

Marian Dineen, Elaina Hickey, Stephen Barry, Reídín Corbet, Seán Collins, Jeremiah Cahill, Anna Healy, Barry Casey, Shane Carroll, Shane Fenton, Cornelia Foley, Danny Holland, Aisling Joyce, Ronan Farrell, & Sarah Keane **A compilation of History & Theory dissertations by Third Year Students from SAUL School of Architecture University of Limerick Volume 1** the SAUL press 2009



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Edited by

Sarah Keane, Naomi Panter
& Gerard Walsh

Coordinated by

Javier Burón, Jan Frohburg
& Irénée Scalbert

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What is Public Space?

The term 'public' signifies the world in itself, in so far as it is common to all of us and distinguished from our privately owned place in it

- *Hannah Arendt*

Public space is of huge importance. Or at least that is what I am continually told. I do not doubt this; in reading for this essay I have seen the importance, both through history and in today's society. A collective space free to all people is vital. It has been said by a colleague of mine that public space is a buzz word to be placed on the leftover space of an urban plan. This cynical view was the spark that ignited my interest in the question 'What is public space?'

There are examples of public spaces that have huge significance for the public – places which people identify with, these spaces are an integral part of urban identity. The Ramblas in Barcelona, the Cobbies in Marseille and Lake Shore Drive in Chicago are locations that have become clichéd references of 'successful' public spaces¹. Here in Ireland we have our own lauded example of public space in Dublin's 'Temple Bar'. A project now known for much more than its architecture, as it is one of the top tourist attractions in the country. Taking this space as an example I hope to discuss some of the issues that concern the experience of public spaces today.

The aim of this essay is to examine what makes a successful public space. Before that I aim to outline the history of this idea of 'public space', this collective space that is about more than the collection of people, although that is at the bones of the idea, it is about the freedom of people to be in a place together.

I approach this idea of public space with a prejudice, I have an idea of what I am looking for, predominantly that a space is democratic and free, but also that it has a character that goes beyond collectivity, it goes to diversity within the masses. The idea I have of public space exist in my mind with parameters, I hope to tease out what these parameters are and why they are. Predominantly I believe that public space is dependant on the ability of people to mass together and the resulting experience is the public space that is created.

My first area of investigation is a historical one. A look back in time to trace where this idea of public space associated with democratic space has come from and an analysis of why I have linked the two in my mind.

1. Hajer, laarten & Reijndorp, Arnold 'In Search of New Public Domain' p2

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Where is the Public Space?

One. Public Space and Democracy

I approached this subject presuming that ‘public space’ is democratic. This presumption was not based on any research as to what democracy was; it was a description used because of the implied meaning of the word. To me, democratic space implies space for all people, accessible at all times and free of charge, without barriers or constraints.

Subsequent reading on the matter showed me that ‘democracy’ and democratic space are not static. Their meaning is as transient as time. Democracy means something much different in Ancient Greece than it does in eighteenth century America and something different again today. Like public space, democracy is dependant on people, specifically on how people collect together. In order to understand either, we must first understand how we relate to each other when massed together as a group. This of course is ever changing.

Space for Ancient Democracy

Democracy has its roots in ancient Greece. The Greek idea of governance was based on religious obligation. This in turn informed the shape and workings of the city. It also informed their

view of collective space. This collective space is, in my mind, the first manifestation of public space – space held in common. For clarification of this relationship between the collective and the public I look to Hannah Arendt;

“The term “public” signifies the world itself, in so far as it is common to all of us and distinguished from out privately owned place in it.”²

“To live together in the world means essentially that the world of things is between those who have it in common.”³

The centre of the Greek city was the Acropolis, around it there are demes – not districts but political groups; people assembled together – large extended families. Ancient Athens was a federation of these demes, each with its own religion. The physical space held by these demes were urbs, the place of assembly of one tribe/religion⁴. It is important to stress at this point that the assembly of society and its physical manifestation was based on religion, a higher power, an obligation.

In a society split into differentiated parts, what was the collective space for citizens? The Pynx; a hill in the centre of the city (as

2. Arendt, Hannah ‘The Human Condition’ p52

3. Ibid.

4. Scalbert, Irene lecture on ‘The 1980’s’



Fig. 1 Scale
Model of Pnyx

seen in Fig. 1). This was where citizens of the various demes would assemble and listen as laws were discussed in the forum. The discussion took place between Demagogues, representatives of the various demes. This was a hugely important aspect of life in Ancient Greece. The polis was not Athens, it was the Athenians.

‘The polis, properly speaking is not the city state in its physical location’ it is the organisation of people as it arises out of acting and speaking together, and its true

space lies between people living together for this purpose, no matter where they happen to be⁵

This space was the most important in the city. *‘For the polis was for the Greeks as the res publica was for the Romans, first of their guarantee against the futility of individual life, the space protected against this futility and reserved for relative performance⁶*

People gathered at the Pnyx in huge numbers, it is estimated that 20,000 people could collect there

5. Arendt, Hannah “The Human Condition” p198

6. Ibid



Fig. 2 Aerial View of Sienna Square

Fig. 3 View across Sienna Square

The importance of the Pynx cannot be understated. This was the platform for speech and action ‘word and deed’. The Greeks saw a permanence in these things, they had a power to transcend time. The Pynx as a public space then took on a much larger significance in terms of time

‘If the world is to contain a public space. It cannot be erected for one generation and planned for the living only, it must transcend the life-span of men.’⁷

‘It is what we have in common not only with those who live with us, but also with those who where here before and with those who will come after us.’⁸

Essentially the Pynx is where the Athenians could represent themselves to themselves.



