simply creates more germ attracting surfaces in need of cleaning, as well as creating obstacles that have to be moved in the surfaces on which they sit are to be cleaned. In aid of the modern sparse look pioneered by art deco, wallpaper also is replaced by new easy to apply house paints; especially in shades of white for brightness, and beige, which, while light in colour does not so readily show the dirt and thus more easily maintains its clean look as do creams and off-whites.

After World War II, a host of post-Fordist plastic, synthetic fabric and ceramic materials added to the hygienic appearance of the modern household surfaces as did the cleaning products that promised to make their hygienic maintenance easy. Thus, the Victorian household, a site of industrious virtue, replaced by the modern household, whose easy to clean appearance made it into a site meant for leisure. It was a change which coincided with the replacement of the nineteenth century ideal of the honest working man with the mid-twentieth century ideal of the common man transformed into middle-class consumer.

Modernist architecture, with its emphasis on a clean bright look to be achieved with the aid of new industrially produced materials, sought to be part of the liberation of the general public from the dirt, domestic drudgery and cramped dark spaces that had served working people in their perennial poverty. That public architecture would employ these same materials, especially glass, over the traditional choices of stone or brick (or concrete fashioned to appear as stone or brick), was meant to indicate a less forbidding, more open attitude towards the public on the part of the large corporations and government agencies which public architecture housed.

Thus, modernism sought to strip away the traditional facades of privilege and authority indicated by the classical face given to cities since the time of the architects of the Renaissance; and to restore cities, through architecture to the people who built, lived and laboured in them. But, was this architectural modernism, the work of post-Fordist society, really emancipatory? In the previous chapter, we argued that post-Fordist society created only the illusion, the facade, of emancipation; all the while further concentrated power in the “visible hand”. In this chapter, we

argue that post-Fordist architectural facades were involved both in the pioneering and completion of this illusory effect. Nowhere can both of these tendencies be seen more clearly than in the work of Le Corbusier.

Le Corbusier – Reverse Façade

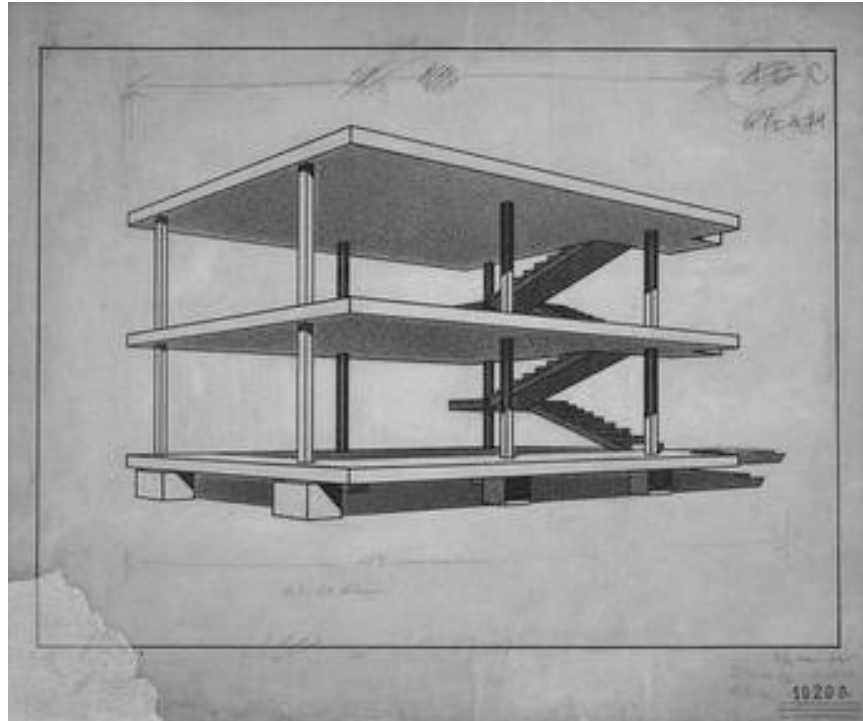


Fig. 6: Le Corbusier: Drawing of Maison Dom-ino, (1914-1915)

If the Renaissance return to classicism saw architecture's use of facades decorated with the likeness of columns and entablatures to hide the building's *wall*, Le Corbusier, whose career started with the advent of Fordist society, reversed this tendency. This reversal began with Le Corbusier's design for a universal prototype system to be deployed as a response to the colossal postwar housing needs while at the same time exploiting the vast opportunity offered by new

means of construction and industrial production¹⁰⁰. The rectangular reinforced concrete “skeleton” scheme (Fig. 4), which he coined *Maison Dom-ino* (Fig. 6) consists of a “*reinforced concrete: six columns of standardized size, slightly raised from the ground on six footings that support floor slabs and stairs. The floor slabs are smooth, without beams supporting them. The columns are on the perimeter of the structure but do not reach the edge of the floors. Thus, facades, walls, fenestration, and doors are independent of the structure*”¹⁰¹. In effect, Le Corbusier’s Dom-ino frame-structure ultimately reduced the traditional load-bearing walls into the two recurring elements throughout his architecture, the “columns or pilotis” and non-load bearing “partitions or diaphragms”. As a result, being non-load bearing, it was the external partitions of the building that could now act as the “free façade”, imbue his architectural object with the appearance of lightness and theatricality – this perception of lightness and theatricality, has been argued by contemporary architectural theorists such as Gevork Hartoonian to “*become the central occupation of architectural experience in the present age of digital reproduction*”¹⁰², a point we will revisit in the following section. First, because they seemed capable of being placed anywhere. For instance, the structural supporting elements could be inset from the slab edge, allowing the “exterior envelope” of the building to freely be aestheticized or theatricalized. Meanwhile, economical glazing units provide the interior space with utmost daylight as a result of floor to floor vision glazing units. With no supporting function the front of an apartment unit could be composed entirely of glass panes giving tenants a panoramic view of the city skyline. And, as the structure supporting the glass was to be hidden in the building, the impression made on the public, viewing the building from the outside, was to be that of glass floating in space; and if there were balconies, the impression would be of the balconies and glass fronts so suspended. If brick or paneling was also to be a component of Le Corbusier’s weightless walls (Fig. 7), it would be white in line with the connection between white surfaces and the hygienic appearance favoured by the modernism of the period.

¹⁰⁰ Tzonis, Alexander. *Le Corbusier, The Poetics of Machine and Metaphor*. New York: Universe Publishing, 2001. p. 33.

¹⁰¹ Tzonis, p. 33.

¹⁰² Hartoonian, Gevork. *Materiality and Architecture*, ed. Karina, Sandra. New York: Routledge, 2016. p. 61.

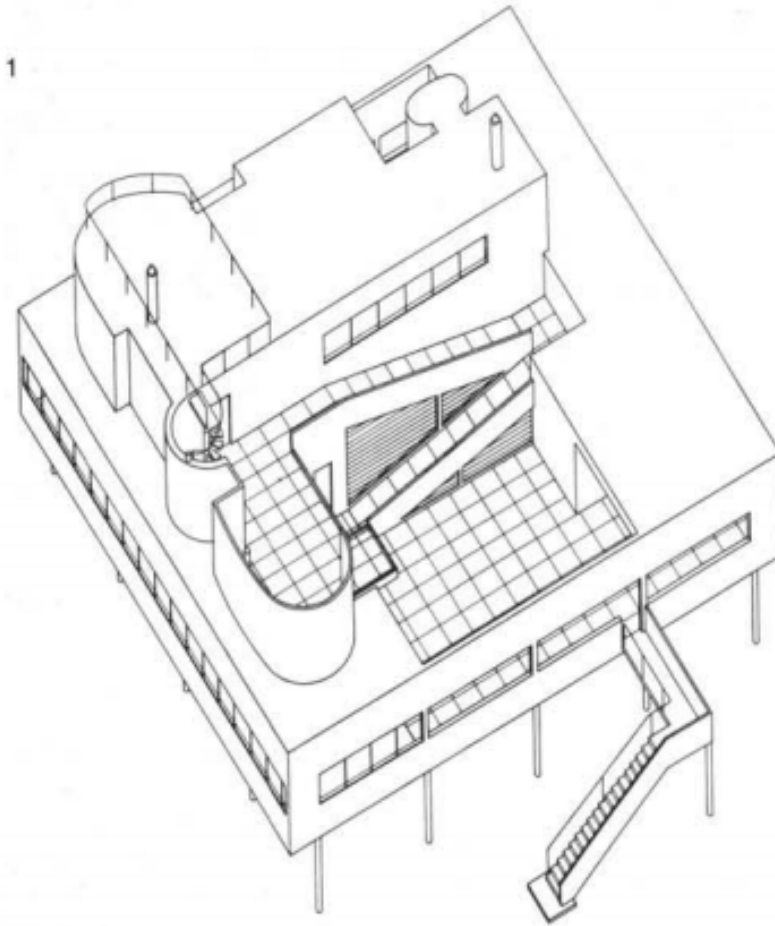


Fig. 7: Le Corbusier: Villa Savoye (1928/30)

Le Corbusier's dream of a structure that would be universal to modern architecture has certainly been realized. Almost all tall buildings in cities around the world now use it. Indeed, architects, today, will often talk in terms of the only truly architectural decision concerning a building's structure as being that of the location of the building's supporting pilotis. So, as well, is his dream of creating housing which seems to let in the best of the world outside – its fresh air, sunlight and panoramic view – while at the same time affording tenants their privacy. That is, if continuous glass walls were to bring each apartment a view of the skyline, reflection of the glass would ensure that passersby would see only the skyline reflected in it. Likewise, balcony railings and the setting back of glass walls behind the balconies would add further privacy to the apartment units. In effect, inhabitants in high rises of Le Corbusier's design would have it all: access to all the benefits of the outside world and simultaneously some privacy from the world outside.

Also hidden from public view, unfortunately, is the fact that Le Corbusier had created his ideal at bargain basement prices. Because they are relatively inexpensive to build (the perennial attraction of all buildings with facade fronts) both the structure and facade of Le Corbusier's towers are made of materials less substantial and enduring than those out of which apartment houses for the nineteenth century middle-class were constructed. The result was that they require constant upgrading and maintenance. As was indicated in the previous chapter, the construction of the facades also required a team of specialized workers, each dedicated to the production of its multiple layers. One result was that frequently, facades had to be replaced at great cost. Another was that since the long-term costs of the facade were not apparent in the initial price of the building, any attempt by architects to design buildings of better quality would always be outbid by those firms adhering to Le Corbusier's model.

If discrepancies in upfront costs were not a sufficient deterrent against exploring alternative designs, there was also, as we saw in the previous chapter, the fact of post-Fordist reregulation. Since the inexpensively made structures must be made safely, each layer of its facade must be constructed by an accredited worker. Because Le Corbusier's facade was well established, it was easy for builders to find workers with the accreditation to build it and easy for inspectors to recognize whether or not the work was up to standard. The result was that the buildings were safe (when new) and also that developers, who might know next-to-nothing about design were in a position to dictate to architects what the materials and look of the design should be (that is, it should look like something designed by Le Corbusier).

After Le Corbusier – What of the Architect

This now brings us to the role of the architect in post-Fordist society. In "What Ever Happened to Urbanism?" Rem Koolhaas reflected on the twentieth-century as that which "has been a losing battle with the issue of quantity. In spite of its early promise and its frequent bravery, urbanism has been unable to invent and implement a scale demanded by its apocalyptic demographics."¹⁰³ This at hand, the architect working on multi-billion dollars projects at mega-urban scales as prime consultant oversees the construction project on behalf of the (client) and without his stamp of approval, the project's construction cannot proceed and is called into

¹⁰³ Koolhaas, Rem. *'What Ever Happened to Urbansim?'* (1994), in *S,M,L,XL* (New York, NY.: Monacelli Press, 1995), pp. 958-971, pp. 961

question, when it comes to delivering public projects in the model of Private Public Partnerships (PPP). In theory then, the architect has the final say in decisions concerning the construction and design of the building project. In reality, contractually, the architect is constrained by the same regulations covering skilled tradesmen. For instance, architects do not design walls (deciding out of what they should be made and how they should function). Rather, they police the construction of walls to ensure that they conform to codes which mandate what materials should be used and how they should function. The same is true for most other aspects of the buildings with which architects are involved so that, in the end, the only creative decisions left to architects attached to the construction of large towers will be the placement of pilotis and the design of facades.

Alternatively, in response to civic initiatives designed to preserve the historically valuable city architecture, due to associated cost for preservation projects, clients will require that architects integrate old store and building fronts as facades for the lower stories of new urban towers built on Le Corbusier's universal design. The traditional brick fronts will give way to the glass and plastic sameness adorning the upper stories of downtown buildings, but only at an altitude above the sight lines of drivers passing by. At the same time, the facades incorporating traditional street fronts will be invisible to anyone observing the cityscape from a distance. The resulting sameness of the facades dotting the cityscape is supposed to advertise each building's conformity to standards of safety, as well as its formal concurrence with the prevailing consensus over what constitutes design excellence. Inadvertently, this sameness is also evidence of the architects' lack of creative control over projects in which theirs is supposed to be the creative contribution.

In effect, then, the architect has no control over the project on which they are required to sign off. Or, if they do, it is by way of the sufferance of the client and general contractor. Generally, the architect's creative control is constrained by government regulation and the demands of clients and contractors that they conform to established practice. Note that this constraint on the architect is asymmetrical. Clients and contractors often pressure architects to "cut corners" and architects who want business would learn to comply. When compare the contemporary situation to that of architects in the nineteenth century, we can see for example, when Daniel Burnham was hired by the City of Chicago to design the 1894 Exposition, he acted not only as architect, but also as contract manager and developer of the project. Burnham hired the workers and designers with whom he worked. Further, he set up his office and living quarters on the construction site in the midst of workers' quarters. He also lived with them and worked with them, personally

overseeing the work at every stage of production. Burnham's control was predicated on his ability to conceive and complete the project beyond the scope of his competitors.

In today's society, the creative ability evidenced by Burnham then is no longer valued - rather it is suspected. The division of the developing and contracting function from that of the architect is rationalized as necessary to avoid conflicts of interest in the architectural profession. In the end, however, this division also robs architects of the power to prevent conflicts of interest by developers and contract managers (it is not through architects that the mob influences development in Toronto and Montreal). If anyone benefits from Le Corbusier's universalism, it is the "visible hand" which governs post-Fordist society. Of course, like everyone else, architects are given the illusion of freedom. Contemporary architectural schools encourage students to dream of spaces found only at the imagination's limits – why not? Because they will never be built. At best, like the work of Ventura, the look of their spaces' outer shells will be noticed and incorporated into the portfolio of facades approved to adorn Le Corbusier's universal structure.

Historically, then, Le Corbusier's efficient Maison Dom-ino diagram has had the effect of robbing architects of creative control over economic efficiency. In turn, it had also guaranteed the sale of edifices which, without expensive maintenance, were designed to crumble; which the wealthy were able to restore and maintain only at great cost and the poor must endure as it disintegrated around them into slum conditions. As recent history has shown, low-income housing projects built by the state modeled after Le Corbusier's diagram do not age well, a prime example would be, "Pruitt-Igoe" a 33 blocks housing complex was demolished in 1972, after a brief 18 years of lifespan. The demolition was due to the ubiquitous dirt stained concrete surfaces of the apartment blocks, the cracks in the concrete floors of their balconies and the leakages in the exterior envelopes. Too often that the balconies became storage spaces for clutter from the apartments made increasingly small for the families they housed. It turns out, then, that Le Corbusier's structure does not create universally accessible middle-class housing; rather it becomes the universal form of all housing, contained within both middle-class and slum dwellings alike. All the while, the facades of Le Corbusier's towers hide the interior differences between them. Like the adoption of blue jeans as the leisure clothing for all classes, the universal adoption of Le Corbusier's facades does not expel class differences from post-Fordist society, from a distance they simply make the classes appear indistinguishable on the outside.

The capacity of Le Corbusier's facades to allow for the invisible introduction of tradition working class conditions into modern apartment living is also indicated by the tendency of developers to build ever smaller units. Answering the need for urban densification, Le

Corbusier's column and platform structure can be stacked Ad Nauseam into ever taller towers with ever more units. Even more units can be added, however, if the distance between platforms is diminished. Thus, Le Corbusier's design further encourages apartments with lower ceilings – admittedly, a degrading of middle apartment living that preceded Le Corbusier. As well, the fact that Le Corbusier's pilotis and reinforced concrete slab structure allow designers to get away with interior walls in units altogether; that Le Corbusier's design allows for large horizontal windows, non-load bearing walls to be painted in white after the style of modernists, floor to ceiling interior glazing between rooms to optimize daylighting into the unit, all work together to encourage the construction of smaller units that they can be made to appear larger than they actually are. Thus, whereas high-rise apartments of the late 60s averaged nine hundred to eleven hundred square feet, now they average five hundred to seven hundred, at times, even downsized to a micro-unit of 398 square-foot.¹⁰⁴ In a time when housing prices militate against tenants moving out of apartments and into houses when they start families, Le Corbusier's design seems to be a vehicle for cramped living for most classes.

¹⁰⁴ The Canadian Press. "How micro condos are facing their first real test in Canada this year" Financial Post, 9 February 2015, <https://business.financialpost.com/personal-finance/mortgages-real-estate/how-micro-condos-are-facing-their-first-real-test-in-canada-this-year>



Fig. 8: Pierre Koenig, Stahl House: LA, Photographed by Julius Shulman

If Le Corbusier's design allows class inequities to hide behind the facade of universally middle-class housing, then it can also help create the post-Fordist illusion of satisfying that most fundamental middle-class aspiration: home-ownership (Fig. 8). Thanks to Le Corbusier's universal structure, condominium brochures can promise everyone a penthouse atop an apartment tower in the city core. In a sense, the brochures do not deceive, for all the units in the tower share a similar if not identical design. In another sense, however, the offer is entirely fraudulent; what everyone gets most is a same show box without the view that was advertised on the brochure cover (only the top floor apartments get that, and they cost more). Furthermore, because the units are advertised as being on desirable properties with an amazing view (for some), prices will be high enough that most buyers will find themselves saddled with mortgage, tax and strata payments higher than the monthly rents for most rental properties. This is obviously not ownership and certainly not its substance. It is, rather, apartment rental by another name. In any case, condominium living is often renting in name as well as deed. Most of the people who mortgage their souls to shoebox condos do not live in them. These suites are let out to become part of the city's official but invisible rental stock.

Not only do Le Corbusier's towers invert the relationship between ownership and renting in the housing market, they also complete the post-Fordist inversion of the relationship between housing and privacy. As we saw above, Le Corbusier's structure was produced with the intent of granting inhabitants' privacy whilst allowing them access to the outside world. Of course, they do the opposite. If balcony railings and front windows that look like mirrors during the day are supposed to block the public's view into apartments from the street; then at night, when the lights in apartments go on, they give the occupants of neighbouring apartment towers ringside seats for the most intimate of tenants' most intimate domestic activities. This is especially true of apartments without balconies. And, because tenants have bought into the conceit that their lofty altitude affords them privacy, many if not most of them have forgone the expense of putting up privacy curtains, thus, tenants are rendered by Le Corbusier's facades into the natural objects of voyeurism.

At the same time, their condition is rendered simultaneously into one of increasing isolation. Whereas the Parisian bourgeoisie of the nineteenth century sought out the arcade as a place where, sheltered behind glass, they could parade their fashions before an admiring public, contemporary apartment dwellers, having made themselves into the stars of voyeuristic peep shows "flip their middle finger" in a display of righteous indignation whenever they catch the voyeurs in the act. In this expression of ambivalent exhibitionism, we see, on the part of contemporary apartment dwellers, an extension of the anti-social and isolationist tendencies displayed by post-Fordist consumers; the result of lives spent in front of computer screens or on smartphones, attending primarily to the content of social media. In effect, Le Corbusier's facade achieves the post-Fordist goal of a pacified populace; as it turns apartment units into observation cells and their inhabitants into social misfits so alienated from human contact that they lock themselves into their self-chosen confinement, to consume and consume.



Fig. 9: Architects Robert Venturi and Denise Scott Brown, Las Vegas, 1968

That Le Corbusier's confinement construct is most properly called post-Fordist is indicated by the manner in which the buildings designed in accordance with his universal structure has transformed the automobile into a seamless extension of contemporary indoor living. To that end, the basement and first floors in many of Le Corbusier's building designs are contoured for the easy entry of cars into underground parking. Ubiquitous in Le Corbusier's underground parking is the pedestrian ramp connecting parking levels. There will be no staircase to reminding tenants that, sometimes, legs can take them wherever cars cannot go. Even more telling, some of Le Corbusier's first floor designs accommodate car parks with the main entrance being adjacent to the car-parking stalls. In these designs, the entrance for pedestrians is set far away from the main entrance and is so obscured as to be practically invisible. Finally, even the park like landscaping around Le Corbusier's towers are bisected by driveways allowing cars access to the parking lot immediately adjacent to the buildings' front doors. If tenants would want to travel by foot, they must transgress on areas designed for drop off by car and for car parking. When tenants do reach the grassy areas on their property, their movement is often restricted by "keep off the grass" signs to designated paths. On Le Corbusier designed properties, cars and drivers are then given convenience of access and pedestrians travel on sufferance.

The effect of the "car-centric" design at the foot of Le Corbusier's towers is that there is a seamlessness and sameness between the tenant's experience between life in the apartment and life out of the doors (because life out of the doors will be defined as travel inside a car). From their ribbon windows, the tenant will see a cityscape of freeways and major streets dominated by the automobile. The elevator and garage ramp ensure that the tenant's journey to their car will be only on surfaces accessible to "wheels" (one of the casual names for the car). As their car rolls out of the garage, car-park or parking lot immediately besides the building, the tenant's experience of the car's padded climate-controlled interior is of a kind with that of life in their apartment. The car in turn becomes a vehicle for their expression of the anti-social attitudes they express while sitting in front of computer screens, working on cell phones or while standing naked behind their plate glass windows.

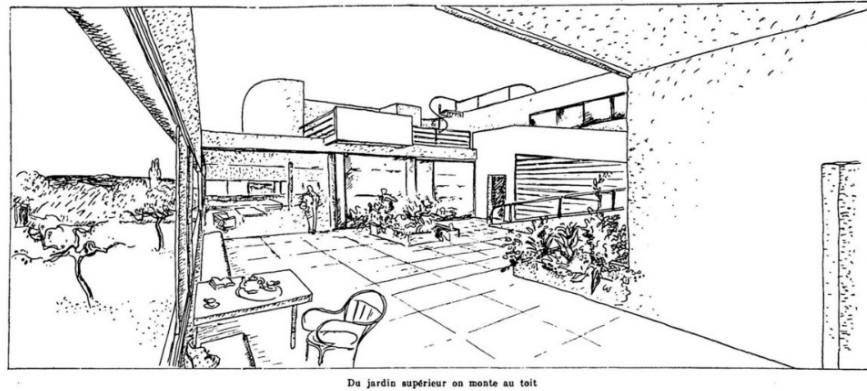


Fig. 10: Le Corbusier: Villa Savoye, Roof Garden

The normalizing of isolation in Le Corbusier's residential design has had a formative influence on the suburban tract housing to which apartment dwellers were, at one time, meant to upgrade. This accounts for the still expanding tendency by developers to build oversized monstrosities, complete with brick and classical facades, on postage stamp lots, and to surround the reduced backyards with six-foot wooden privacy fences. Long gone are the three-foot chain link fences which used to allow mothers to see in which neighbour's yard their children were playing. Gone also are yards big enough to accommodate any children but one's own. The emphasis is on have a property, every square inch of which feels like it is part of the great "indoors." At the same time, the new suburbs provide for the same experience of being the subject of voyeurism as do in Le Corbusier's apartments. No matter how small, every back-yard has a deck raised above the fence line, access to which is by way of a sliding glass double door. Given that the tendency, as is the case with condos, is not to put up privacy curtains, the double door makes the entire ground floor of the house visible to any neighbour looking at it from behind their double door. This is true especially at night when the house's interior lights are on. Again, voyeurism is made almost unavoidable but, at the same time, not welcomed.

The anti-social nature of tract housing extends also to the contemporary front yard. Gone is the vibrant community street life of traditional working class neighbourhoods. The extent to which this is so can be measured by how common it is for neighbours to call the police on a child walking down the street while unattended by an adult; by how uncommon it is to see any adults in gated communities walking out of doors, unless it is on the community golf course; and by how empty of pedestrians the "cars only!" subdivision streets are, even in the evening, after everyone has driven home from work. Invariably, tract neighbourhoods are advertised as being quiet or

secluded; but their quietude is that of the ghost town or grave and their seclusion is that of a prisoner who has volunteered for solitary confinement.

After Le Corbusier – The subject: from voyeur to victim of voyeurism

Of course, the prisoner in solitary confinement may be isolated. They are also under constant scrutiny. That is their unavoidable lot. How is it, that the perpetually scrutinized condition of the prisoner in solitary confinement became the lot of the post-Fordist subject inhabiting Le Corbusier's post-Fordist legacies? In the previous section, we saw the subjects of post-Fordist architecture display ambivalence to its tendencies to render them the subject of voyeurism. Yet, the universality of a life under the gaze of others is one that the post-Fordist subject has accepted nonetheless. In part, this is because Le Corbusier's legacies are so wrapped up in selling and delivering the voyeuristic view that post-Fordist subjects assume they must be true voyeurs, that is, unseen, or at least that they can expect to be treated as unseen.



Fig. 11: Franz Louis Catel: Schinkel in Naples, 1824

The origins of how Le Corbusier's thinking led to architecture capable of so deluding the post-Fordist subject are found in the following retrospective on the beginnings of Le Corbusier's career: one that takes us to the struggles between himself and his then teacher, Auguste Perret. Where Le Corbusier championed the primacy of the horizontal ribbon window (*fenêtre en longueur*)¹⁰⁵ (Fig. 11) as a defining feature of domestic architecture, Perret insisted that the window natural to human habitation must be the vertical (a *porte-fenêtre*) (Fig. 12). To Perret, the vertical window acts as an invitation for man to approach nature in his natural, that is, his vertical stance. Perret writes that there is "an anthropomorphic analogy" between the upright human being and the "vertical window which gives man a frame in line with his silhouette..., it is the line of life itself."¹⁰⁶ This is because the vertical window allows him to visually take in all that his vertical stance allows. Because the vertical window opens onto patio or lawn, it allows man to enter the natural world which it has shown him to be a part. When it is left open, the vertical window allows the natural elements in, transforming man's living space into an extension of his natural environment. For Perret, then, verticality renders windows into thresholds between the civilized and the natural world, invoking in man an appreciation for nature as something of which he longs to be a part. Conversely, Le Corbusier's insistence of horizontality (Fig. 12) seemed to Perret to reduce the window from a threshold capable of transforming man's relationship with nature into a mere illustration of nature, no different from a painting or wall paper with a floral pattern.

¹⁰⁵ Traganou, Jill, Mitrasinovic, Miodrag. *Travel, Space, Architecture*. Surrey, England, Burlington, USA: Company, Ashgate Publishing: 2009. p. 58

¹⁰⁶ This opinion of Perret is taken from: Marcel Zahar. *Auguste Perret*, Paris, 1959, p. 15



Fig. 12: Le Corbusier: Villa Le Lac horizontal window, 2010

Le Corbusier's answer to Perret rested on a denial that the horizontal window sought only to illustrate reality where windows should act as thresholds to it. For Le Corbusier, the horizontal window imitated the modern apotheosis of seeing (the camera) – which extended visual vistas through time and space and then captured those vistas as things to be owned. For Le Corbusier then, the horizontal window did not illustrate a view: it allowed the subject to own the view as in photograph of an object, in the same way the props: a hat, a pair of sunglasses, a little package (cigarettes?) are displayed in the photograph of the space itself.¹⁰⁷ Implicit in what Le Corbusier identifies as our natural desire to own the view is a populist critique of Perret. According to this critique, it is all very well for Perret to argue that the window should embody and facilitate man's longing for unity with nature. After all, the men capable of affording such windows, and the houses worthy of them, lived lives of material comfort from which wistful longings could be enjoyed as diverting novelties. For most people, however, where privation made longing an all too familiar state, the satisfaction of longings, leading to their cessation, is much more desirable a thing. As observed by the architectural historian Beatriz Colomina in *Sexuality and Space*, in canonical photographs interiors of Le Corbusier's Villa Savoye (Fig. 12) sets into motion the notion of

¹⁰⁷ Colomina, Beatriz and Bloomer, Jennifer. *Sexuality and Space*. New York: Princeton Architectural Press, 1992, p. 91

framing the spatial structure of longing by the temporality of promenade architecture.¹⁰⁸ When Le Corbusier seeks, then, a window capturing “that photographic panorama” against which “the rest of [a domicile’s] architectural elements fade into the background,” he is merely answering modern women’s requests for objectivity.” But I propose that we also read this same analysis through Le Corbusier recognition in the demands of the female market a fundamentally human drive to satisfy all longings, and thereby to create a commodious interior life, through the possession of things. In supplying this human desire, Le Corbusier, turns the domicile into a machine capable of capturing and framing¹⁰⁹ as material possessions, all the things which make life worth living – and these possessions extend to the panoramic view.



Fig. 13: Le Corbusier: Villa Savoye, Poissy, Jardin Suspensif, 1929

For Le Corbusier, not only did owning the view bring the entirety of the outdoors into the home, it also allowed the home’s inhabitants to make a seamless transition from interior to exterior living. Le Corbusier’s towers are designed to open most conveniently into the ground level car park or under-ground parking; in comparison, leaving his building on foot always carries with it the sense of confronting encumbrances. Once in the car and on the road, the seamlessness of the transition is augmented by the windshield and surrounding windows which provide the driver with the same panoramic view that is provided by the apartment’s horizontal window. If the

¹⁰⁸ Colomina, Beatriz and Bloomer, Jennifer. *Sexuality and Space*. New York: Princeton Architectural Press, 1992, p. 91

apartment window allows inhabitants to own the view, the car windows allow the driver to own the road. And, as the road can go anywhere, the world, in both its urban form and the rural form that we most often associate with the natural state, is the driver's to survey. In the frame of the car and Le Corbusier's Masion Dom-ino diagram, man achieves a unity with both his interior and exterior environment of which Perret's nineteenth century home owner could only dream. For both frames operate as the machines that allow their inhabitants to own their environment. So alike is the operation of these machines that the experience of life in one of them is identical to that of the other, and the transition from one of them to the other is so unencumbered as to seem natural (Fig. 13). For the architect Benard Cache, the increase of smooth and rarefied surfaces obliterates the directions and specificity of place created by a "box in the air", "The sloping roof then differs from the three other elements of the frame, for it is neither an interval nor a cause; it is the envelope of an effect: it is the singular becoming of a place, of the domestic as an eminent place. What then happens when modern architects reduce the roof to the status of walls? The house loses its bearings and each stone becomes a potential floor. The window stretches out lengthwise and becomes panoramic. This window no longer frames the zenith; it is now a "distributor of light."¹¹⁰

In the end, Le Corbusier's facades are the final envelop around lives separated from reality by post-Fordist advertising, mass culture, automobiles, and electronic playthings – they are the natural habitat of the pacified modern man. Thus, does Le Corbusier's design complete the post-Fordist facade of a life of fully integrated comfort, one that is hiding the structure oppression and fragmentation of personality which makes the facade possible in the first place?

¹¹⁰ Cache, Bernard, *Earth Moves: The Furnishing of Territories*, (Cambridge MA: The MIT Press, 1995) pp 27.

4. TOWARDS POST-FORDISM IN ARCHITECTURE

Like Ford, with whom he was a virtual contemporary; Le Corbusier was a member of the talented minority who exercised creative control over the innovations in industrial technology to revolutionize architectural design. Also like Ford, Le Corbusier's innovations were exploited by post-Fordist managers to ensure that architects of the late twentieth and twenty-first centuries would never again exercise the kind of control Le Corbusier had. As we saw, in the previous section, architects in post-Fordist society have to contend with a range of government regulations and corporate interferences that prohibit their attempting structural innovations as radical as Le Corbusier's. This limitation of architectural freedom has two consequences of note. First, architects have lost managerial control of the project of architecture due to the loss of *techne*¹¹¹ in the contemporary production of architecture. Second, having been deprived of real freedom, architects are reduced to designers of facades.

If architectural design has been relegated to the status of a raw resource to be exploited for the facades it inspires, the contemporary city's heterogeneous architectural heritage is now exploited in the same manner. In Toronto, for instance, no heritage building is safe from the tendency of post-Fordist architecture to convert its street face into a facade for the first few floors of one of the city's many condo towers. That the tower's upper floors will have the same glass facade as all the other condo-towers in Toronto ensures that the incorporation of the heritage street front into the new condo-tower will look less like the preservation of Toronto's heritage than it does an ill-considered attempt to accommodate surviving remnants of the old cityscape to the contemporary homogeneity of post-Fordist architecture. In the end, then, Le Corbusier's universal structure, which was meant to be as emancipatory for architects as it was meant to be for working class city dwellers, seems to have been the death knell for architectural practice worthy of the name, both in the present and from the past.

Fortunately, not all is as it seems. If Le Corbusier's universal frame-structure system has occasioned the relegation of architects to lowly designers of facades, it has also given architects like Ludwig Mies van der Rohe opportunities to subvert post-Fordist homogeneity with their development of what can only be called to anti-facade. It has forced architects to review the work

¹¹¹ Hartoonian, Gevork. *Crisis of the Object: The architecture of theatricality*. New York: Routledge, 2006. p 10

of Art Historian Gottfried Semper who rejects the use of the facade for the wrap, with its concern for the integrity of the materials out of which the wrap is made. It has driven architects such as Adolf Loos, to reintroduce architecture as a form of covering that “privileges the bodily experience of space over its mental construction”.¹¹² Finally, it has pointed architects the way out of an industry dominated by large projects and into that serving small clients and pursuing opportunities created by the demand for urban fill in projects involving small clients working at what used to be considered the city’s internal margins, particularly the alleys and back lanes of inner cities. Common to all of what are in effect critical responses to the domination of post-Fordist building by Le Corbusier’s universal structure and the reduction of architecture to facade design, is the rejection of the notion that architecture is prohibited from a concern with materials or with structural design; also that architecture needs to accommodate itself to existing topography and cityscapes, not the reverse.

¹¹² Colomina, Beatriz and Bloomer, Jennifer. *Sexuality and Space*. New York: Princeton Architectural Press, 1992, p. 90



Fig. 14: Ludwig Mies van der Rohe: Toronto-Dominion Centre, Toronto, 1969

Ludwig Mies van der Rohe and the Anti-Façade

Not satisfied to use glass in a facade creating the illusion of greater size and airiness in moderately sized houses and apartments, Mies van der Rohe sought to use the properties of glass to subvert the facade effect. To this end, while Mies van der Rohe followed Le Corbusier's design to produce units with exterior walls composed almost entirely of glass, he also used float glass panes rolled with great exactitude to give the exterior walls a perfect transparency. The effect of Mies van der Rohe's Farnsworth house was that the unit seemed to be without any walls and thus, incomplete. Rather than masquerading as part of the house's structure, the glass

presented the illusion of absence; not only of structure but of the opacity offered by the walls which affords the unit its sense of privacy. What Mies van der Rohe's house begged for, then, was curtains, the wrapping which, according to Hartoonian as "suggestive of a domestic surrogate for the vanished wall"¹¹³, requires of those on the outside of the dwelling that they gain admittance to a dwelling before they can acquaint themselves with the secrets of its structure, as well as those of the domestic life within.



Fig. 15: Mies van der Rohe: Farnsworth House, Interior

Mies van der Rohe's concern with the quality of the glass is that high quality glass allows the exterior of the house to be transparent and thus to embody the demand that it be clad. Further, the transparency of the glass allows us to experience the house as a space defined by the curtains in which it is wrapped. The curtains act as an anti-facade because no one confuses curtain material with a building's frame or structure. Thus, the cladding works on the natural curiosity of viewers, embodying an invitation to remove it or seek admittance behind it. Either way, the only

¹¹³ Hartoonian, Gevork. *Mies: The Window Framed in Fabrications: The Journal of the Society of Architectural Historians, Australia and New Zealand* 18, no. 2 (December 2008), p. 40.

way to know what is interior to the clad domicile is to enter it lawfully. Entry into the dwelling requires a corresponding entry into relationship with the tenants. So, whereas the facade has always been a visual expression of the strength and power that has as element of the forbidding about it, Mies van der Rohe's anti-facade expresses an inclusive egalitarianism in its demand for reciprocity between those within and without. The passerby desires entry, for which they must acknowledge the dweller's right of tenancy by seeking permission to enter. In turn, to satisfy the curiosity of the passerby, the dweller has issued to the passerby an invitation to seek entry. Could Mies van der Rohe bring this same sense of hospitable reciprocity to public buildings and achieve a truly democratic architecture? The extent of Mies van der Rohe's success can be measured in an examination of his design for the Toronto Dominion Towers, constructed in Toronto's downtown core.

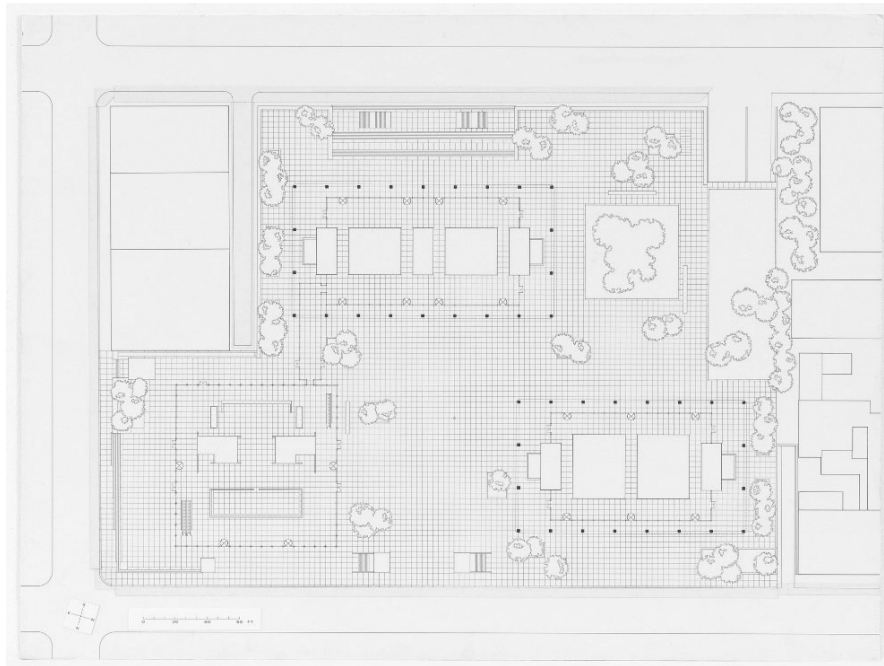


Fig. 16: Ludwig Mies van der Rohe: Toronto-Dominion Centre plan, Toronto, 1963

Constructed in the late 1960s, the TD towers were, at that time, the tallest buildings on the Toronto Skyline; the highest of the two towers had 56 stories (Fig. 14).¹¹⁴ Thus, in cladding

¹¹⁴ Council on Tall Buildings and Urban Habitat, 2009. in <http://www.skyscrapercenter.com/building/td-tower/1211>

these great public structures, Mies van der Rohe could not achieve his anti-facade as he had with his Farnsworth house (Fig.15) : the float glass would not be considered on the ground of feasibility for a 6-meter high first floor. Also, Mies van der Rohe was faced with the problem that reflective glass panels give a building what we saw in the last chapter to be part of its facade effect. Mies van der Rohe was able to use reflective glass panes on all but the first stories of his towers to avoid the facade effect, however, that prevented the panes from hiding the true nature of the towers' construction. Mies van der Rohe did this by adding building height steel girders at equal intervals across the glass faces of the towers. While not part of the building's structure, these girders acted as aesthetic trope which reveals the internal structure of the building. At the same time, the bottoms of the towers' glass envelopes (located, in each case, at the top of the first story) were designed to give their envelopes the appearance of an external wrapping spread over the buildings' structures. This was achieved by Mies van der Rohe's having the envelop bottoms fastened to steel plates visibly dividing the first and second floors of the towers and seemingly welded to their actual structures. With these generic industrial components, Mies van der Rohe aimed to achieve a universal principle that is not that of determinism in a set of rational rules, but more as an deep structure that allows for semantic surplus¹¹⁵. The effect was to send an electrifying double message to the whole city.

Mies van der Rohe had the glass envelopes of the towers reflect a black surface. This, and the fact of the towers being by far the tallest structures on the Toronto skyline, made them stand out as two black monoliths, exotically modern to the point of appearing alien. Their monolith effect was timely. The buildings were completed in 1968, one year after Stanley Kubrick's blockbuster science fiction film, *2001 A Space Odyssey*, featured a black alien monolith as the catalyst for humankind's progress, both from the remote past and into the distant future. Built when they were, then, the monolithic appearance of the towers resulted not only in their dominating the Toronto skyline but in their transforming it, as well. No longer did Toronto appear to be a city clinging to the past signified by the brick and stone facades on its prominent buildings. These neo-classical relics were all rendered invisible as the two towers captured not only the gaze, but also the imaginations of a generation of commuters entering Toronto on their morning commute. What Mies van der Rohe's towers both showed and imagined for Torontonians was a

¹¹⁵ Mertins, Detlef. "Same Difference." In *Phylogenesis: FOA's Ark*. ed. Foreign Office Architects. Barcelona: Actar Press. 2003. pp. 274.

city, their city, embracing a new and different future: no longer a colonial backwater. Toronto was revealed in the towers to be on its way to the forefront of human progress.