Clearly the Pynx had huge political importance but what of its condition spatially? The central position of the Pynx and its surrounding context of urbs is an urban pattern that has been hugely influential for centuries. This relationship is between the collective space and its context that surrounds it can be traced in time to Sienna Square, where the fabric of the city interacts with

7. Ibid

8. Ibid

the square (Fig. 2 & 3). Also the Pompidu Centre by Rogers and Piano has this relationship, an open space, representing the civic heart of the city and an institution.

Is public space then just a matter of rehashing the old model? Open space surrounded my built fabric of some civic importance? I think not, armed with this information we can say that this model defiantly worked for the ancient Greeks, the Athenian society has been praised and lauded as the exemplary way to live. We are a much different society to the ancient Greeks. Imitation of formal characteristics of classical public spaces is a pathetic gesture that achieves the opposite of what is actually intended.⁹ Societies of thinking, politically active, collectively minded people are not formed. No, our society is structured much differently to the Greeks, we cannot expect that model of collectivity to still be adequate.

There is a lot to be learned from the Greeks provided that we are not blinded by some simplistic view of what public space is. The Greeks allowed us a model that allowed for collectivity relative to the societal demands.

Space for Eighteenth Century Democracy

The next leap in my understanding of democracy comes in the eighteenth century, the beginning of the modern thought, the enlightenment.

1780 saw the publication of 'The Declaration of the Rights of Man' by the National Constituent Assembly in France. This document declared that

*"All the citizens, being equal in [the eyes of the law], are equally admissible to all public dignities, places, and employments, according to their capacity and without distinction other than that of their virtues and of their talents."*¹⁰

This understanding of equality and collectivity is democratic. It is a new democracy that is linked with people's freedom and their power to express it. The obligation and the permanence of the Greek model of democracy are down played; this new democracy is, in a way, more humble.

The enlightenment era also saw declarations being made in America. The American Declaration of Independence is another important step in the history of democracy. In 1776 the declaration was signed and published. Its

9. Hajer, Jaarten & Reijndorp, Arnold 'In Search of New Public Domain' p134

10. The Declaration of the Rights of Man

collection of 'truths self evident' called for the right to the pursuit of happiness. Democracy was the will of the people, their will to elect their representatives and their will to overthrow them where they saw a threat to their safety and happiness.¹¹

As with the French example, this new democracy lacks the permanence and obligation of the Greek Democracy, it has its emphases on equality certainly, but the importance placed on happiness and mans responsibility to pursue that happiness is a new insertion into the democratic rhetoric.

The spatial manifestations of this new understanding of democracy and the aims of the collective are captured in the work of famous architect Daniel Burnham. Burnham had a set idea of democracy and public space;

*'He conceived it the duty of the community to foster and promote good citizenship by means of ample and fine opportunities for recreation. To him democracy meant the happiness of all the people secured by the well-directed action of the people themselves.'*¹²

Burnham implemented his idea of democracy in two very high profile projects; The National Mall in Washington DC (1901) and the plan for Chicago (1909). At Washington Burnham was part of a comission that were set the task of designing a representation of the National Government. The design proposal can be seen in figure 4, showing the plan for the area. The style of the design is influenced heavily from a European model of landscaping. It is a Beaux Arts design. America at the time sought to lay claim to a lineage of democracy stretching

Fig. 4 1901 plan for Washington DC



11. The American Declaration of Independence

12. Moore, Charles 'Daniel H Burnham, Architect, Planner of Cities'

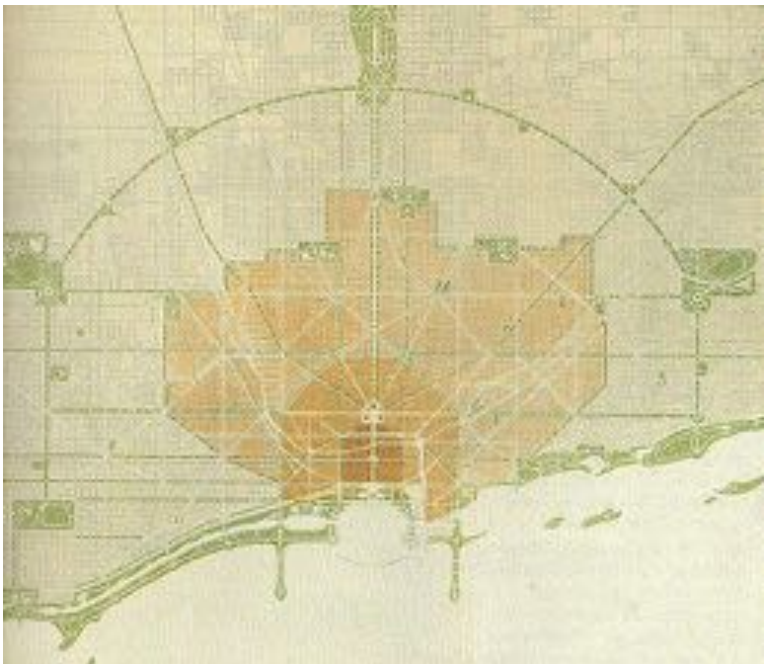
back Europe and to the Greeks. Prior to its redevelopment the Mall was simply an open space for residents of Washington DC; with the new plan it “*was reconceived as a new kind of governmental complex, a combined civic and cultural centre*”¹³ Still public space, it sought to set itself on a new greater scale. The Mall was to be both an ancient forum and a national front lawn.

With his plan for Chicago Burnham sought to beautify the city, to open it up. His plan can be seen below in figure

4. The green areas are the many open public parks he proposed. Also included is a new pier and access to the lake shore. Before the plan, Chicago and Cook County had no forest preserves. Now there are 68,000 acres of woodland. The lakeshore was opened up for the enjoyment of the public.

This is a manifestation of Burnham's view of democracy. It highlights the link, which I discussed earlier with regard to Ancient Greece and the Pnyx, between democracy and public space.