What that future would look like in detail, however, was reserved for Torontonians viewing the towers up close. Mies van der Rohe's design had the towers set on a raised plinth much larger than their combined footprint which extends against the edge of the street and accessible to pedestrian traffic from all sides, on two sides by wide but shallow stairs. People approaching the towers, therefore, experienced them as being located in the midst of a pedestrian square set above and apart from competing vehicular traffic and yet accessible from every direction to those travelling by foot. From this vantage point, the vertical girders and horizontal steel plates, which reveal the black glass envelopes' true natures as wrap around concealing and at the same time inviting entry to a private space, give way to the tall transparent glass panes surrounding the lofty galleries on the towers' first floors. What these glass panes allow viewers on the plinth to see is that the towers are supported solely by columns surrounding the only super-structure cores in the buildings (the elevator shafts and exit stairs). Thus, Mies van der Rohe showcases Le Corbusier's "Madison Dom-ino" construction, the archetypical deep-structure hidden beneath the skins on hundreds of thousands of contemporary residential, commercial and public buildings, as a worthy armature for even the greatest of Toronto's buildings. Literally, Rohe's towers are a rendering in architectural design of the invitation, a *mise-en-scene* to the notion of "our home is your home," for they both share the same design. This invitation is further augmented by the fact that the transparency of the glass surrounding the towers' ground floors also allows them to appear as continuations of the surrounding pedestrian square; by the fact of the many large revolving doors giving the public free access to the lobby as thorough-fairs across the plinth; and by the fact that the sight lines and seating on the plinth are designed to draw the gaze of viewers on the plinth into the plinth centre and the buildings themselves. As such, Mies' plinth acts as what Aureli a limiting¹¹⁶ principle, rupturing the limitless extent of design which permeates the rest of urban space in the post-Fordist city (Fig. 16). As we shall see in the next two paragraphs, in the space of the plinth, the divisions between public and private are also honoured: the enveloped upper

¹¹⁶ Aureli, Pier Vittorio. "*More and More about Less and Less*" in *Log* Vol. 16 (Summer 2009), p. 15-18

floor are contained within the garb of privacy; the ground floor transparency renders it into a continuation of the public space defined by the plinth.

The overall effect of Mies van der Rohe's plinth and first floors design for his towers is that it acts to rupture the seamless connection between life in the private domain and life in the automobile so characteristic of modern tropes generated by Le Corbusier's expansive "Maison Dom-ino" diagram. Under Mies van der Rohe, the plinth and first floors of the towers become a space granting entry only to those who leave their cars and proceed on foot. Once on the plinth, the gaze of viewers is turned away from the city's car dominated conflation of public and private experience and towards a square which is purely public. Which is to say, the entire plinth, even that lobby on which the ground floors of the towers rest, is open to all members of the public as a right of way (there are no restrictions on where they might go), but only if they leave their cars to enter an open space where the automobile cannot follow. It is on this plinth that individuals are compelled to interact with the public; uninsulated by the automobile and without even the usual commercial displays and competing traffic to distract them, they must walk, sit and meet face to face with the strangers who share their city. As such, the plinth functions as an 'archipelago' (Fig. 17) of the civitas realized amidst the ubiquitous and ever spreading urbs, that is an oasis which reclaims the right of individuals to experience life as citizens in a city which otherwise would consign them to the status of mere consumers. A similar observation made by Oswald Mathias Ungers in "Mies van der Rohe and Toronto,":

*'Mies's use of the plinth in his North American complexes, such as the Toronto Dominion Center, as an attempt to design a city form from within the limited boundaries of the architectural artifact. Addressed in this way, the plinth becomes the element that transforms the limits of the architectural artifact into its fundamental contribution to the city's form.'*¹¹⁷

Of course, the black glassed wrap-around clothing the towers' upper floors signify their status as private property. The deep-structure for the domain of the private is further differentiated by the entity that makes up the plinth, which is the grid system that he employs throughout his projects. This dialectical pairing of the universal (grid) and the particular (plinth) placed Mies van

¹¹⁷ Aureli, Pier Vittorio. "More and More about Less and Less" in Log Vol. 16 (Summer 2009), p. 16

der Rohe in a unique category among architects of his time as he saw the possibility of architecture oscillating between the two dialectics as follows:

*“Wherever technology reaches its real fulfillment it transcends into architecture. [...] architecture is the real battle ground of the spirit. Architecture wrote the history of the epochs and gave them their names. Architecture depends on its time. It is the crystallization of its inner structure, the slow unfolding of its form.”*¹¹⁸

But, with Mies van der Rohe’s towers, the distinction between the public and private is clearly delineated so that those people using the towers may experience both public and private life in their authentic condition and not some hybrid amalgamation of the two; a condition that was expressed by Tafuri in the in the following passage:

*“place of absence, man, aware of the impossibility of restoring syntheses, and having once understood the negativeness of the metropolis, as the spectator of an entertainment which is truly total because it does not exist, is forced into pantomime.”*¹¹⁹

Manfredo Tafuri, 1978

Today, fifty years after their construction, Mies van der Rohe’s towers no longer dominate the Toronto skyline. After the seventies, a decade defending municipal building policies designed to preserve Toronto from the irrationality of unbridled development, city councils surrendered to the rampant post-Fordist tendencies of the Reagan and post-Reagan years. The result was that Mies van der Rohe’s towers disappeared amidst a forest of even taller banking and financial edifices. Over all of this new construction, the glass facade reigns, albeit without Mies van der Rohe’s visual celebration of the materials comprising their structures. Also, whereas the black surfaces of Mies van der Rohe’s wrap-arounds on the towers reflected the imaginative profundity of Kubrick’s cinematic genius, the red, gold, blue, and white glass surrounding the new towers were suited more to the sci-fi kitch of George Lucas’ Star Wars. This tendency to sci-fi kitch

¹¹⁸ Mies van der Rohe, Ludwig. “Technology and Architecture,” In *Programs and Manifestoes on 20th Century Architecture*. Ed. Ulrich Conrad. Cambridge: MIT Press. 1964, pp. 154.

¹¹⁹ Tafuri, Manfredo. *The Sphere and the Labyrinth*. The MIT Press, 1978. pp. 111.

extended to a host of condo-towers surrounding the financial centre. Thus, did Toronto's foray into the display of spectacular thought give way to thoughtless spectacle? Nowadays, the emphasis is not on what the design of a building signifies, so long as it is ostentatious and shiny.

But, what do the TD Towers signify to the present-day subjects viewing them from the vantage of the plinth? They signify an authentically public view, in which the eye is drawn unashamed to all that goes on in the building at ground level with no sense that this viewing constitutes an invasion of privacy. To emphasize the point that tower living invites for the external gaze, the upper floors of the tower seem "wrapped" in a covering of copper-toned glass. Again, the details act to make the point. The building's copper-toned cover is so configured as to indicate its non-essential nature as a part of the building's structure. In effect, it appears as a glass curtain: an eloquent declaration that, if we wish privacy in a building without walls, we had better draw the blinds.

Mies van der Rohe's towers, then, stand as an enduring testimony to the possibility of architecture capable of rupturing the seamless extension of life in towers and suburban subdivisions to the automobile enabling the expansion of the post-Fordist urbus without end. It is because contemporary developers have not emulated Mies van der Rohe's subtle yet daring plinth design that his towers continue to stand out as original works of the architectural art and as monuments to Mies van der Rohe's post-Fordism – his ability to act with the creative freedom of a pre-Fordist practitioner amidst the stultifying pressures of a post-Fordist age and to restore a sense of the demarcation between public and private that post-Fordist society has attempted to render passe.

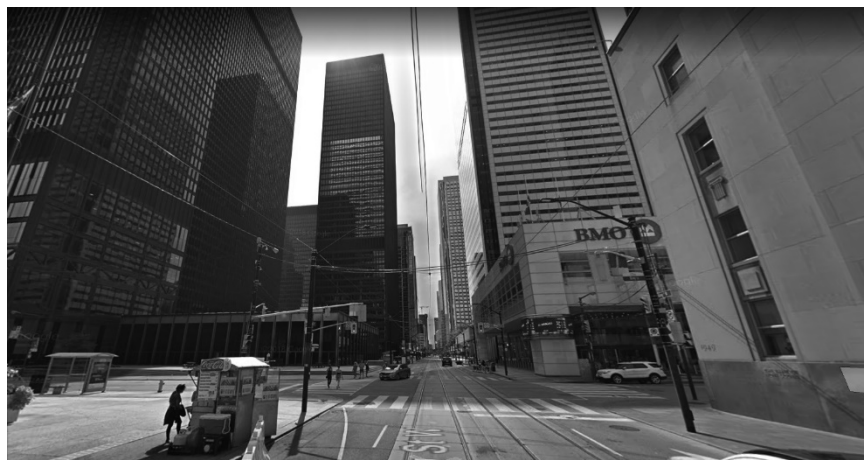


Fig. 17: TD Towers: intersection along King Street facing Bay Street.

Adolf Loos: The aurality of the “Raumplan”

As Le Corbusier’s seamlessly permeable facade was post-Fordist, it must be imbricated, not only with the automobile but with consumer consumption generally. If the plinth-based architecture of Mies van der Rohe ruptured the blurring of space within Le Corbusier’s uninterrupted ground floor of the automobile dominated urbus, it was the “Raumplan” of Adolf Loos that caused a rupture in the post-Fordist tendency to allow consumer goods to give shape to life indoors. Although Loos’ greatest output was a product of the early twentieth century, his rediscovery in the 1960s extended his critical influence to that of post-Fordist architecture.

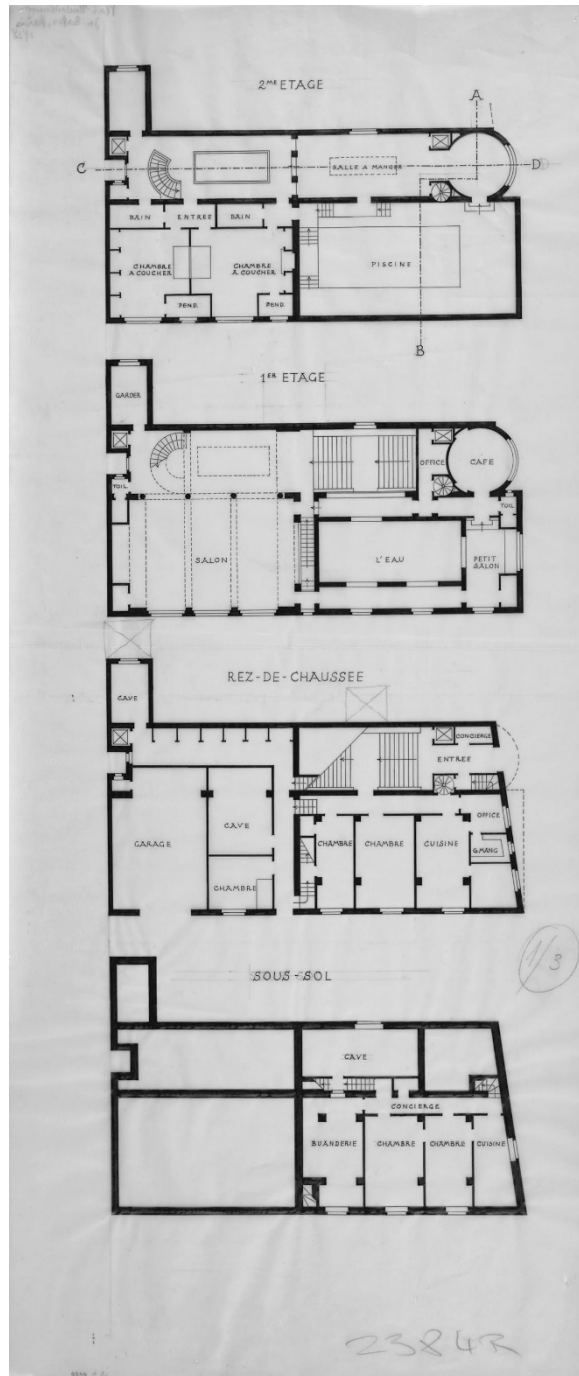


Fig. 18: Adolf Loos: Josephine Baker House Plans, Unbuilt, Paris, 1927.

How did Loos's "Raumplan" or space-plan contrast with the "free-plan" of Le Corbusier? As we have already seen, Le Corbusier designed vertically stacked datums to house one continuous space which could be extended by way of the automobile beyond their confines into the urbus generally. Divisions in the "pure" space were left to developers and inhabitants

respectively. The new freedom produced by the “free-plan” and architecture of the pre-Fordist traditions that Le Corbusier considered “paralyzing, wasteful, parasitic, and “anachronistic”.¹²⁰

The freedom to individualize their segment of an otherwise homogeneous space, encouraged tenants to define their units through the consumption of standardized mass-produced objects, furnishing and accessories. As such, walls were left incidental to the essential character of each unit: a plastic tabula rasa which the tenant could remove or upon which they could imprint their own character. Le Corbusier’s inability to conceptualize interiority as the “room” was anathema to the architecture of interiority. What is of interest here is Loos’ ability to sense a conceptual space in which he calls *Raumplan*; but was unable to theoretically give it a definition.”¹²¹ In recent years, the researcher, Ines Weizman noted interesting aspect that was left out of earlier readings of Loos, that is, the aurality in Loos’s architecture: a direct result of Loos’s progressive hearing loss. If Le Corbusier’s architecture aims to achieve the ultimate photographic device, as described by Beatriz Colomina in *Sexuality and Space*, then perhaps listening to spatial structure of *Raumplan* as a contraption of noise¹²² would be of value in restoring a sense of the haptic to architecture.

To avoid the defining of space by commodification, Loos reconceived the nature of place in architectural design. Famously, Loos averred that he designed rooms, not buildings. His goal was not the unified continuous space but rather the harmonious configuration of distinct places. To that end, Loos worked to ensure that the distinct character of every room was an intrinsic part of a building’s design. Loos ultimately achieved this aim in the following ways: working within the confines of a cubic design, Loos configured his rooms volumetrically so that adjacent rooms would enter each other from different levels and different heights (one must imagine sectional relationship in all of Loos’ designs). Within each room, special attention was given to the materials out of which the ceiling, walls and floors were made. To this end, Loos gave priority to “cladding” over construction, the interior over the exterior. In the “Principle of Cladding”, Loos favoured stone, fine wood with attractive grains and marble over the artificiality of imitative stone tiles, as he believed the “human soul is too lofty and sublime” for the “surrogate architects” to be able to

¹²⁰ Tzonis, Alexander. *Le Corbusier, The Poetics of Machine and Metaphor*. New York: Universe Publishing, 2001. p 34.

¹²¹ Colomina, Beatriz. *Sexuality and Space*. New York: Princeton Architectural Press, 1992, p. 96

¹²² Weizman, Ines. *Turning into the Void: The Aurality of Adolf Loos’s Architecture* in Harvard Design Magazine, No. 38 / Do You Read Me?

dupe it with their tactics and tricks¹²³. Concern was also given to the tasteful matching of these materials. The effect was that ceiling, walls and floors would adorn each room without the need for further decoration; also, that their positioning and character would be essential to the definition of the room as a place distinctive from other places. The effect was that passing from one room to another could not be experienced by inhabitants as incidental; a mode of travel (to ascent and descent) had to change in order for inhabitants to pass into another room. Once there, the configuration of walls, floor and ceiling, as well as the adorning nature out of which these were constructed, distinguished the room entered as a place intrinsically different from the room just left.

Loos considered his approach to design as “ascetic.” This is to say, his architecture eschewed the demand for artificial ornamentation in favour of the natural beauties in the materials out of which the rooms of the building were made. Rather than the “aesthetic” envelope insulating the tenant from nature, Loos’ dwellings were to be habitations of natural beauty allowing their tenants to experience a harmony with nature. Loos’ avoidance of the aesthetic also led him to avoid designs incorporating the traditional aspects of the facade and their suggestion of a classical unity which their building did not actually possess. In one design, Loos forewent the inclusion of windows on the upper stories of his building and ruptured the seamless presentation of reciprocity between the building’s in and out of doors. Again, the effect was to create a sense of separate places: the place in the building’s upper stories was opaque, solid and forbidding and that of the lower stories was transparent, open and inviting. As a result, the building seemed too heavy and utilitarian – it reserved its beauties for private consumption. But if we look at the design from the aspect of sound, the opaque and solid volumes can be heard in the sounds of unique music chambers, as one moves from room to room. The textures and materialities in which Loos applied to his rooms designs show that he was attuned to the aural dimension of space.¹²⁴

As put forth by Weizman, Loos ‘claimed that concert halls similar to wooden violins, absorb the music played in them via the molecular structure of their building materials, making some

¹²³ Loos, Adolf / Le Corbusier. *Raumplan versus Plan Libre*, ed. R. Max. Cambridge Massachusetts: Delft University Press, 1988. p. 137

¹²⁴ Weizman, Ines. *Turning into the Void: The Aural of Adolf Loos’s Architecture* in Harvard Design Magazine, No. 38 / Do You Read Me?

building better acoustics forums', thus, the less Loos could hear, the more his buildings began to suggest prosthetic devices – extensions, perhaps, of his trusted hearing trumpet.¹²⁵

In the Josephine Baker House (Fig. 18), according to Colomina, Loos designed the house as an optical device to dislocate the subject's gaze directed towards the window and the mirror, transforming the interior into an exterior view, a scene.¹²⁶ However, as Weizman pointed out, the swimming pool in which the sound of the swimmer together with the aurality of the space caused by the movement and water would be muted, trapped in the silent room not only amplifies the voyeuristic act of the observer but also a "communication through a kind of sign language"¹²⁷ via the spatial structure designed specifically for each of the rooms.

If Mies van der Rohe's plinth recreated the civitas and a place within which people could move and reposed together as citizens, Loos' "*Raumplan*" allowed tenants to experience to true character of privacy as a return to the condition in which individuals live part and parcel with nature. By necessity, Loos' radical separation of the private from public space imbricated his architecture in the rupturing of Le Corbusier's post-Fordist facade.

John Hejduk's: flatness of the vertical wall

*"If the Cubist canvas provided thought to the architects of the twenties, there may by some significance in the diamond canvases of Mondrian for architects today. The initial spatial evolution in the form of a new projected and exploded space were sought after in the Diamond Projects. Another way of looking at space and form can be adopted. The Renaissance space of perspective is a fact, the flat-shadow contained flux space of the post-Cubist canvas is a fact"*¹²⁸

¹²⁵ Weizman, Ines. *Turning into the Void: The Aurality of Adolf Loos's Architecture* in Harvard Design Magazine, No. 38 / Do You Read Me?

¹²⁶ Colomina, Beatriz. *Sexuality and Space*. New York: Princeton Architectural Press, 1992, p. 96

¹²⁷ Weizman, Ines. *Turning into the Void: The Aurality of Adolf Loos's Architecture* in Harvard Design Magazine, No. 38 / Do You Read Me?

¹²⁸ Hejduk, John. *Mask of Medusa: Works, 1947-1983*. Edited by Kim Shkapich; Introduction by Daniel Libeskind. New York: Rizzoli, 1985. p 48

(Hejduk 1985)

If van der Rohe's plinth and float glass panels served to disrupt the illusion of seamless continuity in Le Corbusier's design and exposed the "fool posing as king" nature on life in Le Corbusier's towers, it was John Hejduk's re-conception of the wall in the Wall House series, which challenged Le Corbusier's assumption that his Dom-ino diagram constituted a design most natural to the needs of human beings. I aim to draw the relevance of Hejduk's wall in his Wall House series as post-Fordism's abstraction of the "subjective planarity" found in Renaissance architecture to re-conceptualize the frontality in the homogenous façades of post-Fordist architecture. Thus, in Hejduk's work, we can see an active effort at effecting at "estrangement" from the forms of architecture which the architectural mainstream took to be natural, especially those forms in the Diamond Series and the Wall House series inspired by the work of Le Corbusier.

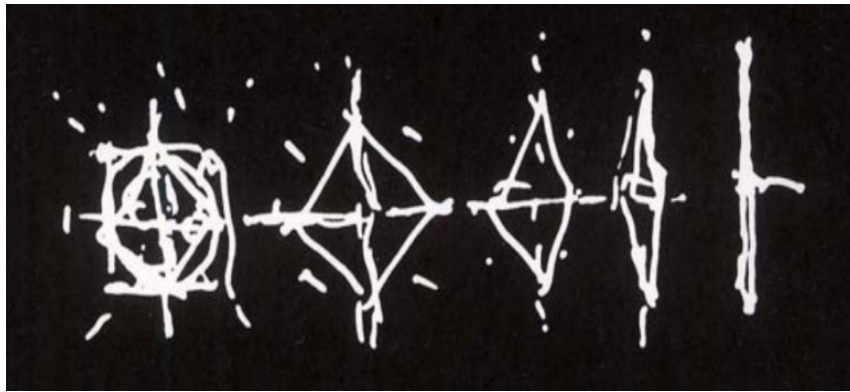


Fig. 19: John Hejduk: Diamond flattened into triangle, 1995

The formative period of the Diamond Series can be traced in Hejduk's sketches starting from 1985, where a series of sketches with a diamond figure appearing in axonometric drawings like those in (Fig. 19) appeared to be in transformation more and more in Hejduk's drawings. Of interest for Hejduk is the relationship between the precise linear drawings and the lively and painterly rendition of the conceptual and the sensual. In her PhD Dissertation, Weiling He investigates the concept of "Flatness and Otherness" of Hejduk's work as one of its main tenets. An interesting observation that came from the research was that He noticed the absence of perspective drawings in Hejduk's body of work, but with one exception, that of the one-point perspective of the diamond house (Fig. 20) in which he was investigating the relationship between

the meandering walls around the column grid,¹²⁹ This only perspective drawing was placed under the miscellaneous category for the two collections at the Canadian Center for Architecture (Diamond Series and the Wall House Series).

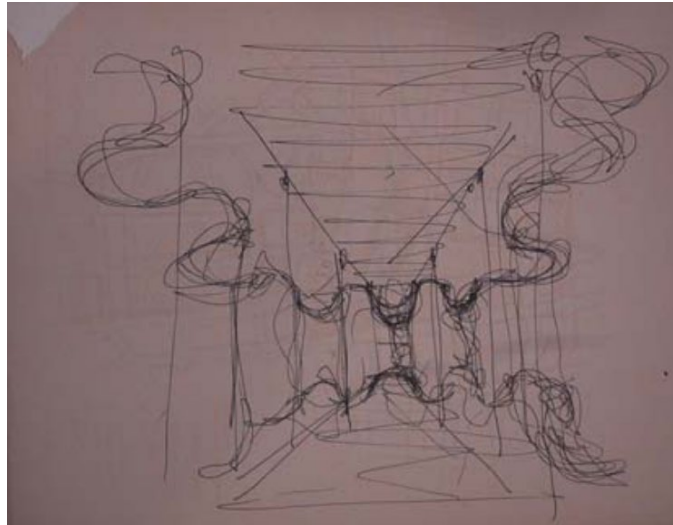


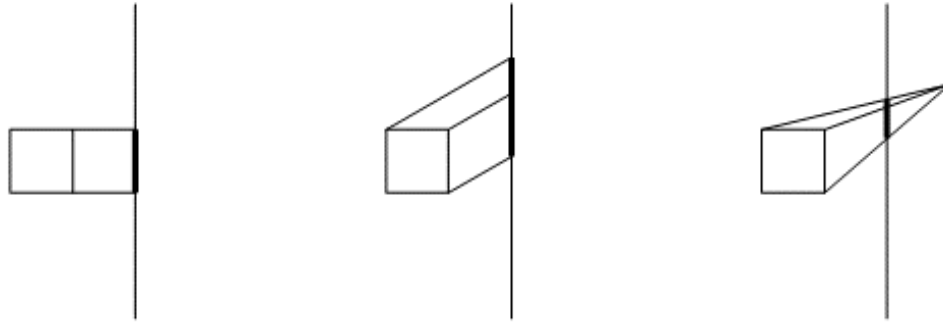
Fig. 20: John Hejduk: "The only perspective"

From interviews with Steven Hillyer and thorough research into Hejduk's writings, He drew the relationship between the idea of flatness with the mechanism of axonometric projection¹³⁰ of which, the projection of depth onto the two-dimensionality of the drawing plays a crucial role. That is, the two-dimensionality provides the logic of the space depicted by "moving away from realistic appearance and towards providing explanatory images"¹³¹. The conceptual defines the shapes, objects and demarcates the edges conditions of the depicted, meanwhile, the intensity of the colours and light draws upon sensations of the views.

¹²⁹ He, Weiling. *Flatness transformed and otherness embodied: A study of John Hejduk's Diamond Museum and Wall House 2 across the media of painting, poetry, architectural drawing and architectural space*. 2005. Georgia Institute of Technology, PhD dissertation. p. 172. (He)

¹³⁰ He, 174-175

¹³¹ He, 178



a. Orthographic Projection b. Oblique Projection c. Perspective Projection

Fig. 21: Weiling He: Projection Systems

In the moment of “hypothénuse”, the tension between periphery and centrality in the 45-degree rotation of the plan results in a void, as shown in the development of Hejduk’s diamond series, where Hejduk borrows from Mondrian and van Doesburg and Braque of the cubists to flatten the depth of architecture with 2D-axonometric drawings.

“for van Doesburg the diagonal was a means of adding vitality to his composition. For Mondrian such vitality had to be stated within the dynamics of the horizontal and vertical structure, the edges of his diamonds are pictorially active as they cut across the composition and state the limits of the pictorial field.”

Carmean 1979, p. 35

Hejduk’s investigation naturally leads to the development of the Wall as a strategy for flattening of spatial appearance in architecture to make way for a three-dimensional experience of space via architectural representation.

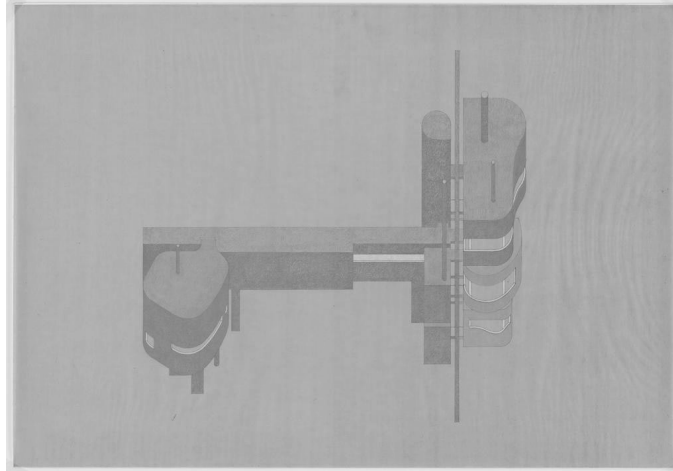


Fig. 22: John Hejduk: Wall House 2, 1995

In his Wall House 2 (Fig. 2), for instance, Hejduk, problematizes the notions of inner and outer; and of front and back. Upon first approach the wall house 2 appears a cluster of three windowed biomorphic shells (shells) hanging one above another from a flat wall which extends out on either side of the shells. As such, the wall appears to demarcate the rear of the house. If we try to gain entry, however, we find that only entrance to the house is a corridor on the side of the wall opposite to the shells and running perpendicular to the wall. The experience of the corridor is anti-promenade: a long horizontal window extends along the length of the corridor, but with a deep inset into the outside, so that the window provides almost now illumination for the corridor itself. It is as if the individual is being promised the illumination that will render him visible – an object of the gaze – but the promise is never fulfilled. At the end of the corridor, the entry to the first shell passes through a glazed in gap between the wall and the first shell. Again, the narrowness of the gap provides no illumination for the interior of the house, but does call into question our assumptions about where the house's interior begins – is the threshold at the door where the corridor meets the ground or here, at the entry to the first shell? The shell wall containing the entry to the shell is flat; the other wall is curved, therefore, without corners. To reach the other two shells of the house, we must re-enter the corridor beside which a spiral stair case will take us to entrances to the other shells. From the inside of the shells, it is clear that the walls are not facades, their reinforced concrete appearance indicates that they are load bearing. In all, the Wall House 2 seems determined to render our desire to see, a desire treated as natural by Le Corbusier, and our desire to be seen, a desire that Le Corbusier seems unconsciously to

supply, almost impossible. What the Wall House 2 seems to recapture is a space that serves our need for privacy and private intimate spaces upon which others cannot easily intrude.



Fig. 23: John Hejduk: Wall House 2, From corridor looking into living room

But the Wall House 2 embodies the service of another human need is indicated by Hejduk's oblique projections. In his projections, Hejduk rejects the perspective for a radical realism which recognizes that the appearance of perspective on a two-dimensional surface must be illusory. For Hejduk, if the projection is to capture, on a flat surface, all the regularities one encounters in three-dimensional space, the techniques of perspectival realism – the unified horizon, the vanishing pointing, the privileged vantage of the viewer must be expunged from the projection's geometry. Only then, is the projection free from the distortion of perspective realism and our tendency to passively accept those distortions as reality.

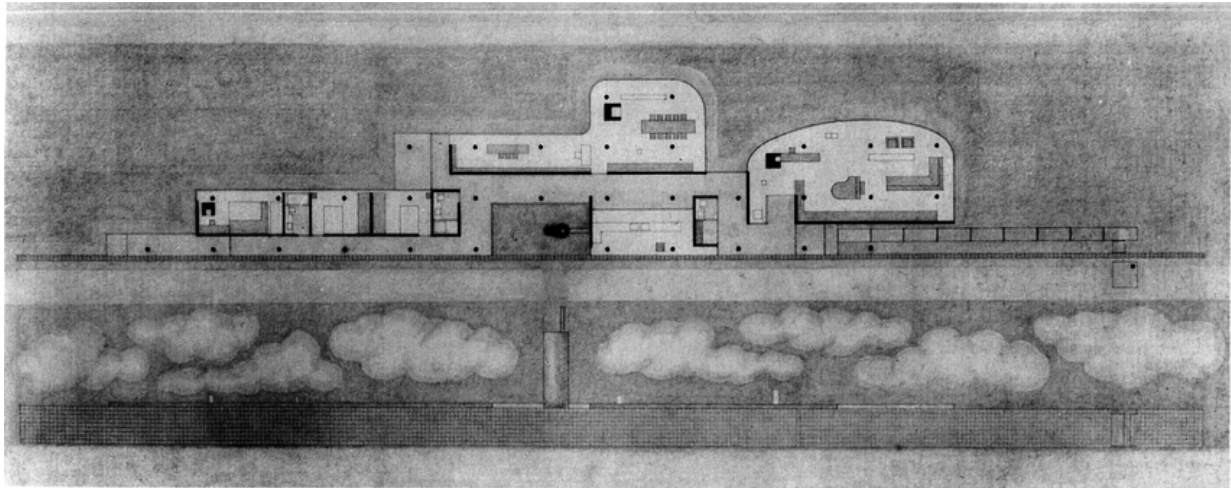


Fig. 24: John Hejduk: Grandfather Wall House, 1966-76

Hejduk's Wall House, in this sense, is not a recycling of imageries or meanings from the past; rather, it is an outer moment (moment of hypotenuse)¹³² of opening for the engaged subject. Hejduk's concern was to represent the profundity of a situation, an anti-scenographic theatricality generated by the experience of the architectural presentation rather than the work's semantic. As discussed by Lamberto Amistadi in "*Structures for the imagination*", the function of Hejduk's drawing of the Grandfather Wall House Project (Fig. 21) was considered by the architectural historian Richard Pommer as the creation of "new architecture of imagination is nowhere more explicit than in this work."¹³³ where the relationship between the ground and the sky is defamiliarized. The observer is positioned in an uncomfortable place where the flatness of the architectural object demands focus and imagination simultaneously to enter the presented place of imagination. The effect is achieved in the sense of objects displayed, such as the biomorphic clouds spaced between the plan and elevation, opens a moment of dream-like imagery between the rationalization of the plan and the quantification of the elevation.

¹³² Hejduk, John, *Mask of Medusa: Works 1947-1983*. New York: Rizzoli International, 1985. pp. 65

¹³³ Amistadi, Lamberto. *Structures for the imagination*. Festival dell'Architettura Magazine. anno V. 21-30. (2014). 10.12838/issn.20390491/n27-28.2014/2.

5. AN ARCHITECTURAL TOUR ON FOOT

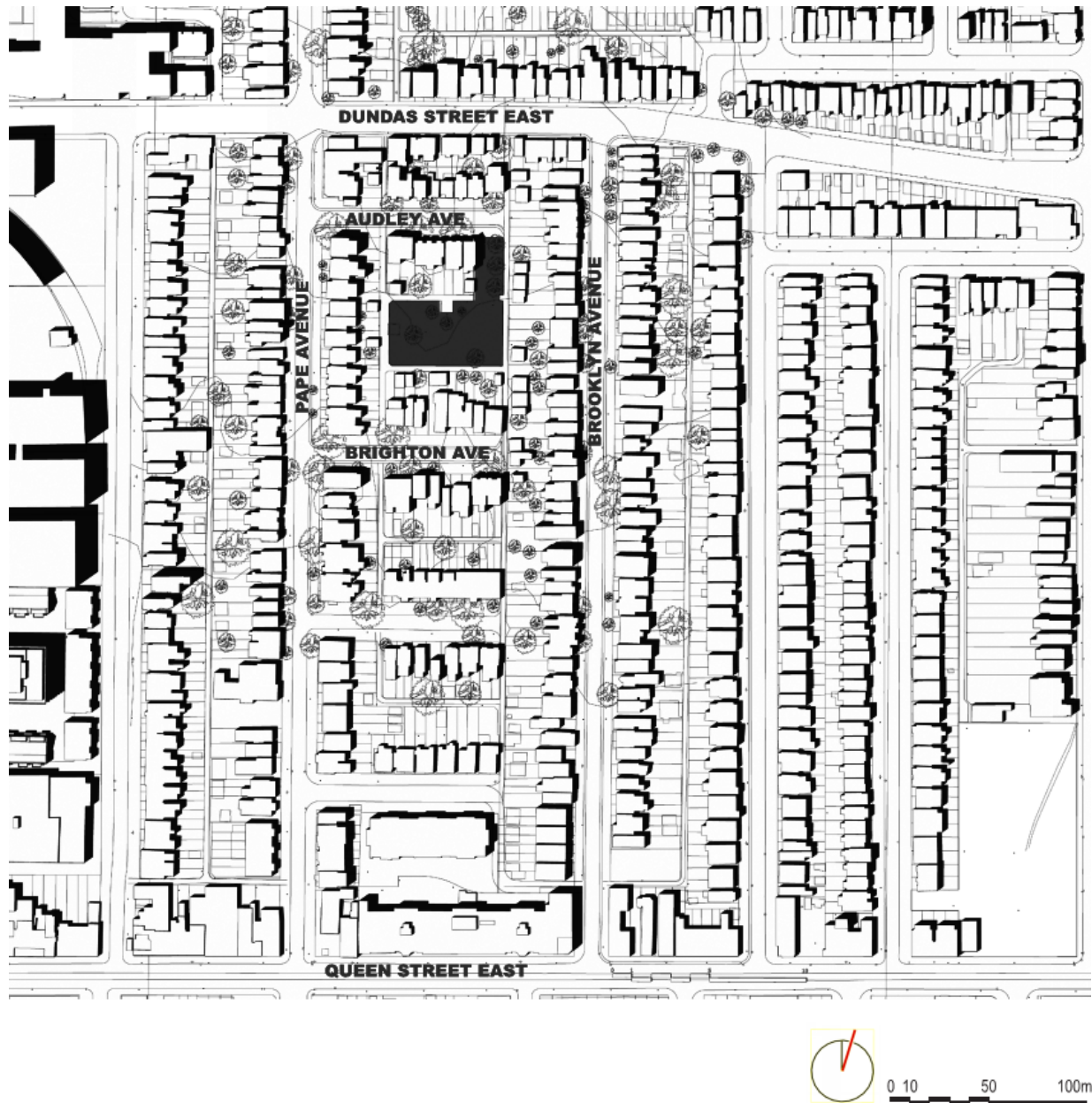


Fig. 25: Hideaway Park Folly: Context Plan, by Author

This chapter of the thesis describes and discusses the Hideaway Park that captures the author's interest at first sight. The Hideaway Park is surrounded by back lanes and the back yards of houses. The exception is the north entrance to the park. This faces onto Audley Avenue with a frontage of 14.7m. The park is in the shape of a backward "L" with the length of the

horizontal, east-west, line (at 58m) almost equaling that of the vertical, north-south, line (at 67m), though the width of the horizontal line (at 36m) is much greater than that of the vertical (at 14.7m).

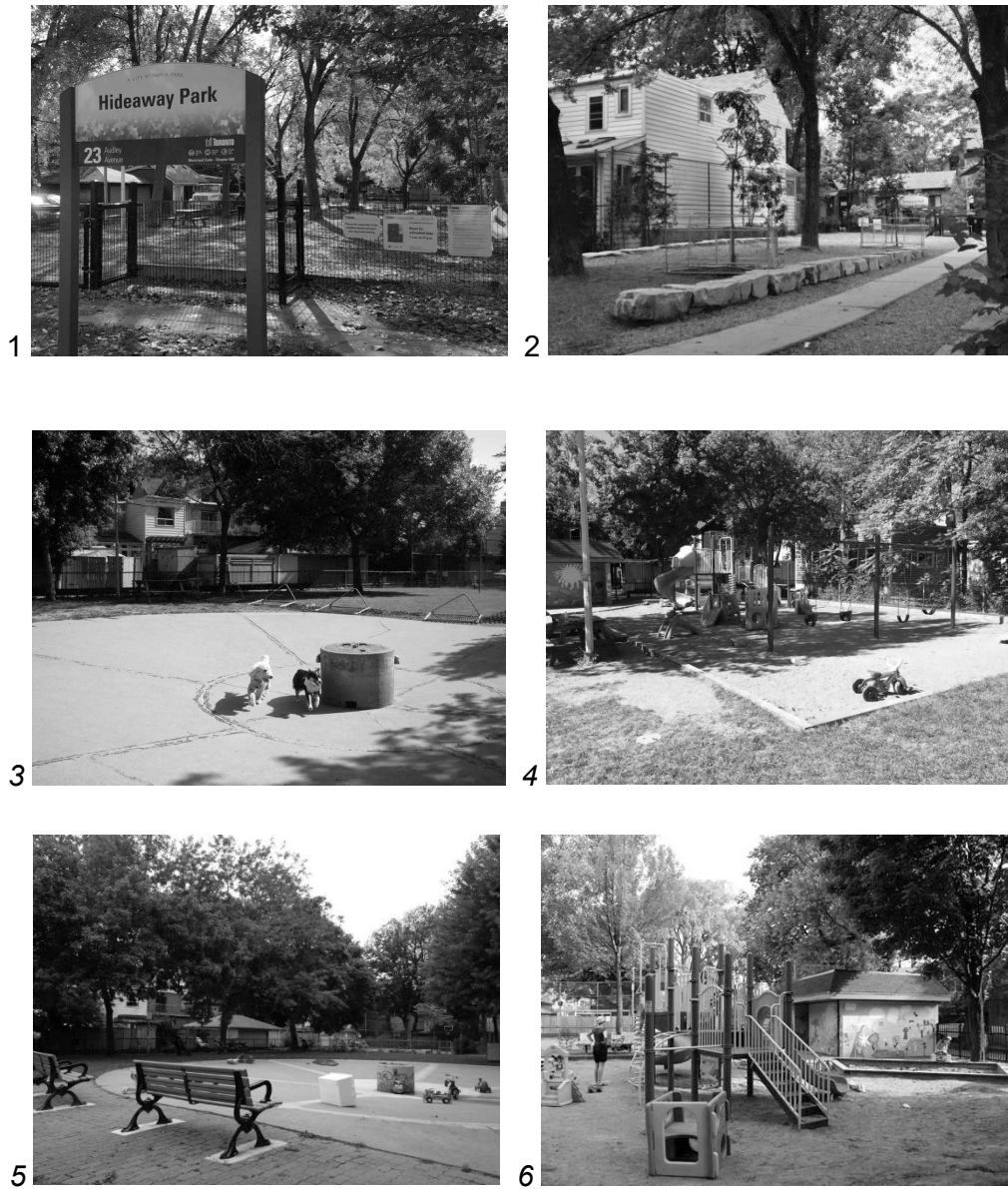


Fig. 26: Hideaway Park, existing conditions, by Author

There are four entrances to the folly, one from each point of the compass. Each entrance opens onto a descending pathway which meets its entrance and ground level and converges with the other paths in an under-pass near the southeast corner of the park. As the east and south entrances to the folly are also very near to the park's south east corner, they are very short, comprising nothing more, in fact, than a flight of stairs and a landing plinth each. By contrast, the paths from the north and west entrances are very long descending ramps taking on the character of trenches the closer to the underpass they get. The purpose of the four pathways is to take visitors on an investigation of the potential experience of space reminiscent to that effected by the corridor of Hejduk's Wall House 2, an investigation that exposes the environment of the folly as one traversing the site; and more importantly, effecting the potential awareness of one's body and action in the public realm.