Fig. 5 1909 plan for Chicago



13. ‘The 1901 Plan for Washington DC’

TWO. People are Plural - How Society Collects

As I have mentioned before, public space is our commonly held space. In order to understand public space we must first understand how we relate to each other when massed together as a group of strangers. Ultimately public space is dependant on how a society wishes to behave in public.

Nineteenth Century Public Life

This behaviour in public is subject to change. It would no be accurate to say that we collect as the polis did in Ancient Greece, nor would it be right to day that we collect as the founding Americans or Revolutionary French collected in the Seventeenth Century. With the modern age came new social

interaction. The change in the public realm is documented in Richard Sennett's work, 'The Fall of Public Man'

*'In the mid nineteenth century there grew up in Paris and London, and thence in other Western capitals, a pattern of behaviour unlike that was known in London or Paris a century before, or is known in most of the non-Western world today. There grew up a notion that strangers has no right to speak to each other, that each man possessed as a public right an invisible shield, a right to be left alone.'*¹⁴

To understand this phenomenon it is best we look at the context of the time. The population growth of the time was unprecedented.

15

	london	paris	berlin	new yor k	chicago
1800	1,117,000	547,000	172,1000	60,000	0
1850	2,685,000	1,053,000	419,000	516,000	30,000
1880	4,770,000	2,269,000	1,122,000	1,165,000	503,000
1910	7,256,000	2,888,000	2,071,000	4,767,000	2,185,000
1940	8,700,000	2,830,000	4,332,000	7,455,00	3,397,000

14. Sennett, Richard 'The Fall of Public Man' p27

15. Varnelis, Kazys lecture on 'Territories'

Why these capitals grew so big was a complicated matter, the birth to death ration became more favourable to living but also a major source of growth came from in-migration to cities. A flow of young unattached people came from the surrounding countryside,

travelling an average of fifty miles or more; that is two days travel to get to their new lives. Essentially these people were strangers, a special sort of stranger; cut off from past associations, alone, having come a considerable distance to the city.¹⁶

Fig. 6 Engraving of Ninteenth Century London



16. Sennett, Richard "The Fall of Public Man" p131

*As the city continued to fill with people, these people increasingly lost functional contact with each other outside. There were more strangers and they were more isolated*¹⁷

The human race had not encountered such masses of people for centuries and thus had no term of reference as to how to react. For most of human history we were born into small societies of tens/hundreds of people, from primitive tribes of hunter gatherers, to the ancient city of small communities of demes, strangers were a rare occurrence¹⁸.

That was the context for any previous idea of democracy and for what collective space could be. To exist in anonymity of millions of strangers was a new experience and a new idea of collective space. (Fig. 6 Engraving of Nineteenth Century London)

The public had no term of reference for the new way of collecting together. Their reaction was to recoil into the private realm. People wished to flee, shut themselves up in the morally superior realm of the family and close friends. This was the birth of individualism. As Alexis deTocqueville writes in the nineteenth century;

'Each person, withdrawn into himself, behaves as though he is a stranger to the destiny of all others. His children and his good family constitute for him the whole of the species. As for his transactions with his fellow citizens, he may mix among them, but he sees them not; he touches them but does not feel them, he exists only in himself and for himself alone'

Cities, but in particular the collective public space in cities, became a place to avoid. They induced a claustrophobic fear; masses of people, aimless and rootless, intimidating and threatening. Where public space once meant the collection of the body politic to stave off the futility of individualism it was now something to be avoided. In my mind collective space lost its power when people did not wish to be there anymore.

The nineteenth century saw the beginning of the end of the desire of people to collect. No longer were medieval and renaissance squares used as a model for public space, these were free zones, contrary to what was required for the time.¹⁹ In particular the Haussman plan for Paris saw a new typology of streets and squares; not designed with a

17. Ibid p135

18. Appiah, Anthony 'Cosmopolitanism' p2

19. Sennett, Richard 'The Fall of Public Man'

lingering, congregating crowd in mind, but with a collection of consumers in transition from one place to another. The new design for streets restricted the masses and changed the freedom with which people could assemble. Public space became increasingly privatised. It has been said that in twentieth century society people have become less citizens and more consumers.²⁰

From Individualism to Individualisation

What is our current social condition? The distance of time has made it easier to label past social conditions. There are varying

opinions as to what our current condition is.

One theory comes from Ulrich Beck and his writings on 'Individualization'. This individualization has emerged as a result of a highly differentiated society. Society is broken down into functional groups, '*people are integrated into society only in their partial aspects as taxpayers, car drivers, students, consumers, voters, patients, producers, fathers, mothers, sisters, pedestrians and so on*'²¹ Different groups in society follow different routes through space and time.

This individualization is the

Fig. 7 Plan for Levittown New Jersey

Fig. 8 Aerial view of Levittown New Jersey

Fig 9 View of Single family home, Levittown



20. Varnelis, Kazys & Friedberg, Ana 'Networked Place' p3

21. Beck, Ulrich 'Individualization' p3

progression of the individualism that I discussed earlier, the individualism that grew rapidly in the nineteenth century. The revolt against the city resulted in a mass migration of people who fled the decaying cities to suburbs. In her book 'Death and Life of Great American Cities' Jane Jacobs argued that public space can only be successful where frequent face-to-face interactions within an urban community take place. It is an architectural infrastructure that encourages this social interaction. In the suburbs this infrastructure is based on the individual single-family detached house (Fig. 7 - 9), any incidental interactions are not allowed for; there is no chance, no incidental inter-relations.