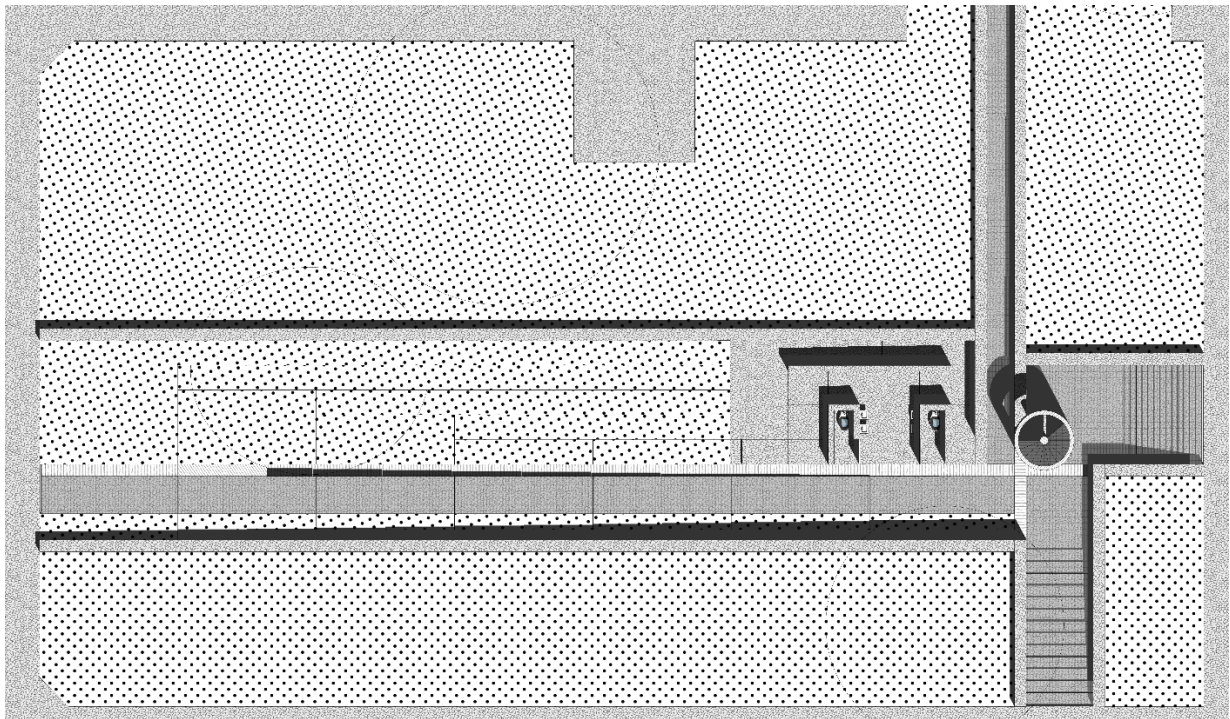


Fig. 27: Hideaway Park Folly, Underpass Commons, by Author

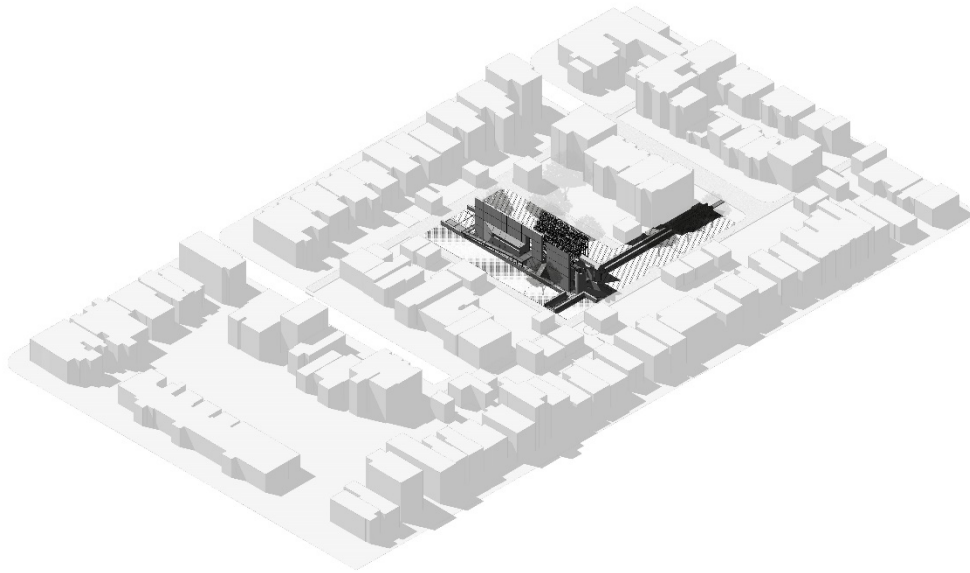


Fig. 28: Hideaway Park Folly, Axonometric - SE Corner, by Author

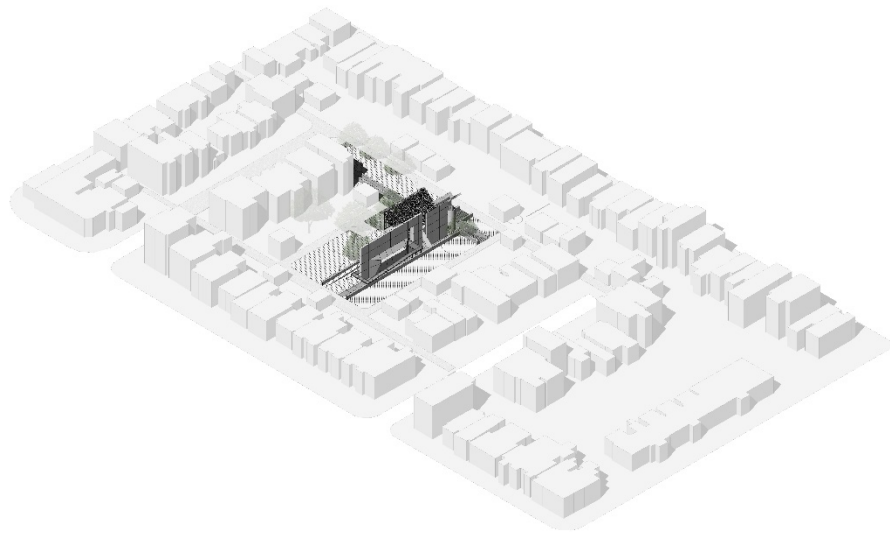


Fig. 29: Hideaway Park Folly, Axonometric - NE Corner, by Author

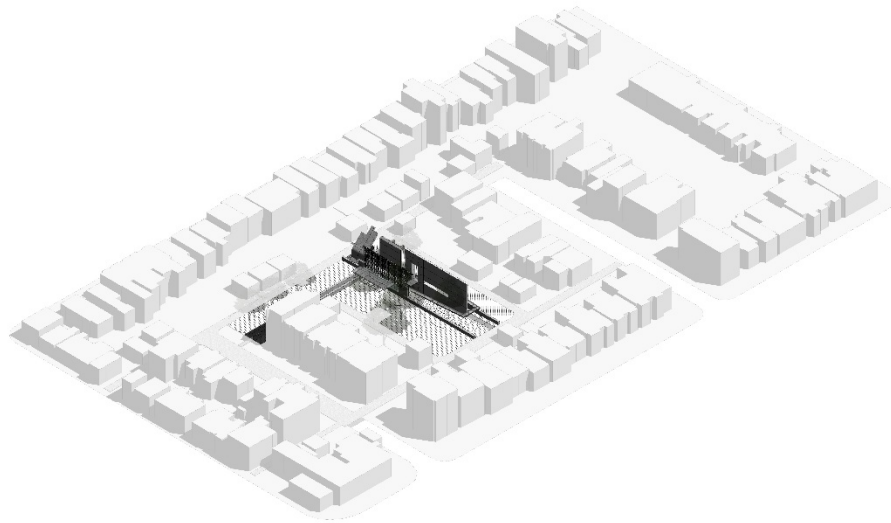


Fig. 30: Hideaway Park Folly, Axonometric - NW Corner, by Author

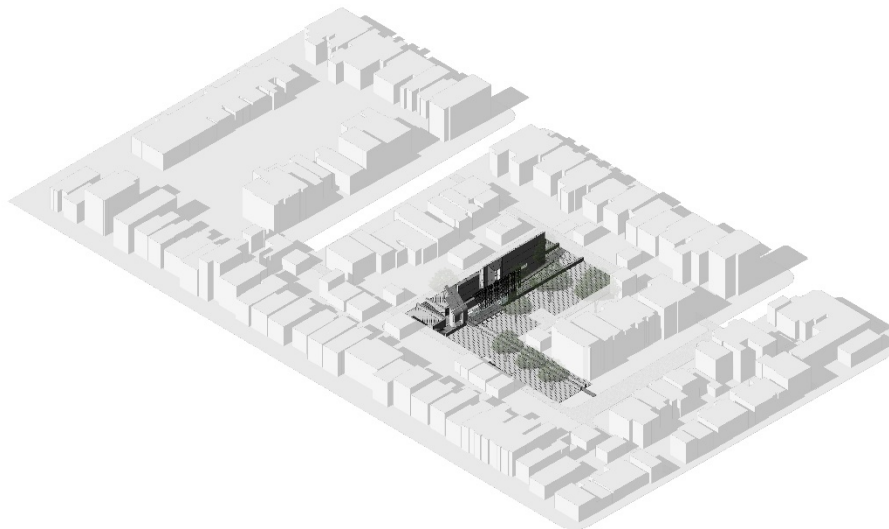
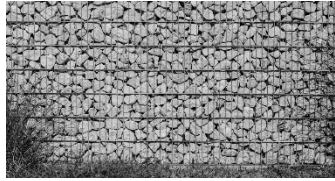


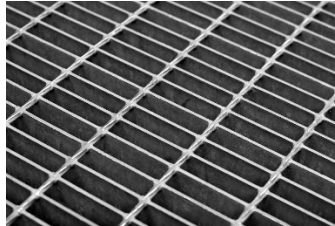
Fig. 31: Hideaway Park Folly, Axonometric - SW Corner, by Author



1-River Stone



2-Gabion Wall



3-Metal Grate



4-Cast-in Place Concrete



5-Wooden Trusses



6-Cedar Roof Shingles



7-Outdoor Curtains

Fig. 32: Hideaway Park Folly: material inspirations

Along the east pathway, the olfactory quality of the earth seeps through the gabion retaining walls registering as the smell of grass and soil belonging to nature. The squeaking sounds of the wheels on the baby strollers rubbing against the mesh wires of the gabion walls travel from one end to another, making each movement in the space lively. The laughter of the children from the playground bounces against the smooth surface of the folly's 10 meters high reinforced concrete wall reaching deep in and around the nooks and crannies of the folly. The visitors are encouraged to feel the architecture and re-invigorate the sense of the data available to them; similar to that of a child engaging with an object in the playground for the first time.

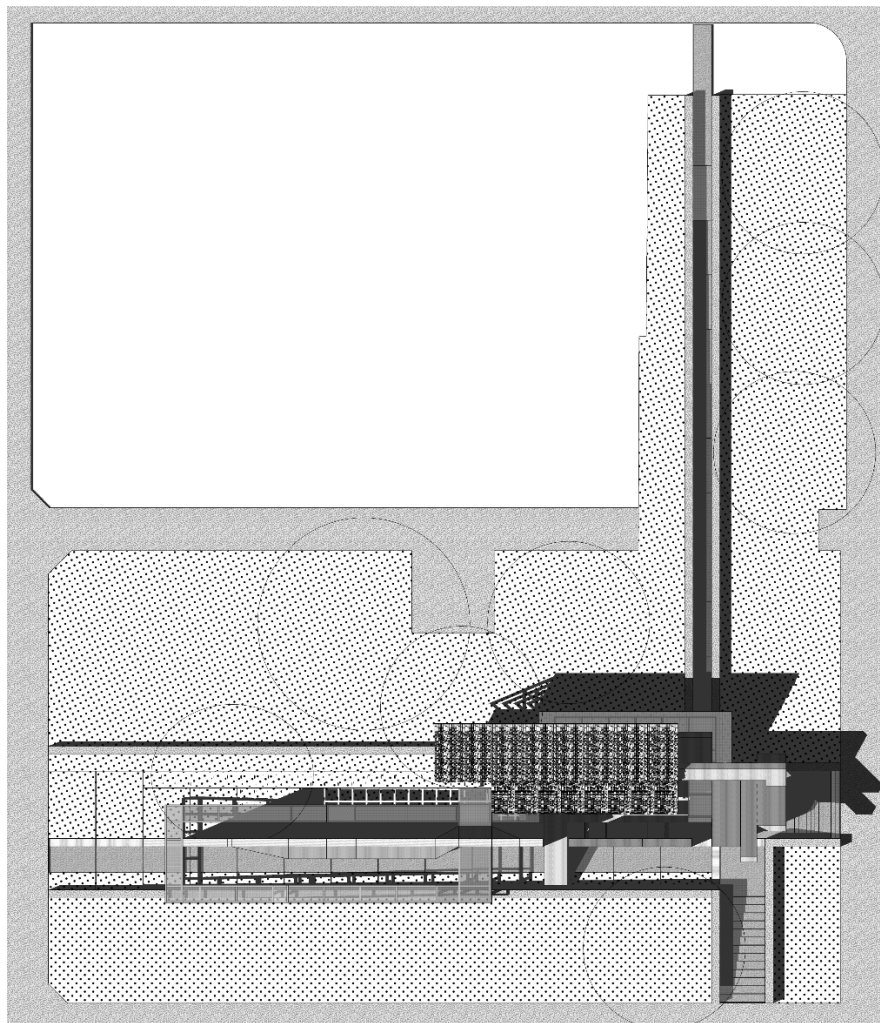


Fig. 33: Hideaway Park Folly, Roof Plan, by Author

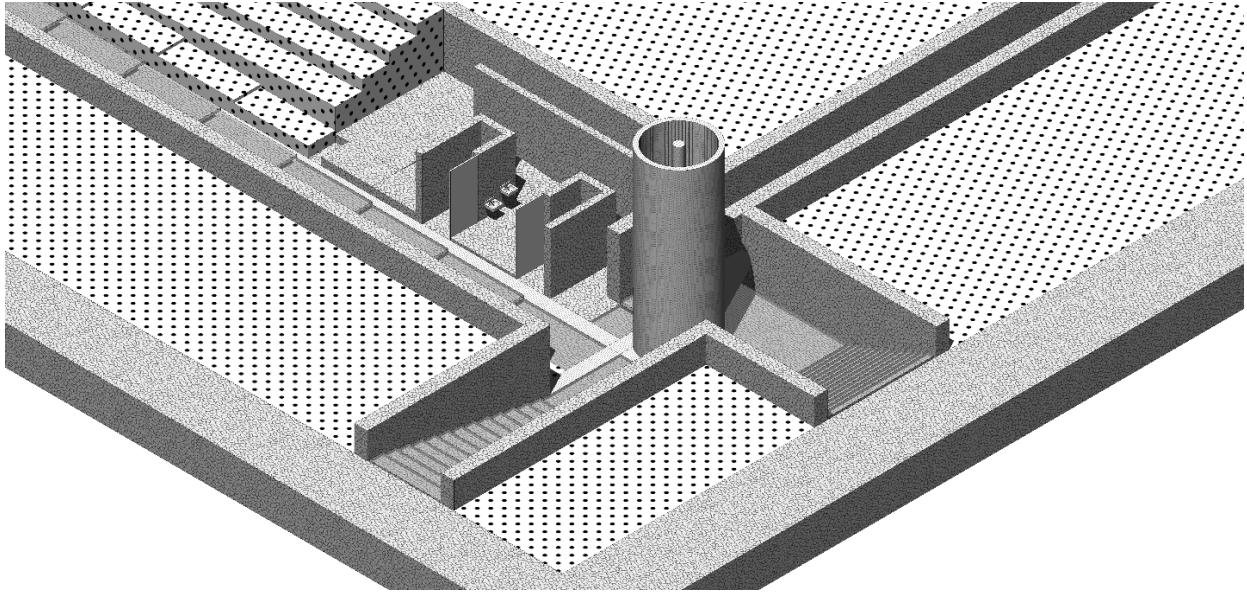


Fig. 34: Hideaway Park Folly: Washroom, by Author

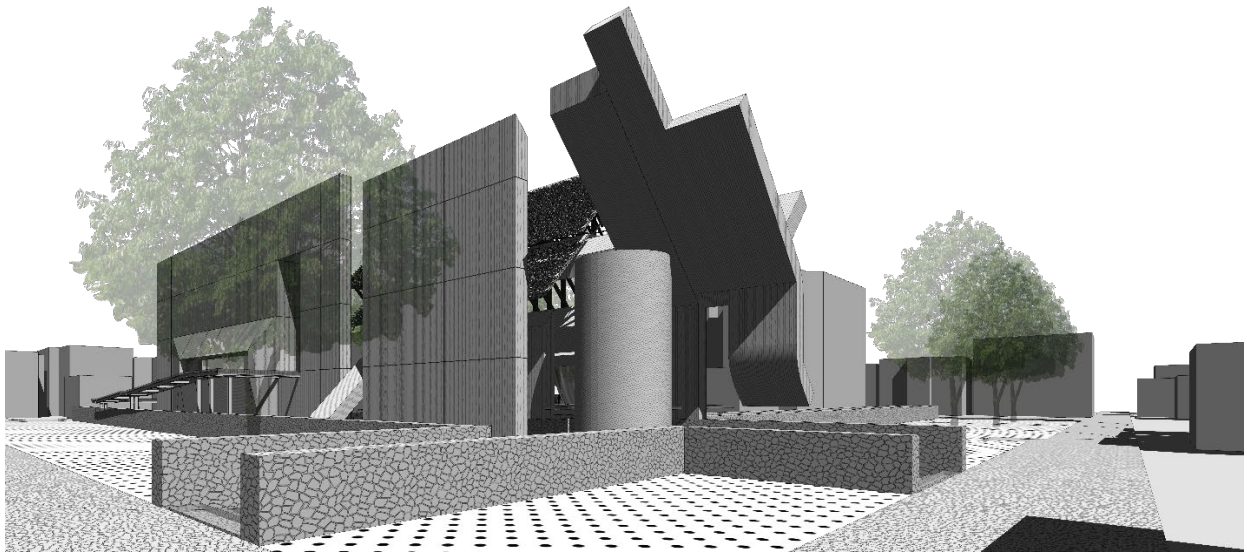


Fig. 35: Hideaway Park Folly: South-East Corner, by Author

To do so, each pathway slopes at a unique interval to make clear the orientation for the visitors upon entry. The four pathways serve as a conduit to bring visitors from the park's four entry points to a common sub-terrain foyer directly underneath the plinth, with the intent of unifying the site. By fully submerging the visitors beneath ground level by the time they get to the foyer,

a “place of absence”¹³⁴ is achieved, not only in the visual sense, but also in the absence of light itself. The long narrow width of the north pathway prolongs the experience of a deep frontal perspective, leading the visitors directly to the main wall, where the end of the space expands into one of light and air causing the bodies of the visitors to experience an acute awareness of compression and openness.

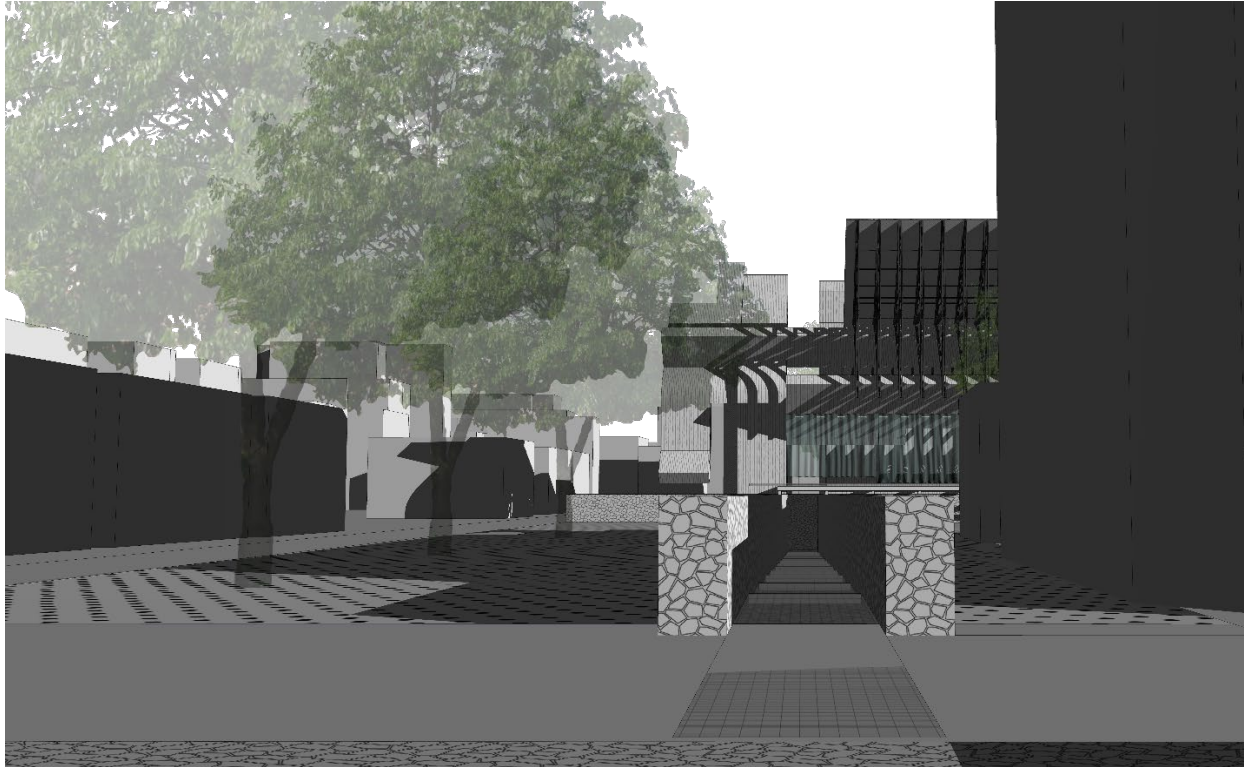


Fig. 36: Hideaway Park Folly: Main Pathways, by Author

At 2.7m in depth and cover, the underpass has a subterranean feel to it, yet the absence of doors and close proximity of pathway entrances preclude its giving visitors the sense that they have entered an interior space. Also, the paths meet in the underpass perpendicular to each other in such a way that visitors must turn in order to leave their pathways. Having arrived at the

¹³⁴ “place of absence, man, aware of the impossibility of restoring syntheses, and having once understood the negativeness of the metropolis, as the spectator of an entertainment which is truly total because it does not exist, is forced into pantomime.” See Tafuri, Manfredo. *The Sphere and the Labyrinth*. The MIT Press, 1978. pp. 111.

underpass, visitors are confronted by two exits separated from those afforded by the pathways.

The first exit, to the park wash rooms, faces north, at the meeting point of the west and north entrance pathways. This exit opens onto a passage on the right side of the wash rooms which turns left to reach the entries to each of the washrooms. The separate washroom entrances are side by side and face north. Even the washrooms do not present a true interior materially, as the galian wall suggests an exterior surface. Aside from that, neither the exit into the washrooms, nor the entrances to each of the washrooms has doors (doors are reserved for the stalls only). Also, extending 1m from the south wall shared by the washrooms and the passage to them, is a space which is open to the sky. The space, however, is hidden at ground level, between a tall wall and a screen to be described later on the tour.