If we are only to interact with the set functional group to which we belong, is public space then the space for these different groups to cross and exchange? Or is it merely the transit space between different groups of 'our kind of people'? This question is addressed in 'Non-Places', by Marc Augé. He talks about the distinction between transition places or 'non-places' and 'places'. Augé distinguishes 'places' - locations in which individuals of distinct functional groups band together - from 'non-places' transitional spaces absent of identity and human identity. The world described

privileges the fleeting, ephemeral, and contingent²²

*'The space of non-place creates neither singular identity nor relations; only solitude, and similitude'*²³

Non-places is an expression of the super-modern condition; it is marked by loneliness and constant change. In his definition, Augé also touches on a concern of lack of authenticity of new spaces, something I mentioned earlier in relation to the reuse of the classical model of public space today. A pseudo-world that acts as a replacement for genuinely democratic space is easily a non-place.

Augé suggests that our sense of place, as humanity, is coming to an end. This, to my mind is a very heavy handed statement. It may be true that one understanding of our sense of place is coming to an end. It is possible that this has been part of the spark that has inspired me to write on this matter. Our current societal condition, as fractured and separate as it is, encores a different understanding of place. Is it then the old ideas of public space, a place of chance encounter, of neutral meeting, that is a hindrance to our understanding of what public space is? If we accept how our current society is structured we can design success-

22. Varnelis, Kazys & Friedberg, Ana 'Networked Place' p4

23Augé, Marc 'Non-Places' p103

ful public spaces, as the Greeks did in their time.

The issue with addressing our current social structure is identifying what that structure is. I have mentioned that opinions on this matter are varied. The 'non-place' model discussed by Augé is only one view. In 'Cosmopolitanism' Anthony Appiah presents a different stance of how we as a society interact and work together. He points out that regardless of how disparate and atomized we have become, we still (or should still) respect each other and see each other as different but not strange. He thinks that ethics have been removed from the debate of our social condition. Being kind is irrefutably good, the world over accepts that, at times the kindness

can be poorly judged and cause offence but all parties agree that wanting to do the right thing by other people is good. The respect implicit in cosmopolitanism is where we find the collective.

Both Augé and Appiah are agreed that society is indeed individualized. I believe that this is the structure that public spaces should be based on. Public space is the place where everyone creates an individual polycentric urban identity. Varieties of public space but more than that, it is a free space for each individual to claim and identify with, in whichever collective they feel they belong. Essentially public space is the space for strangers in the city.

Fig. 10 Fractured Society



Three. Dublin's Temple Bar - A Case Study

To understand the idea of public space and collectivity I looked at an example of space, thought about the public's interaction in the space and hopefully gained further insight into what it is I am hoping to define in this essay. My research into Temple Bar has helped me to clarify some of my thoughts on people collection together and freedom for strangeness in this.

Fig. 11 CIE plan for Dublin's Inner City Transport Hub

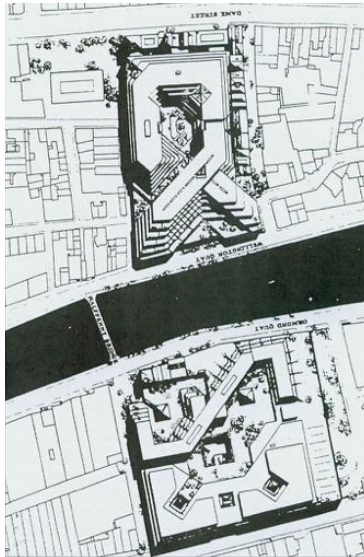
A Recent History

Temple Bar has entered our consciousness due to an urban renewal programme for one of Dublin's dilapidated inner-city

districts. The history of Temple Bar as we know it starts from 1981 onwards when CIE (the national transport company) began to purchase property to build a huge Transportation Centre. Figure 11 shows this large scale modernist inspired plan. Over the years, while dealing with the planning process, it rented out its properties at low rents to artists, musicians, Co-ops and other cultural bodies. This inevitably lent an alternative, bohemian atmosphere to the place and residents began to see a real value in their area²⁴.

Meanwhile, members of An Taisce, the national conservation association, began to examine the architectural heritage and streetscapes of the area. Their report, published in 1985, entitled, 'The Temple Bar Area - A Policy for its Future', was the first reference ever made to 'Temple Bar' as an area²⁴. The association recommended that this unique quarter of Dublin, which was home to the highest density of listed sites anywhere in the city, should be preserved. The report also called for the plan for a bus station to be abandoned.

This call was supported by traders and residents of the



24. 'Temple Bar, the Power of an Idea'



Fig. 12 Derelict Dublin, the site that would become The Curved St.

area. They formed a committee known as the Temple Bar Development Council in 1988 to oppose CIE's plans for the bus depot. With the media on their side they successfully lobbied Dublin City Council and after 3 further years in negotiation with Dublin Corporation they received assurances that the Temple Bar area was safe from demolition.

The Taoiseach (Prime Minister), Charles J. Haughey, pledged during the general election campaign of 1987 that Temple Bar would be preserved. This pledge was duly followed by government action, funding and tax incentives were put in place and Temple Bar Properties was established in 1991 to carry through the scheme of conservation and renewal. In 1991 Temple Bar Properties

Ltd. initiated what was the most important architectural competition held in Ireland for years; 'The Temple Bar Architectural Competition'. What it was looking for was an outline of architectural and urban design proposals, which would provide the basis for the sensitive urban renewal of Temple Bar. An emphasis was placed in reserving the area as a unique cultural quarter in the city.

The brief asked competitors to bring the area to life with emphasis on public open area, pedestrian permeability and a respect and incorporation of the streetscape and heritage

Group 91 Framework Plan

'This Framework plan comprises a policy and a series of outline or illustrative architectural proposals designed to stimulate the renewal of Temple Bar and secure its future as the living heart of Dublin, and to serve as a model for inner city renewal'

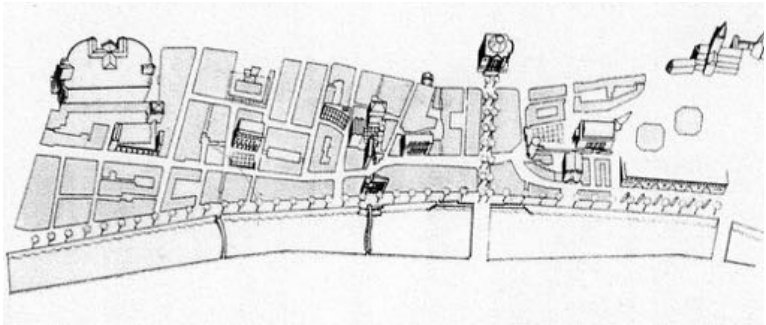
-John Toomey, O'Donnell + Toomey Architects

The Group 91 Framework for Temple Bar was exactly that, a framework. It was not a master plan. It did not impose a new order onto the site. Instead the framework wished to work with the existing grain of the city, the existing scale and texture¹. There is a huge influence from Aldo Rossi in the Group 91 plan. The importance placed on the city, the regard for the grain and context, the respect for history and spirit of place, are all echoes for Rossi's writing, 'The Architecture and the City'. Another strong influence on

the group is Leon Krier and his one time employer James Sterling, whom John Toomey worked for as a graduate. The group describes their proposal as bringing European ideas of the city and public space to a derelict Dublin²⁵.

'Urban dentistry' was required for the area; work with what was already there, replacing cavities and cleaning up the existing condition. A measured and respectful approach to the existing buildings was a key factor in the plan. A choice was made to intensify certain areas and not others, this intensification came through the development of public spaces. The three flagship projects of the plan were; Temple Bar Square, Meeting House Square and The Curved Street. Their importance in the proposal is highlighted by figure 13 which shows each of them represented in the same manner as the pre-existing public buildings of the area; 3D on a 2D plan. With these projects the

Fig. 13 Site plan/Axo of the Temple Bar Area



25. Ibid

group hoped to set the tone for the district.

To my mind this is a successful public space as it allows for people watching and time wasting. Essentially it allows for several different groups to experience the

Temple Bar Square



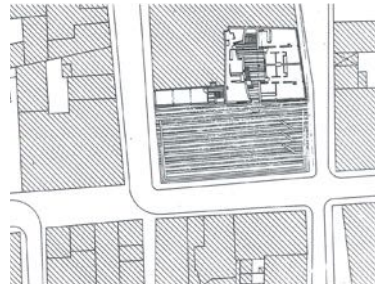
Fig. 14 Looking West across Temple Bar Square

Fig. 15 Perspective Elevation of South Edge of Temple Bar Square

Fig. 16 Plan of Temple Bar Sq.

Temple Bar Sq (Fig. 14) is for many the entrance to Temple Bar. It is one of the only junctions of the north-south and east-west routes through the district, it orientates pedestrians. Regardless of the time of day there are always people ambling around the space.

space at the same time. The steps on the north side of the square are one of the few open air free seating in the Temple Bar area. It is clear from an early design sketch (Fig. 17) that the provision for steps and a platform were key to the character of the space from



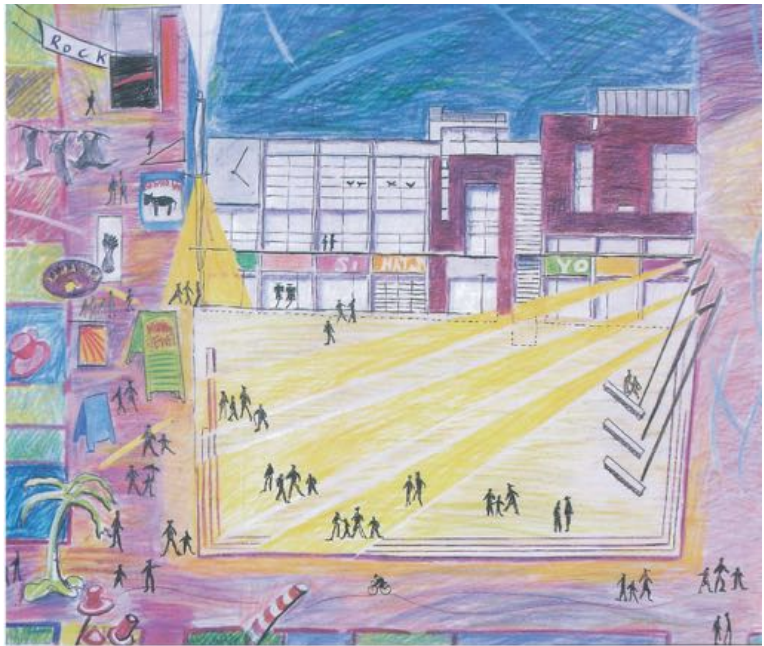
its inception.

The importance of such seating area cannot be overestimated. The freedom to sit and watch the world go by is an essential aspect to public space. It allows for interaction between people and serves to combat the prevalence of ‘non-

places’ that Marc Augé refers to.

To be able to watch people walk buy or to walk by people sitting, improves the safety of a space. As Jane Jacobs talks about in her book ‘Death and Life of Great American Cities’, many eyes make a safe street.

Fig 17. Design sketch of Temple Bar Sq.



The Curved Street

Fig 18 Night View of the Curved St, looking West



The aim of the curved street was to provide a new pedestrianised route from Eustace St. to Temple Lane. As with Meeting House square the street is lined with cultural buildings, the 'Temple Bar Music Centre' to the North and the 'Arthouse' to the South. Prior to its development the site was a disused car park (As shown in the

1987 map shown in Fig. 20). The curve of the street allowed for the retention of surrounding listed buildings. It has a pleasant scale and the architecture of the buildings on it is a modern counterpart to the older buildings along the pedestrian route.

This project is an example of



Fig. 19
Perspective
Drawing of The
Curved St.