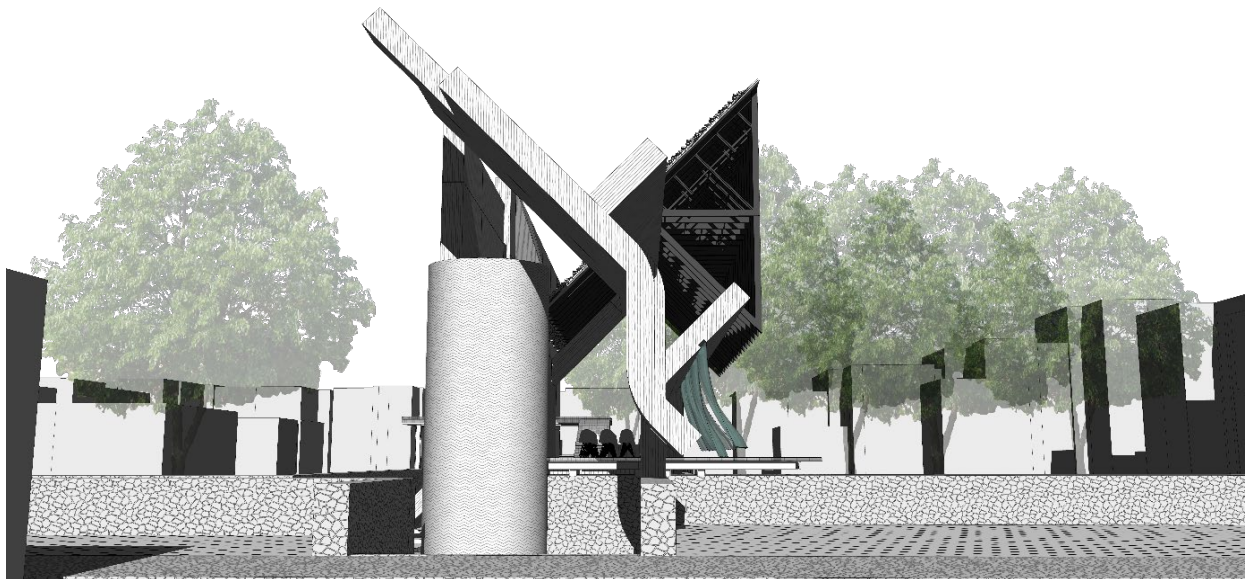


Fig. 37: Hideaway Park Folly: East Entrance, by Author

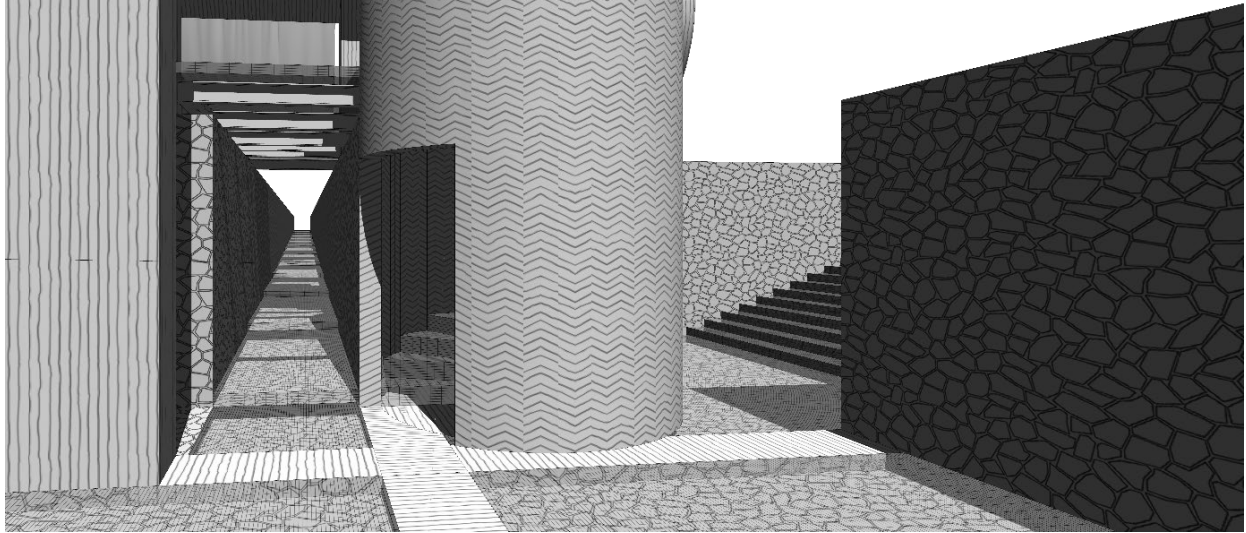


Fig. 38: Hideaway Park Folly: underpass looking north, by Author

The second exit, kitty-corner and south-east to the exit opens to the west into a cylindrical stair well housing a spiral stair case to the folly above. The cylinder encases the stair case in a tight glove like fit. As the cylindrical stair well has no ceiling the experience of climbing the stairs is like that of coming out of a well. The familiar rectilinear exit door opening in the stairwell cylinder relinquishes the visitor on folly level 3m above the underpass floor and facing north.

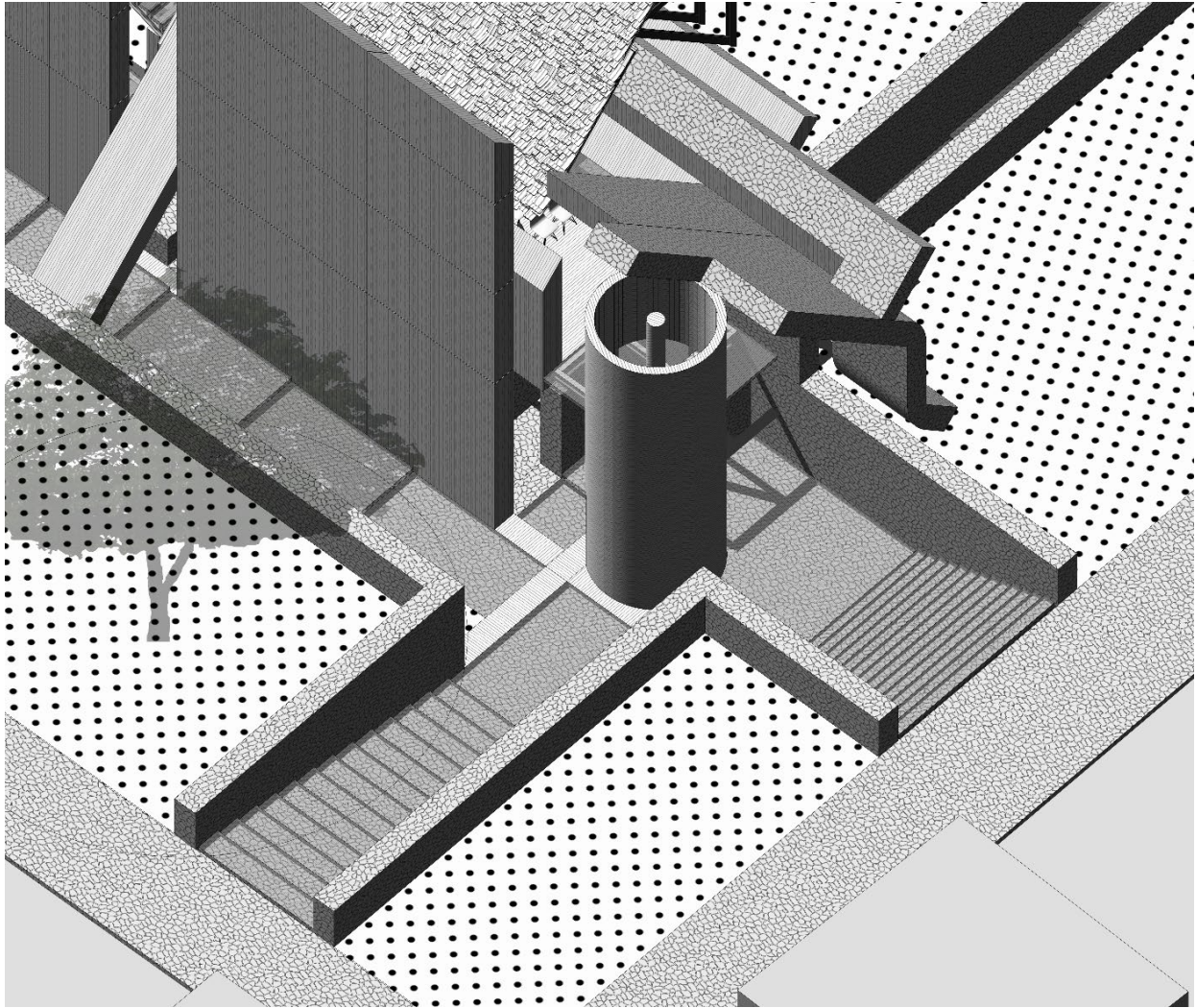


Fig. 39: Hideaway Park Folly: Cylinder Staircase, by Author

To rupture the continuity of the experience in service of sequencing an unusualness to defamiliarize the visitors, the uncommon spiral staircase beckons the visitors, in the manner of Hejduk's dislocation of otherness, to climb with care, not because it is unsafe, but because it is an unfamiliar to and unexpected part of our day-to-day activity. Another uncommon and perhaps suffocating feature is the containment of the spiral staircase within an opaque cylindrical envelope whose fit is so tight as to be claustrophobic. The approach taken for the spiral staircase, the only intentional circulation, is not that of Le Corbusier's "promenade architecture" where the visual experience of external views framed and objects displayed are synthesized by successions of movements along a designed path, but that of discontinuity evidenced in the corridor of Hejduk's Wall House 2.

Enclosing the spiral staircase in a tight cylinder challenges the body to engage with day-to-day generic objects; in this case, the stairs and handrails as part of a disquieting experience, rather than as elements of what are comfortably familiar. Again, this is not the visual device of satisfaction achieved in Le Corbusier's "Promenade Architecture", but a discomfort of the usualness of sensation (open air and light from above as the only orientation device) body (movement in a confined space) and sight (looking at the steps below)

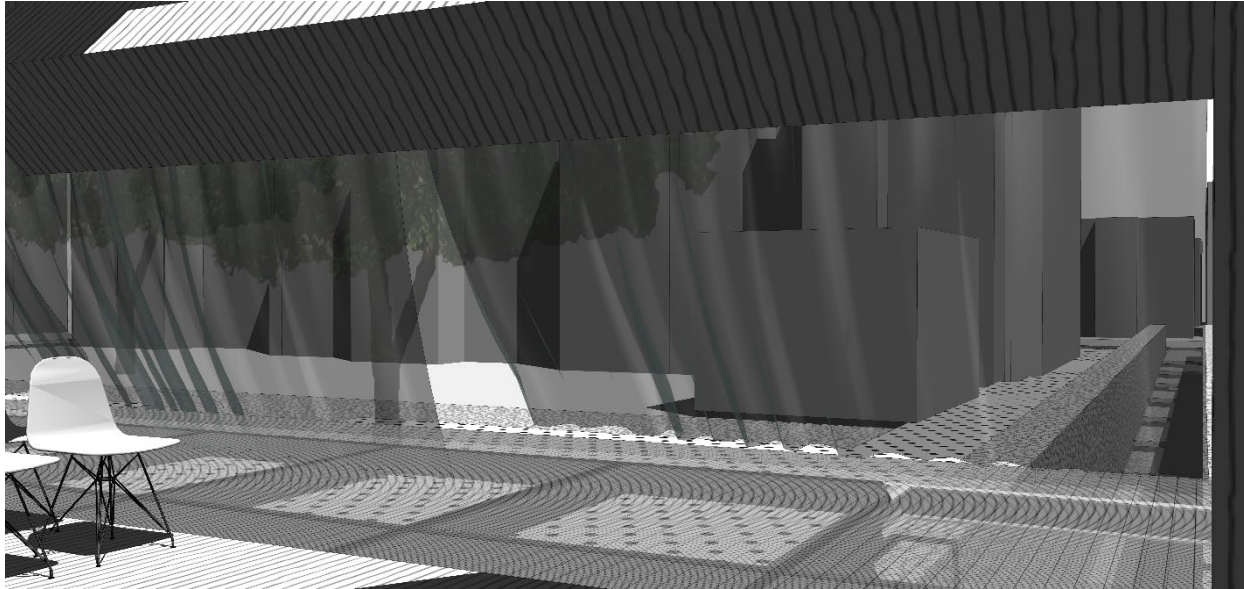


Fig. 40: Hideaway Park Folly: plinth at first site, by Author

Stepping out of the cylinder, visitors will find themselves on the south east corner of a plinth 8m wide and 14m long; their first view from the cylinder will be curtains, hanging 3m to the north of the cylinder. The curtains are suspended from a slanted beam running east and west 20m. Turning away from the curtains to the west, visitors will find that the plinth is a roofed space, the roof supported by a slanted column to the west of the cylinder. On the south side of the roofed area opposite of that of the curtains, there is a concrete screen. From this vantage, the roofed space will be seen to contain 8 rows of 4 chairs facing visitors, and giving them the sense that they have entered onto a theatre stage in front of seating reserved for an audience. Any sense of interiority on the plinth is belied, however, by the absence of walls or coverings at the east or west ends of the roofed plinth area.

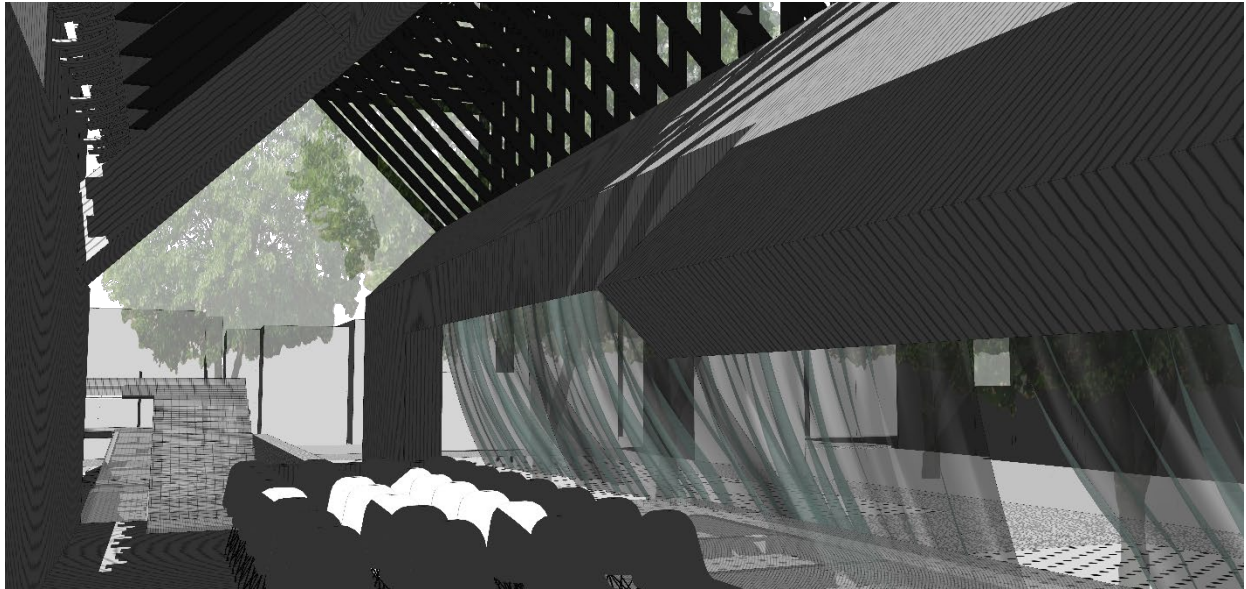


Fig. 41: Hideaway Park Folly: plinth at first site, by Author

In the passages to the main gallery and then up the staircase, the visitors are given no hint of the plinth or the experience of its location. Thus, the plinth takes the visitors by surprise as they emerge from the cylinder. However, to borrow the Miesian plinth as a paradoxical device of connection and separation, the placement of the plinth over the subterranean foyer is intentional, with the aim of establishing a Lacanian psychoanalytic dialogue and cast the visitors in the role of actors in relation to an audience that is not even there. As it was in the Mies's Farnsworth's house, the feeling of being on stage with their back to the audience is replicated in the case of the folly. The relationship between the audience and the main character is one of distance, in other words, the transfiguration of the subject from an audience into the main character is made explicit to the visitor in their procession from underground onto the plinth and new datum.

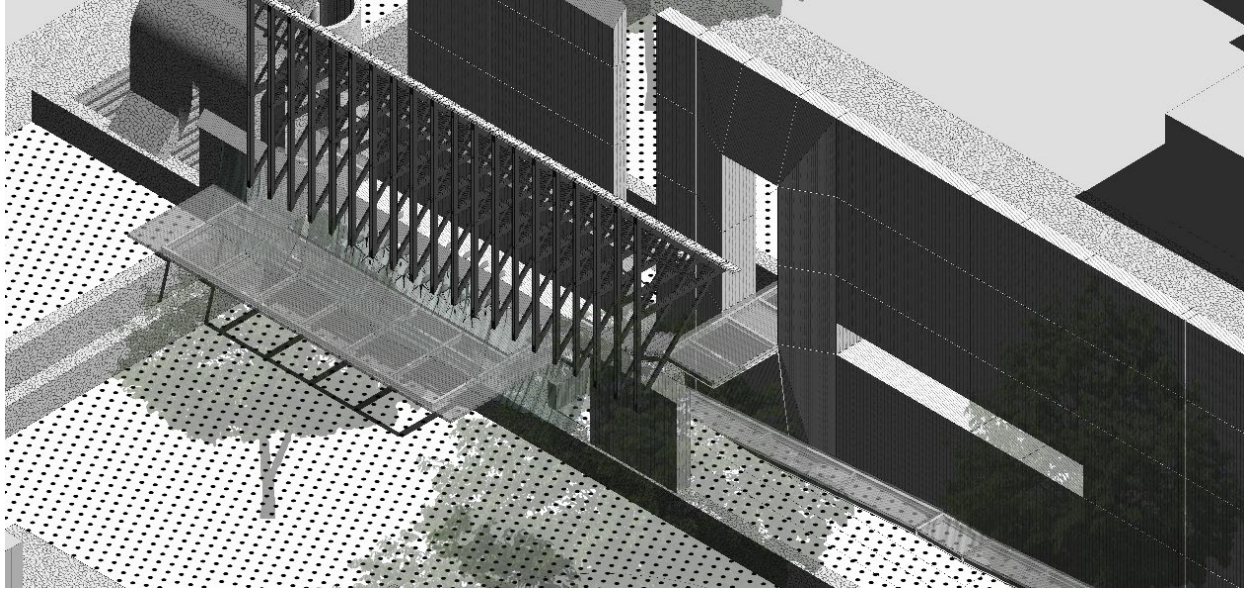


Fig. 42: Hideaway Park Folly: plinth as stage, by Author

Why and when reaching the plinth, do visitors unwittingly find themselves in the role of one view: as an actor in front of his expectant audience? First, the plinth is raised above the grass lawn, in the centre of the park and its floor is a metal grate through which the visitors can feel fresh air blowing from below. Second, the visitors find themselves situated against a wall facing the lawn, hovering above them is an inverted roof, and in front of them, there are curtains like those on a stage waiting to open before their attentive audience.

In assigning the visitors their new role as one viewed, the plinth alerts them to a truth which they have always known but have been allowed to suppress. It is that, if we insist on living without walls, not only are we afforded a view, but everyone is afforded one of us. Such a condition, it is appropriate only to a truly public place, where we are liable to put our best foot forward. In private spaces, as Mies van der Rohe illustrated with his Farnsworth house, our activities are too mundane, too intimate and too bare watching. If we are to live in glass houses, we must have recourse to curtain as does the enclosure on the plinth.

Moreover, immediately south of the plinth and running parallel to the plinth screen and curtains is a wall towering 10m over the folly and extending east and west over almost the entirety of the park's width. If visitors follow the aisle created by a space between the screen and the audience seating, they will clear the screen and come to a stair case leading to a ramp. Turning to the left, visitors will find that the ramp adjoins the towering wall 2m south of the screen. At this point, the wall presents a vertical opening leading to an inclining ramp which runs parallel to the

south side of the wall all the way to, and beyond its western end (Hejduk's moment of hypothermose).