Fig 20 1987 OS
Map showing
the site of the
Curved St and
Meeting House
Square

Fig. 21 Initial
plan for Meet-
ing House
Square

street as public space; it is the first mention I have made of this typological form. Its character is intrinsically different, it is a transition space. Unlike Temple Bar Sq. there is little opportunity to waste time or people watch. This does not make it less of a spaces, it is different, not necessarily bad.



Meeting House Square

The brief for 'Meeting House Square' saw it ear-marked to be the cultural hub of Temple Bar. As it stands today the 'Ark' (children's creative centre), the 'Irish Film Centre', the 'Nation Photographic Archive', the 'Gaiety School of Acting' and the 'Photography Gallery', are all lining the square. Initially it was thought that the square would be a main thoroughfare. A proposed north-south axis from 'Jervis St' in the north inner city, across the river and directly into the square, was

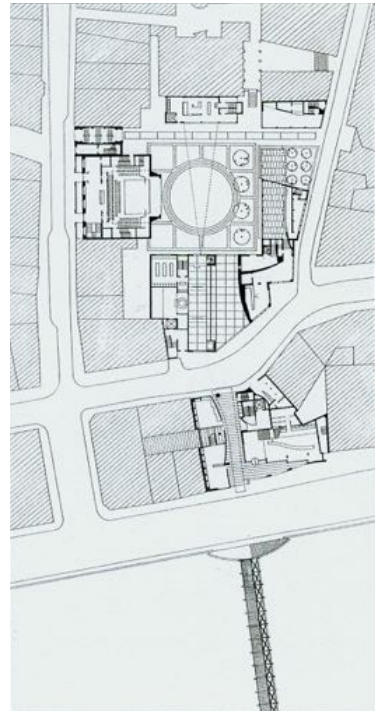




Fig. 22 Meeting House Square with projection on to Irish Film Arcive and Ark stage open

Fig 23. Panorama around an empty Meeting House Sq.

never realised²⁶. The east-west route was intended to bring people through the 'Curved Street', into the square and subsequently on to 'The Olympia Theatre'. This too was never realised. Now the square is a dead end. Only the backs of buildings, with the exception of the 'eden' restaurant on the west side, face the square.

Meeting House square is an example that shows the importance of having public in public

spaces. The emptiness of the square, which can be seen in the panorama below, has resulted in a much different character for the space than was planned in the framework. It has potential built into it. As the image above shows; an auditorium opens onto the space for open air performances, and films (once a year at the Dublin Film Festival) are projected from one side of the space to the other. It is more a room that a square or street. It is successful in



26. Ibid

this function, although as a public space it is lacking. People are drawn to where people are. Empty spaces are considered dangerous and avoided²⁷. I believe that a space without public cannot be considered a public space.

There are other deterrents that prevent the public from utilizing the space. During the hours of ten thirty in the evening and nine o'clock in the morning high security gates at all access points into the square are locked. Apparently this is a necessary precaution to keep anti-social drunken behaviour from damaging the square. This exclusion adds an air of exclusion to the space and prevents people from utilizing the space when the gates are open. I believe, and will discuss later, that this anti-social behaviour should be handled in a more responsi-

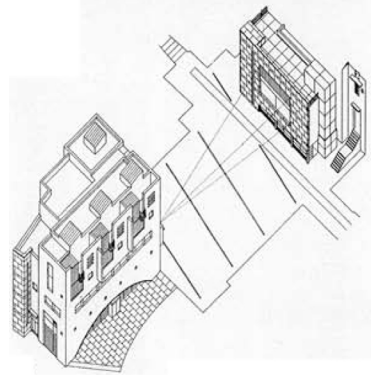


Fig. 24
Axonometric
of Meeting
House Sq.

Fig. 25 Col-
lection of flyers
advertising
entertainment
in Temple Bar

ble manner that merely locking it out and forgetting about it. If the cultural quarter wishes to be protected from damage caused by drunks then it should be more mindful of the way it portrays itself to visitors. As you can see from the selection of flyers advertising the area, the emphasis is on pub-culture.



27. Jacobs, Jane
'Death and
Life of Great
American
Cities'

A Critique

Having read the rhetoric of the framework plan, one would be forgiven for thinking that Temple Bar is a hub of culture, high culture at that, the arts, theatre, literature, etc. It is true, to a certain extent; there has been a development of these fields in the area. The world famous Temple

the area. Thus the temple of the bars was created.

*Two great European narcotics,
alcohol and Christianity*
-Friedrich Nietzsche

This phenomenon is not unique to Temple Bar. The attractiveness of certain urban space works to their disadvantage; they become

Fig. 26 The Oliver StJohn Gogarty Pub



Fig. 27 View East down Essex St



Bar is no cultural quarter, it is an Irish theme park. How did this happen?

A large proportion of the funding that came to invest in the project came from Europe, but not any urban renewal fund or cultural advancement fund, it was tourism money. The objective then was to increase the pedestrian foot fall in the area. To achieve incentives were put in place to encourage the licensing trade²⁸. The success of this was such that soon the only people able to afford the retail space in Temple Bar were the publicans, more and more licensed premises were opened in

over populated and more often the arena for mindless violence. Bearing in mind the demands of mass culture in flux it is inevitable that an extent of violence will occur²⁹. There has been a lot reported of the antisocial behaviour in Temple Bar. This has come, in the most part from Irish Times journalist Frank McDonald. He is frequently appalled by the mindless behaviour of the patrons of the several bars and clubs in the area. Having visited the area I cannot find reasonable foundation for this. The marketing for the area encourages drinking and 'craic', it promises music and dancing. If this is how the area

28. McDonald, Frank 'Reflecting the City'

29. Reijndorp, Arnold 'In Search of New Public Domain' p45

is portrayed then how can Mr. McDonald expect anything less? The behaviour is a symptom of its success as a night-time district.