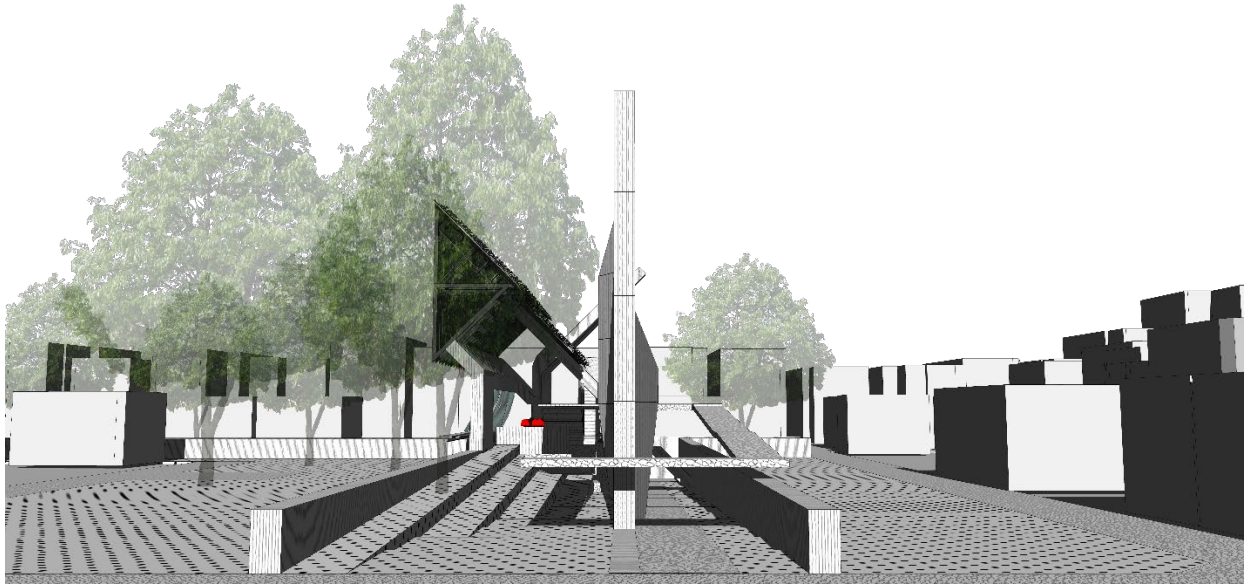


Fig. 43: Hideaway Park Folly: Traversing Ramp at west elevation, by Author

Travelling down the ramp, visitors pass a horizontal opening, 11m wide. Along the opening, the wall protrudes out towards the ramp, making the opening very thick. Since the opening is low to the ramp surface, its thickness inhibits any view or light it can afford. Once at the end of the wall, the inclining ramp returns around to the wall's north side where it continues its parallel incline. The first half of the ramp's incline north of the wall extends above two stylobates and towards their termination point. The Stylobates adjoin each other in perpendicular, one descending from the west and the other from the north, starting about 6m from the wall. The ramp comes level with the termination points of the stylobates when it passes the west end of the plinth but 2.2m below it. If visitors continue down the ramp from this point they will find themselves in front the entrances to each of the two washrooms. Alternatively, visitors can step off the ramp into either of the stylobates, both of which would take them into a lawn, located to the north of the wall, which accounts for most of the park's area.

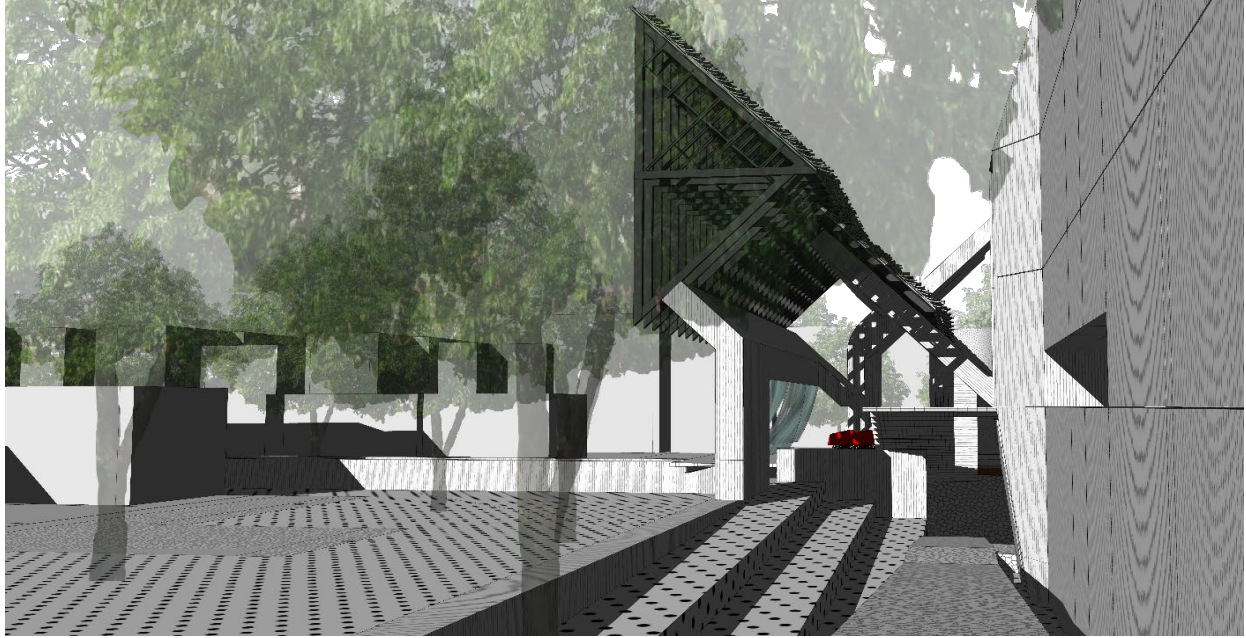


Fig. 44: Hideaway Park Folly, Traversing ramp at ribbon window, by Author

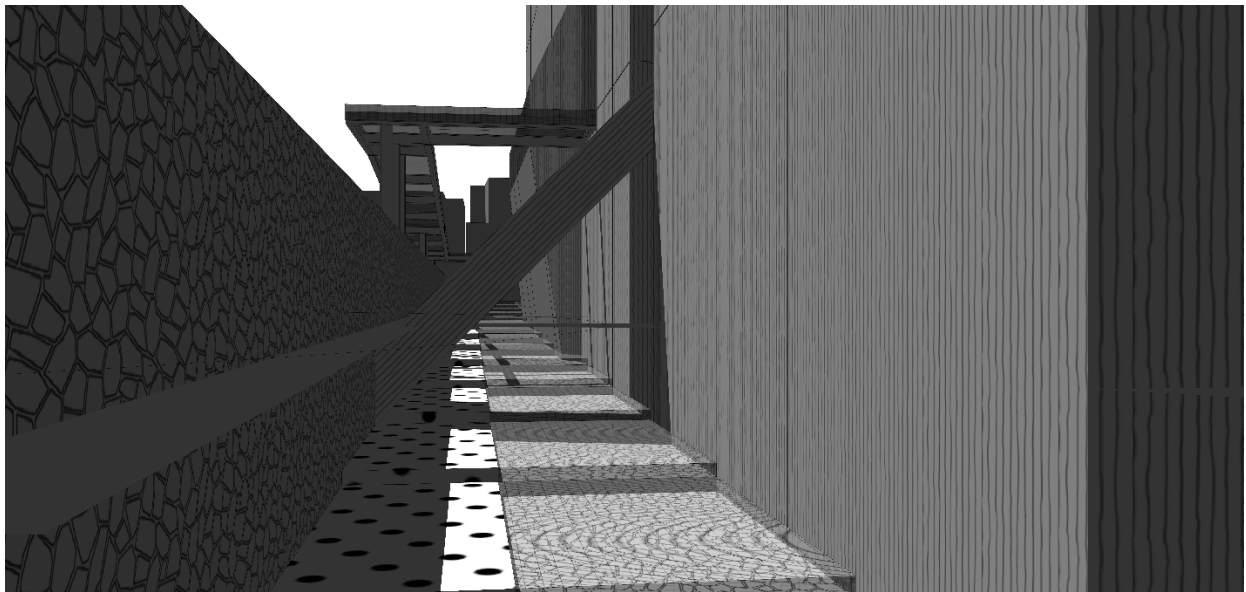


Fig. 45: Hideaway Park Folly: Traversing ramp at ribbon window, by Author

Confrontations with the unexpected role of one viewed will be unsettling for the visitors. So much so, that they may wish to retreat through the vertical window in the wall at the back of the plinth. Having done so, the visitors will find themselves on a ramp flanking the wall. As they proceed down the ramp, the visitors will pass a horizontal window. Both the vertical and horizontal

windows expose the thickness of the wall suggesting the appearance as the front of building. And yet, the appearance and positioning of the windows especially the horizontal one belies their status as windows. That is, as visitors pass by the horizontal window they find that its depth, owing to the wall's thickness, and the fact that this side of the wall has a southern exposure, gives off very little light. Further its position, close to the bottom of the wall offers almost no view of what is on the other side. Finally, when visitors reach the bottom of the ramp and the end of the wall, they will be led to turn the corner to seek another entrance. Of course, there is no corner. The wall, while seeming to be frontage, fronts on no building at all. Thus, the visitors will find a building which is no building, and pass a wall which is no wall and to turn a corner in which there is no corner. In so doing, the visitors would have the impression that they have re-entered the park when in fact, they have not; and which they have never left the park, even when they have.