Mr. McDonald is not the only voice against the behaviour in Temple Bar (although he is the loudest). There is a move globally to streamline the public spaces in cities, a call for frictionless space. The rise of suburban living and increased employment in the periphery causes a doughnut effect where the centre is empty. City centres in general are looking to tourism to vitalise them. There is an idea that tourists demand a streamlined space. Design of public spaces has been determined by the notion that frictionless public space is good public space; the battle against street violence is waged. It is fraught with more lighting, more surveillance cameras a clear organisation and a great deal of appeal to ones moral senses e.g. this is a violence free zone³⁰.

I have several issues. The idea of surveillance cameras in public spaces, monitored by private security companies, is essentially privatizing public space. But on a bigger scale the implications of this streamlining, this exclusion of dangers and irritations of urban life, goes hand in hand with the elimination of the unexpected

and the spontaneous, which are just as important in urban life

There are issues with Temple Bar that can be levelled at the architecture. There is an imbalance. This imbalance is not necessarily in the functionality (the rise and rise of licensed premises). No the imbalances I am referring to is in the age demographic of the area. Temple Bar is a zone for people between 15 and 40. For a district that claims to be residential it has no amenities for children. It is true that the 'Ark' children's theatre is located there but children can go there for a set amount of time provided that they pay a set amount of money. There are no playgrounds of fun spaces for children to enjoy. Similarly there are no facilities for the older generation. The lack of everyday facilities, grocery shops, hair dressers, doctors or dentists. As a result only the young and mobile can realistically lie in the area.

Another criticism is the outdated idea of city that is implicit in the plan. There is an impression that the centre is more city like than the rest – this partial and elitist view only considers a small segment of urbanism. Temple Bar pushes issues aside and only deals with a certain spectrum of vision; only the young and mobile, only bars clubs and cafes, only consumers.

30. Ibid

Four. What is Public Space

As I repeatedly say, public space is dependant on the public and how they mass together. I have outlined how this has changed but have yet to discuss how that has effected design. The question remains, what is the public space that we as architects are designing?

Space for Strangeness

In designing a public space, the emphases has to be on the experience that people have when massed together. It is important to look, as I have tried to do in a previous chapter, at how we as a

society gather together. Fractured, differentiated, atomized.

In my initial statement I mentioned that successful public spaces form the urban identity of a city, they identify a people and a place. This sentiment also appeared when I spoke of classical public space of the Pynx. The success of these spaces is certainly the freedom they offer the collective public. But this leads to a question of how this freedom can be felt?

Public spaces then are less of a place and more of an experience. How can one design for that? I mentioned when describing Tem-

Fig. 28 Space for Strangeness?



ple Bar Square that the space was successful because it held a variety of groups of people. The task at hand is to design an experience that one feels free in, to design space for a collective, though in a society structured on the network this collective is fractured and comprised of groups. There will always have to be one dominant group in space. If you accept that public space is an experience of other worlds, then it follows that you experience the space as public because you are not part of the dominant group.

Anyone reflecting on personal public domain experiences will notice on closer inspection that the key experiences with shared use of space often involve entering the parochial domains of others.³¹ Public domain is this not so much a place as an experience.

Tourists are put at ease by everyday things in an exotic world. A public space is enjoyed more the more activities of the dominant group turn out to be a variation on the everyday life activities of the tourist, thus they foster participation rather than spectatorship.

There is not talk of 'meeting' in this description of successful public space; there is an idea of being in a place with others, not neces-

sarily meeting and engaging them in conversation but being there. Perhaps the idea of public space as meeting place is a stumbling block in our understanding of it. The insistence on coincidence 'meeting' and incidental exchange should possibly be abandoned in favour of an acceptance that in a network structured society there is no chance or incidental. This idea goes back to the idea of our understanding of public space being at an end. A new understanding of public space, liberated from the notion of meeting place is called for.

Where is the Public Space?

I do not think public space is out of date, despite the changes in society and how we collect together. Perhaps its manifestations are quite different to the traditional civic square. The idea of a free exterior space is not attracting diversity of public. Where then is a public filled public space? Some say, that public space is in the network, namely Kazys Varnelis.

Others say that this is a too linear view of where we are going, as a physical collection of people, how does the network account of our collectivity? It is the means not necessarily the medium. Infrastructure is seen as an option to find our public space, what things

31. Ibid

do we share? Our air, our power our water, to understand these in a differently could be the key to finding what is the collective space of our time.

Others again say that the park is not new public space; it is a free and open location, without the self possession of the civic square. Parks are having a revival of sorts; even Obama saw their potential and famously held his election speech in Grant Park Chicago. It is my opinion that if we are to see the history of our generation written, President Barack Obama is the one name that will illuminate the pages; he and his actions will define this generation.

Looking around I wonder if the public space is in the shopping centre, or at least was. The shopping centre was the destination of choice for all groups of people; nothing else caught the imagination of the masses quite so much as the florescent lit halls of consumption. It is no surprise that this popularity was played out when the market was cited as the must dominant and important force of our time.

The market determined everything; it influenced arts, literature, and inspired architecture and formed how the world made itself. With the dramatic collapse of

the market I think it is not right to say that shopping malls are our public space.

I have other reservations, that until now I have been slow to air. Up until this point the focus of the images I have included and the majority of examples I have discussed have been exterior open spaces. This is a bias on my part that I now wish to address

My historical mapping of democracy and the spatial conditions that accompanied it, as well as the legacy it has left on public space through time, has been focused on pure public space. It as not muddied my political incorrectness and exclusionary issues. I claimed that the spaces I was documenting were collective spaces. It is true that they were but many hugely important collective spaces were omitted, the factories of the industrial revolution.

These houses of industry were the first coming together of masses of peoples all of the same socio-economic class, all with the same purpose, all at the same time. I have not included these factories or indeed today's shopping centres because there is an issue in my mind to do with functionality that prevents me from allowing them into the debate.