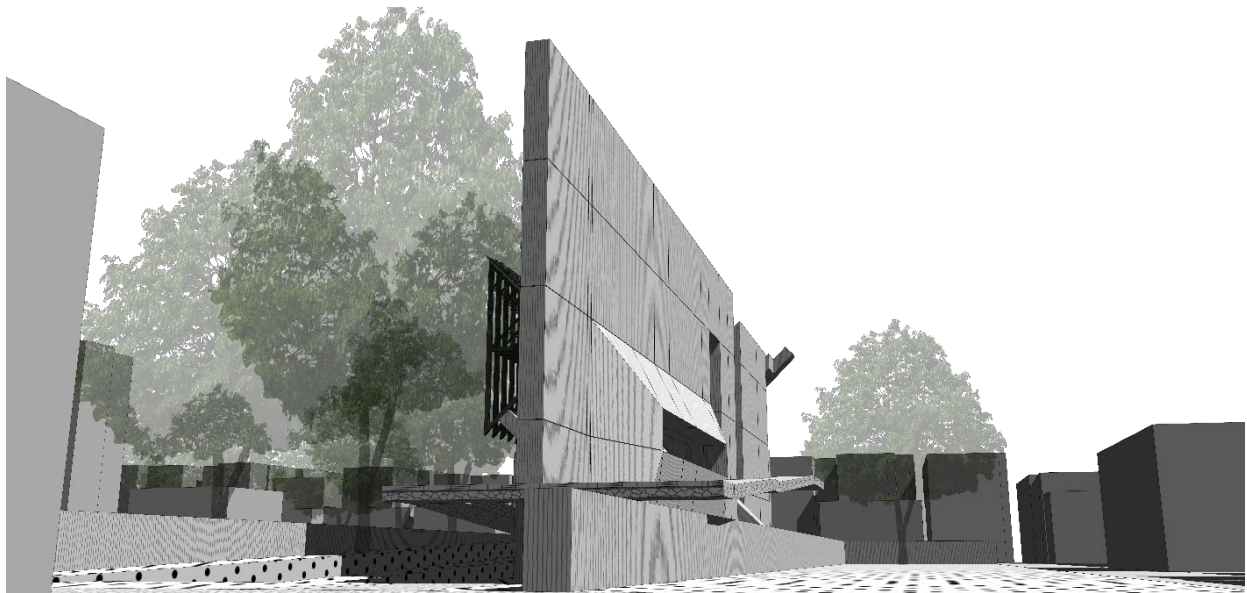


Fig. 46: Hideaway Park Folly: horizontal ribbon window, by Author

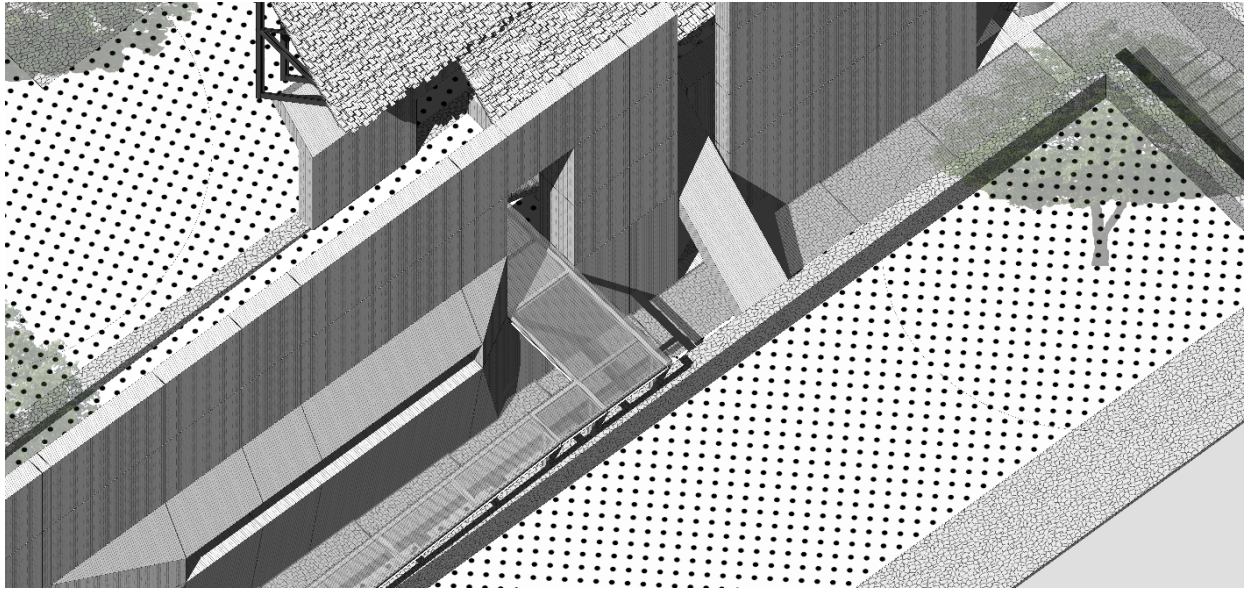


Fig. 47: Hideaway Park Folly: horizontal ribbon window, by Author



Fig. 48: Hideaway Park Folly, True East Elevations, by Author

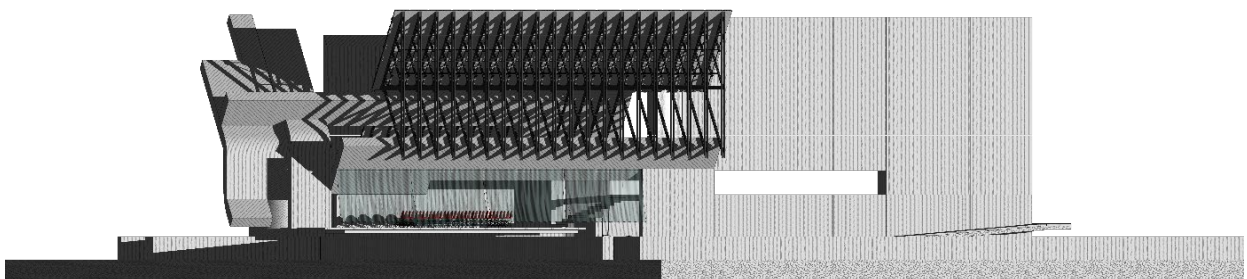


Fig. 49: Hideaway Park Folly, True North Elevations, by Author

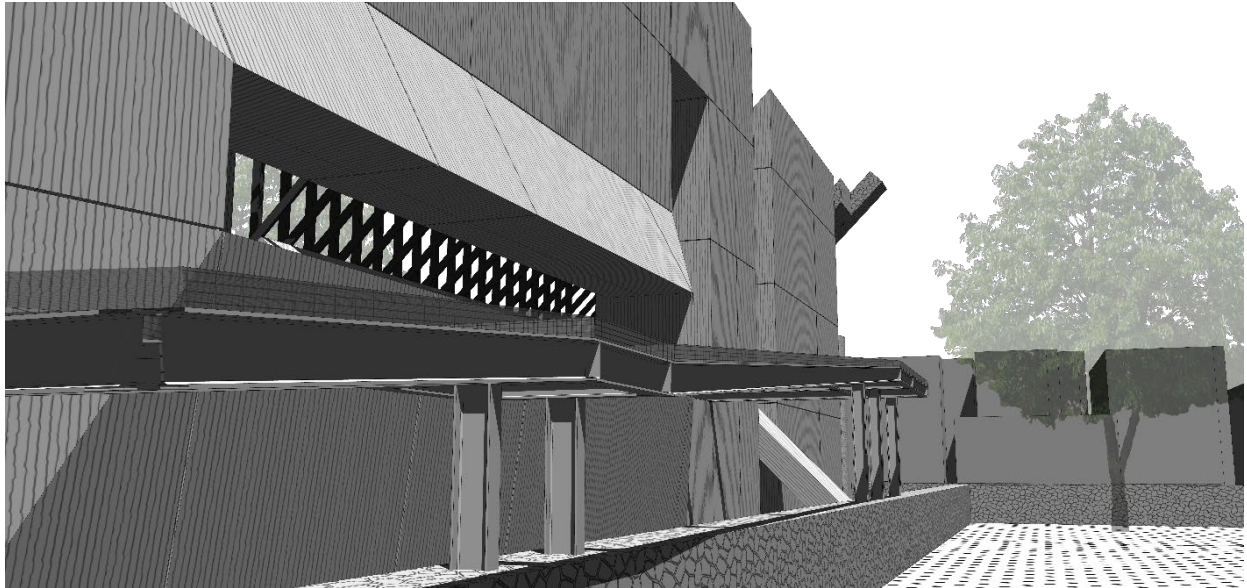


Fig. 50: Hideaway Park Folly: horizontal ribbon window, by Author

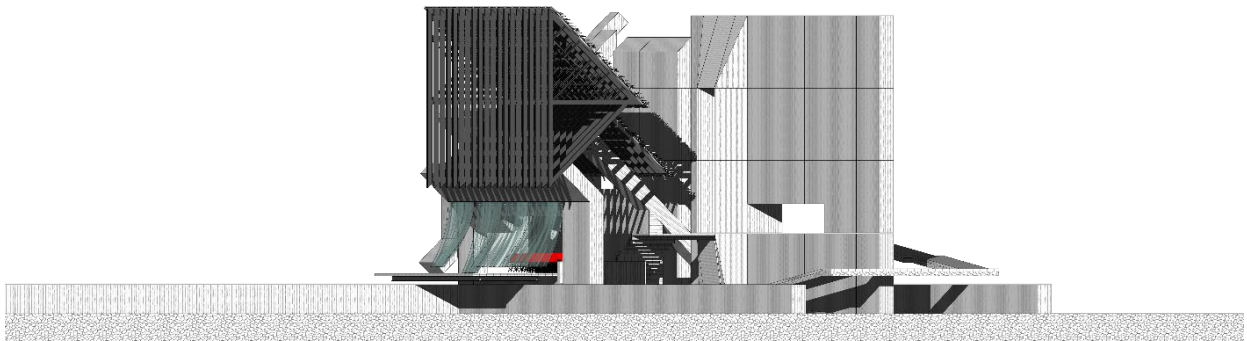


Fig. 51: Hideaway Park Folly, True West Elevations, by Author

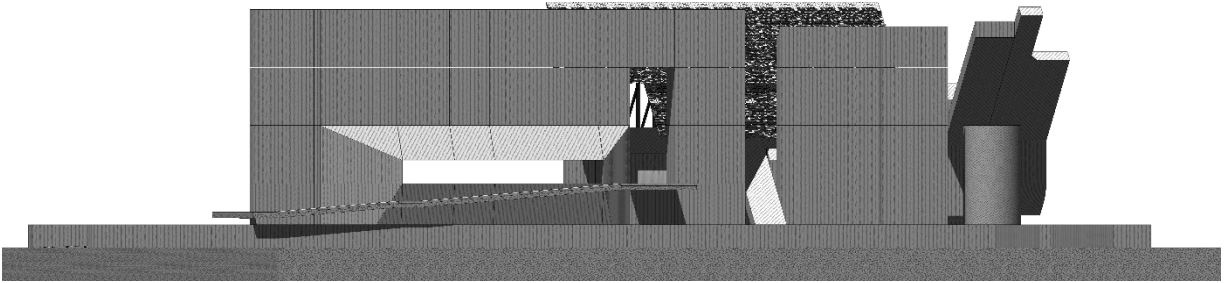


Fig. 52: Hideaway Park Folly, True South Elevation, by Author

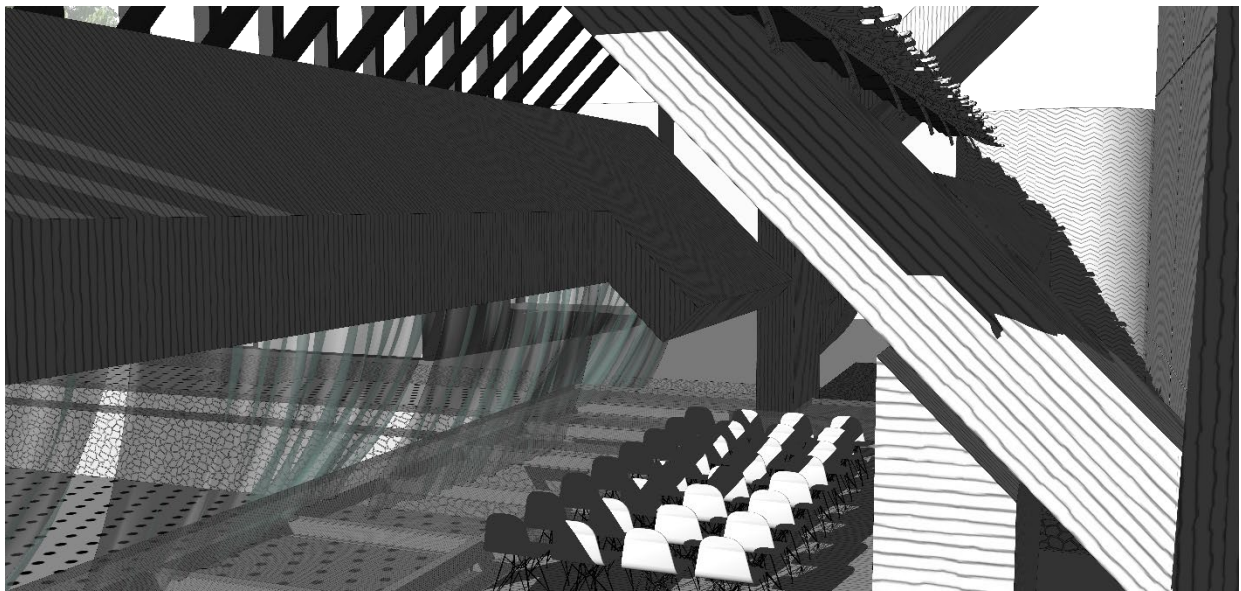


Fig. 53: Hideaway Park Folly: horizontal ribbon window, by Author

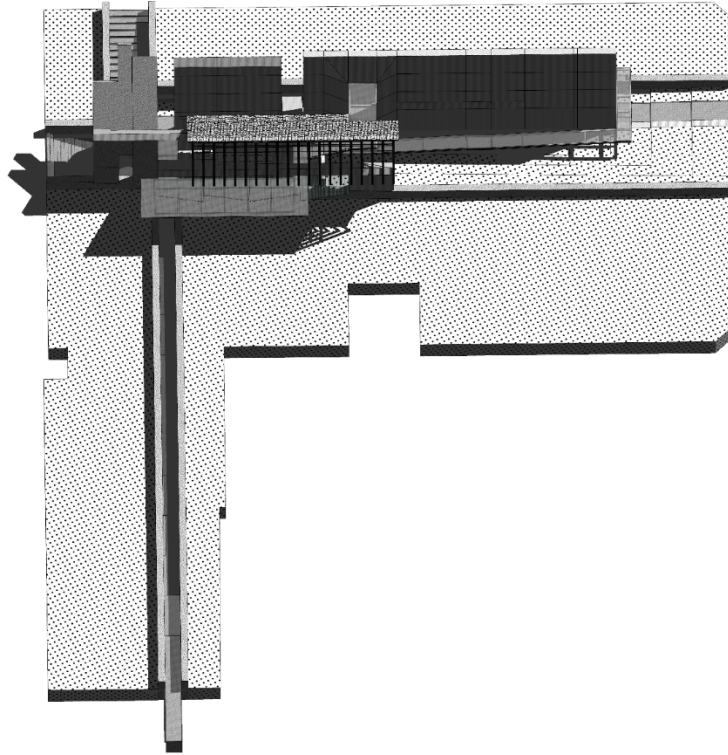


Fig. 54: Hideaway Park Folly, North Isometric View, by Author

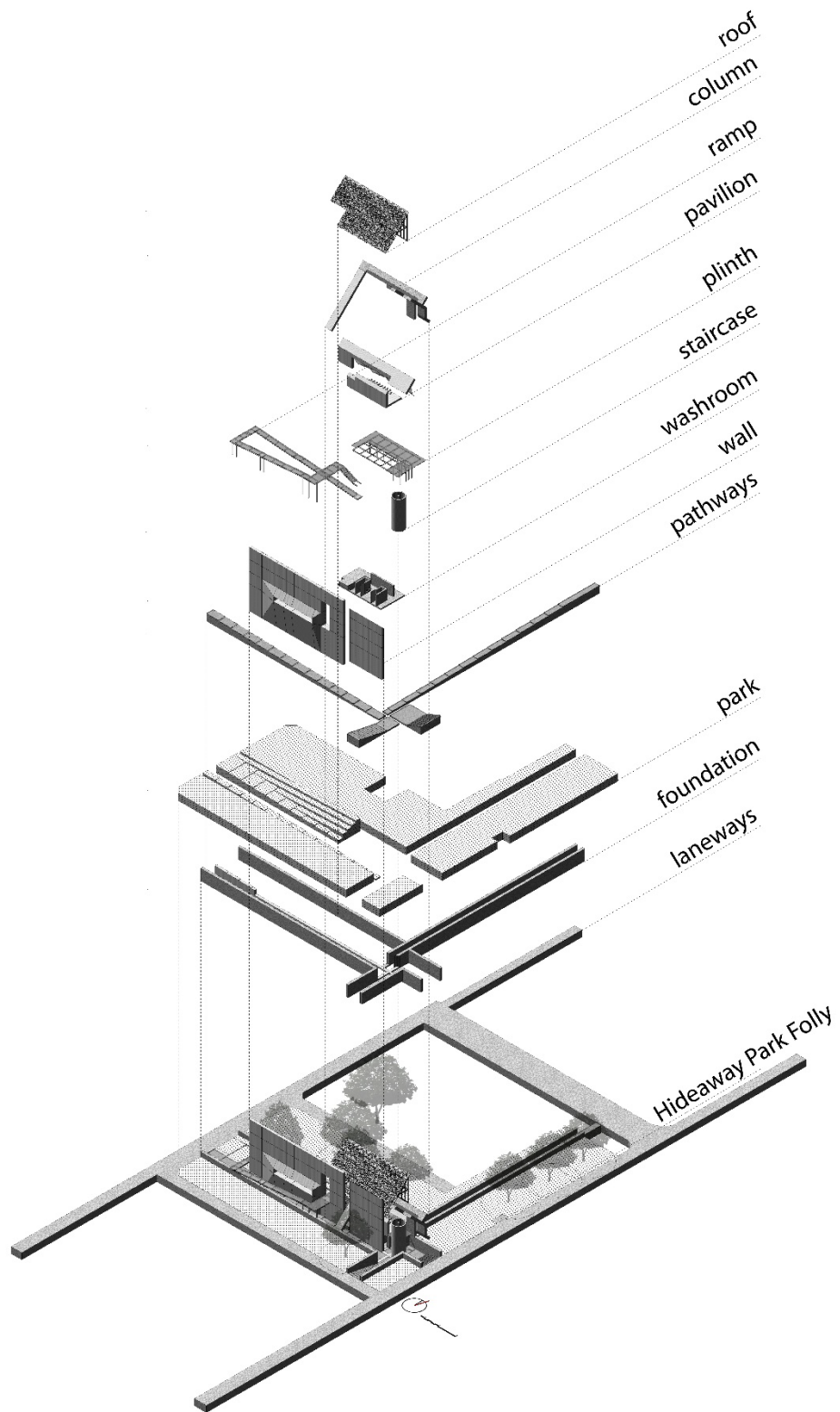


Fig. 55: Hideaway Park Folly, SE exploded axonometric, by Author

EPILOGUE

This thesis has taken an historical overview of the development of modern society and the corresponding development of architecture to indicate how both are imbricated in a tendency to privatize what previously was public and to reserve for managerial minorities what previously was free to all, especially to the creative minorities which put public goods to such emancipatory use. Thus, the thesis divides its historical overview into three sections. The first being pre-Fordist modernity, describes how the rise of modern science and technology had the initial effect of liberating the creative energies of skilled craftsmen, creating a new industrial society, and with it, a new managerial class. Under this new class, however, technology became a tool designed to deprive workers of their creative freedom, in the name of efficiency. The second, Fordist, this section sees how Ford's assembly line and the architecture housing it, reshaped not only the work space but the lives of workers; and how Ford's machines would determine their behavior both at work, in the home and on the road. The third section, examines how post-Fordist society captured the imaginations of workers. It promised them lives rivaling the freedom of princes and kings, the new post-Fordist managers of what has become primarily a promotional economy have captured workers in an ersatz illusion of pleasure, the reality of which is life in isolation and under surveillance – and all in the name of keeping the public safe.

The thesis has also treated the history of the architectural development of the façade as architecture's illusion of riches. This section sees the apotheosis of the façade's development in the work of Le Corbusier, where it has the effect, perhaps one not intended by Le Corbusier, but apparent in his legacy, of completing the post-Fordist privatization of public goods as well as architecture's role in that privatization.

Le Corbusier has won the battle over what the city should look like. In so doing, he has reduced indoor living to the experience of commercial consumption. Ultimately, for Le Corbusier, the purpose of indoor living spaces is to allow us to own the view and his architecture informs those spaces accordingly. This thesis is predicated on the assumption that there is more to living than ownership and consumption. That man is as much a doer as he is one who acquires and owns. As a result, the thesis envisions a project that reconceptualizes man as doer: a return to the nineteenth century conception of man fostered by Le Corbusier's teacher Auguste Perret. However, we realize that architecture cannot simply return to the past. If man was to be reconceptualized, it would be architecture that confronts Le Corbusier's vision of architecture in his own terms. To do this, we bring to the project the creative genius of Mies van der Rohe, whose plinth architecture recaptures the limits between the public and private space, and John

Hejduk, who re-problematizes what post-Fordist architecture presents as the natural perspective. Their architecture critiques what Le Corbusier took to be the humanizing of space as a divorce from tactility a venue for voyeurism.

In our tour of the folly, two central features are identified: first, the folly has multiple points of entry and therefore entertains multiple narratives; second, the folly contains points of semantic surplus. By semantic surplus, the emphasis is in the meaning which persists in architecture in excess of the meaning imposed upon it by any given ideology. The primary value of the points of semantic surplus is a negative one. That is, the semantic surplus of these points serves to destabilize and render unfamiliar the spaces and objects we encounter every day. At the same time, the points of semantic surplus evidence a tertiary value as architectural archetype, ensuring that, however they are used, they will support human roles and human constructions. As such, the points of semantic content are what they were identified as being at the end of the tour and objects of imaginative play. Taken as a whole, they constitute the stuff of a playground in the proper sense of the word. Their program is never provided by the people who designed or built them, only by the children, and adults who would dare to be children, playing amongst them. They act not as a diversion from reality, but as serious practice in aid of realizing realities worth creating. As such, the folly shows us that a playground is serious business and thus, the paradigmatic example of a public space.

In essence, the park both eliminates the interior while constantly signaling visitors with conventional architectural tropes indicating the thresholds to interiors. As such, the visitors are engaged in a game which treats the illusions that conventional constructions of the interior and exterior distinction are natural as a type of child's play which participates in the illusion knowing full well that it is not real. Visitors finding themselves in a truly public place discover that there is no place to hide. If they want privacy, it must be found behind closed doors and "shuttered" windows.

REFERENCES

Alberti, Leon Battista. *On The Art of Building in Ten Books*, trans. Joseph Rykwert, Neil Leach and Robert Tavernor, 4th edition. Cambridge: The MIT Press, 1988

Amistadi, Lamberto. *Structures for the imagination*. Festival dell'Architettura Magazine. anno V. 21-30. (2014). 10.12838/issn.20390491/n27-28.2014/2.

Aureli, Pier Vittorio. "More and More about Less and Less" in Log Vol. 16 (Summer 2009)

Aureli, Pier Vittorio. *The Project of Autonomy: Politics and Architecture within and against Capitalism*. New York: Princeton Architectural Press, 2008.

Aureli, Pier Vittorio and Giudici, Maria Shéhérazade . "Familiar Horror: Toward a Critique of Domestic Space" In Log Vol. 38, Fall 2016.

Barthes, Roland. "Camera Lucida, Reflections on Photography" Hill and Wang, New York, 1981.

"Bluecoat Schools and Ragged Schools," *Naked History*, July 21, 2016, in URL <http://www.historynaked.com/bluecoat-schools-ragged-schools/>

Bruschi, Arnaldo. "L'artico, La tradizione e Il moderno" Milan: Electa, 2004.

Berardi, Franco. *The Uprising: On Poetry and Finance*, Cambridge MA: The MIT Press, 2012.

Borsi, Franco. *Leon Battista Alberti: The Complete*. New York: Electra: Rizzoli, 1989.

Cache, Bernard, *Earth Moves: The Furnishing of Territories*, Cambridge MA: The MIT Press, 1995.

Cacciari, Massimo. "The Architecture of Nihilism. New Haven: Yale University Press, 1993.

Caruso, Adam, "Tradition", in OSA 65 "Ornamentation", 2004.

Chandler, Alfred D. *The Visible Hand: The Managerial Revolution in American Business*. Cambridge, MA: Harvard University Press, 1997.

Colomina, Beatriz. *Sexuality and Space*. New York: Princeton Architectural Press, 1992.

Council on Tall Buildings and Urban Habitat, 2009. in
<http://www.skyscrapercenter.com/building/td-tower/1211>

Damisch, Joseph. "Inheritance or Tradition" in "Leon Battista Alberti," ed. Joseph Rykwert, special issue, *Architecture Design* 49, nos. 5-6, 1979.

Derry, T.K. "The Repeal of the Apprenticeship Clauses of the Statue of Apprentices." *The Economic History Review* a3.1 (1931): 67-87. Document.

Durant, Will, and Ariel Durant. *Rousseau and Revolution: A History of Civilization in France, England, and Germany from 1756, and in the Remainder of Europe from 1715 to 1789*. New York: Simon & Schuster, 1967.

Evans, Richard J. *The Third Reich in Power*. New York: Penguin Books, 2005

Ford, Henry and Crowther, Samuel. *My Life and Work*. Garden City, NY: Doubleday, Page & Company 1923.

Giedion, Siegfried. *Space, Time and Architecture: The Growth of a New Tradition*. Cambridge, Massachusetts: Harvard University Press, 1967.

Greene, Frederick. "Working in the World of Propaganda: Creel, Lippmann & Bernays". In
<http://www.movietrailers101.com/working-in-the-world-of-propaganda-creel-lippmann-bernays/>

Hartoonian, Gevork "Mies van der Rohe: The Genealogy of Column and Wall." In *Journal of Architectural Education*, Vol. 42, No. 2 (Winter, 1989).

Hartoonian, Gevork. *Crisis of the Object: The architecture of theatricality*. New York: Routledge, 2006.

Hartoonian, Gevork. *Materiality and Architecture*, ed. Karina, Sandra. Routledge: New York, 2016.

Hartoonian, Gevork. *Mies: The Window Framed in Fabrications: The Journal of the Society of Architectural Historians, Australia and New Zealand* 18, no. 2 (December 2008)

Haug, Wolfgang Fritz. *Critique of commodity aesthetics: Appearance, Sexuality, and Advertising in Capitalist Society*. Cambridge: Polity Press, 1971.

Hayden, Dolores. *Grand Domestic Revolution*. Cambridge, MA: MIT Press, 1983.

Hejduk, John. *Mask of Medusa: Works, 1947-1983*. New York: Rizzoli International, 1985.

He, Weiling. *Flatness transformed and otherness embodied: A study of John Hejduk's Diamond Museum and Wall House 2 across the media of painting, poetry, architectural drawing and architectural space*. 2005. Georgia Institute of Technology, PhD dissertation. SMARTech Repository, https://smartech.gatech.edu/bitstream/handle/1853/36608/he_weiling_200505_phd.pdf?sequence=1&isAllowed=y

Hobbes, Thomas. *Leviathan*. Ed., C.B. MacPherson. London, Penguin Classics, 1988.

Horkheimer, Max and Adorno, Theodor W. *Dialectic of Enlightenment: Philosophical Fragments*; edited by Gunzelin Schmid Noerr; trans. by Edmund Jephcott. Stanford, CA: Stanford University Press, 2002.

Jeanneret, Charles Edouard. *Vers une Architecture*, Paris: Edition Cres, 1923.

Jasper, Michael. "Working It Out: On John Hejduk's Diamond Compositions." *Architectural Histories* 2 (1)/26: 1-8

Koolhaas, Rem, "Typical Plan" (1994), in S, M, L, XL. New York, Monacelli Press, 1995.

Langins, Janis. "The Ecole Polytechnique and the French Revolution: Merit, Militarization and Mathematics," *LLULL*, Vol. 13, 1990.

Lazzarato, Maurizio. *The Making of the Indebted Man: Essay on the Neoliberal Condition*, trans. by Joshu David Jordan. Los Angeles, California: Semiotext(e), 2012.

Loos, Adolf / Le Corbusier. *Raumplan versus Plan Libre*, ed. R. Max. Cambridge Massachusetta: Delft University Press, 1988.

Marazzi, Christian. *Capital and Language: From the new Economy to the War Economy*, transl. by Gregory Conti. Los Angeles, CA: Semiotext(e), 2008.

Marazzi, Christian. *The Violence of Financial Capitalism*, trans. by Kristina Lebedeva and Jason Francis McGimsey. Los Angeles; Cambridge, MA: Semiotext(e); MIT Press, 2011.

McLuhan, Marshal. *Understanding Media: The Extensions of Man*. New York, London, Sydney, Toronto: McGraw-Hill Book Company, 1964.

Marshall, T H. *Citizenship and Social Class: and other Essays by T. H. Marshall*. Cambridge: The University Press, 1950

Marullo, Francesco. *Typical Plan: The Architecture of Labor and the Space of Production*. 2014. TUDelft, PhD dissertation. Institutional Repository. <https://doi.org/10.4233/uuid:5b7faa1f-a2a7-46e2-974d-7b77c13836f3>

Marx, Karl and Engels, Friedrich. "*The Communist Manifesto*" (2004) edited and trans. by L. M. Findlay Broadview Press Ltd.: 2004.

Mertins, Detlef. "*Same Difference.*" in *Phylogenesis: FOA's Ark*. ed. Foreign Office Architects. Barcelona: Actar Press, 2003.

Mies van der Rohe, Ludwig. "*Technology and Architecture*," in *Programs and Manifestoes on 20th Century Architecture*. Ed. Ulrich Conrad. Cambridge: MIT Press, 1964.

Mill, John Stuart. "On Liberty," Ed., Steven M. Cahn. *Classics of Political and Moral Philosophy*. New York & Oxford: Oxford University Press, 2002.

Miller, Daniel and Woodward, Sophie. *Blue Jeans: The Art of the Ordinary*. Berkeley and Los Angeles, California: University of California Press, 2012.

Miller, Kevin and S Newitt, Jay. MasterFormat 2004 Impact on Construction Organizations. 2019.

Murad, Anatol. *What Keynes Means: A Critical Clarification of the Economic Theories of John Maynard Keynes*. New Haven, Conn.: College & University Press, 1964.

Muirhead, James, Patrick. *The Life of James Watt: With Selections from His Correspondance*. London: John Murray, Albemarle Street, 1859.

Nelson, George. *Industrial Architecture of Albert Kahn Inc*. New York: Architectural Book Publishing Company, 1939.

Northrop Frye, *Anatomy of Criticism: Four Essays*. Princeton: Princeton University Press, 1957.

Nye, David E. *America's Assembly Line*. Cambridge, MA, London: MIT Press, 2013.

Ossola, Alexandra. *Hamilton*. 25 August 2010. Document. 12 August 2018.
<<https://www.hamilton.edu/news/story/revolutionary-medicine-and-the-medical-revolution>>.

Parker, Irene. *Dissenting Academies in England*. Cambridge: Cambridge University Press, 1914.

Pribac, Igor. "Post-Fordism – a Contextualisation" in Post-Fordism and its Discontents, Ed., Kirn, Gal, AAAAARG.ORG: LULU.com, 2018.

Riegl, Alois. *Historical Grammar of the Visual Arts*, trans. Jacqueline E. Jung. New York: Zone Books, 2004.

Roth, Leland M. *Understanding Architecture: Its Elements, History, and Meaning*. Philadelphia, PA: Westview Press, 2007.

Simkin, John. *Manchester*. Spartacus-Educational, August 2014, <http://spartacus-educational.com/ITmanchester.htm>

Somol, Robert / Sarah Whiting. "Notes around the Doppler Effect and Other Moods of Modernism," *Perspecta*, Vol. 33, Mining Autonomy, 1988.

Strong, Roy. *The Story of Britain: A People's History*. London: Pimlico, 1998.

Suetonius. *The Twelve Caesars*, trans. Alexander Thomson, edited by T. Forester. New York: The Floating Press, 2009.

Traganou, Jill, Mitrasinovic, Miodrag. *Travel, Space, Architecture*. Surrey, England, Burlington, USA: Company, Ashgate Publishing: 2009.

Tafuri, Manfredo. *The Sphere and the Labyrinth*. Cambridge: The MIT Press, 1988.

The Canadian Press. "How micro condos are facing their first real test in Canada this year" *Financial Post*, 9 February 2015, <https://business.financialpost.com/personal-finance/mortgages-real-estate/how-micro-condos-are-facing-their-first-real-test-in-canada-this-year>

Thompson, Richard S. *Classics and Charity: The English Grammar School in the Eighteenth Century*. historical. Washington D.C.: Office of Education (DHEW), 1966.

Turing, Allan M. Computing Machinery and Intelligence, in *Mind* 59, 1950.

Tzonis, Alexander. *Le Corbusier, The Poetics of Machine and Metaphor*. New York: Universe Publishing, 2001.

Virno, Paolo. *A Grammar of the Multitude*, trans. Isabella Bertolotti, James Cascaito, and Andrea Casson Los Angeles: Semiotext(e), 2004.

Weizman, Ines. *Turning into the Void: The Aurality of Adolf Loos's Architecture* in Harvard Design Magazine, No. 38 / Do You Read Me?

<http://www.harvarddesignmagazine.org/issues/38/tuning-into-the-void-the-aurality-of-adolf-loos-architecture>