In issue with the public space I wish to analyse it its functionality. It is public space, not necessarily collective space. ‘There are no demonstrations in Disneyland’³³ that is because the space is collective rather than public it is functional space, just as the shopping centre is designed for shopping.

To my mind public space does no have this kind of restrictive functionalism at its core, not like factories, shopping centres or Disneyland. It is this freedom, and what I have tried to communicate, public space is free to be political space, it depends on the public and their freedom to collect in whatever way they see fit.

Personal Reflections

The aim of this essay was to clarify my ideas of what public space is. The writing has given me the opportunity to read on the topic, through this process my understanding of ‘public’ and people in the plural sense, has broadened. In putting together all these understandings together, understandings of people collecting together, of people segregating apart and of the spatial implications of that, I have achieved a level of clarity as to what public space is. I would maintain that public space is not a condition that is straight-

forward. My understanding of it is a spatial condition where people are free to collect together without the burden of functionality, or the burden of sociability. It is an understanding that I am sure will change with time, as the information I have digested in the reading for this essay settle in my mind and develop.

32. Ibid p97

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What is the Role of the Architect in The Future?

Elaina Hickey

Introduction

Dublin, 16 July 2050

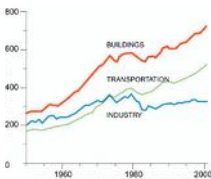
It is a typical July morning, with temperatures soaring to over 30 degrees, with a forecast high of over 40 degrees. The bumper to bumper traffic that was such a common-place sight a couple of decades ago are but a distant memory as sky-high fuel costs, personal carbon allocations and private usage restricted to three days a week diminishing numbers of vehicles on the road to almost nil. Extreme drought has changed lifestyles dramatically. Stringent water rationing has been put in place to curb wasteful water usage. Hosepipes can no longer be purchased, cars cleaned or golf-courses watered. Massive fines and jail penalties are given to people who break these laws or are caught trafficking. Inner city areas lie derelict with people escaping the deathly heat in the city. As the sun sets the city is plunged into darkness as power shortages and carbon caps mean the city is no longer lit up with the millions of lights that would once adorn every nook and cranny of the city. The dawn of the “dark city” has made crime rates soar with security harder to maintain. The near-daily electrical storms make flash-flooding a common occurrence, flushing raw sewage into the Liffey leaving a terrible smell permanently in the city. Rising sea-levels have regularly meant that coastal defences have been overcome, destroying homes, businesses, cars and basically leaving areas totally uninhabitable. The terrible heat of the city has also had a negative effect on peoples’ health and well-being. While there has been numerous tragic deaths and injury from heat waves, storms, floods and drought, the occurrence of health conditions has been exacerbated by changing weather conditions, such as respiratory diseases as a result of air pollution and elsewhere ensuing outbreaks of disease, such as typhoid, cholera etc. as a result of climatic events such as floods etc. Diseases associated with warmer climates have been introduced here such as malaria and trypanosome.

Elder people are particularly vulnerable in this respect. The instance of skin cancers has also dramatically increased, due to the increased intensity of the sun. All public outdoor activity areas and children’s playgrounds are now required to be shaded or partially-shaded.

Outside the city the once lush green countryside that Ireland was famed for is gone, replaced with scorched earth once associated with Mediterranean climate. Citrus trees and vineyards are now a common site along the dusty derelict roads. Agriculture as we know it is gone, the climate no longer suited to dairy and beef farming. Farmers all over the country have had to adapt to this new unfamiliar climate and landscape.

The economy too is crumbling. Caps on aviation emissions and a limit to personal air mileage means the sun holidays and city breaks the Irish had grown accustomed to are now a thing of the past. It has also completely killed the tourist industry, an industry many countries relied on especially in Mediterranean countries. Power and fuel costs have sent business costs sky-high and have sent bars and restaurants closing in their droves. Life is tough for everyone; all but the most privileged spend most of their time in their dark homes.

Elsewhere in the world, things are even worse. Many low-lying lands have been almost submerged by rising sea-levels, such as the Netherlands. Continued desertification in Africa and the expanding desert area of the Mediterranean has forced millions to migrate northward. The increase in wild forest fires in America and Australia have caused the destruction of millions of acres of forest land and the deaths of thousands along with the destruction of homes and properties. In the USA, Miami and New Orleans lie abandoned and in ruins after one too many direct hits from the ever strengthening Atlantis hurricanes. Famine and drought are rampant all over the world with poor regions suffering the most. Today, an estimated 1.25 billion people do not have enough food to eat on a daily basis. Species of plant and animals are vanishing to extinction at an alarming rate. Wars, civil strife and social problems have arisen from these conflicts. People lives are governed by fear, a deteriorating physical environment with little personal freedoms and a continually depressed economy, with little hope of things getting any better.



Co2 emissions by sector

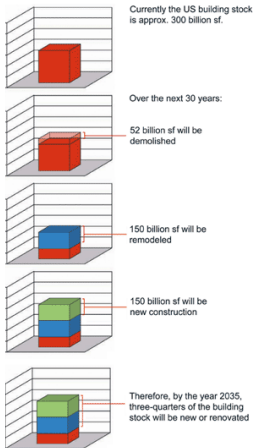
Images taken from AIA architects and Climate Change prepared by Edward Mazria

Is this the world we want our children to grow up in? A world in which the ability to live long, healthy and prosperous lives is seriously in question? There is an old Kenyan proverb, "Treat the earth well, it was not given to you by your parents, it was loaned to you by your children". If this is so, then we have not taken care of it as well as we should have and are handing it over to our children in a far worse condition than we received it. The 20th century has seen immense change and development. The population of the world has risen dramatically, and is continuing to expand by around 84 million every year. The developed world which accounts for less than 20% of the world population consumes over 80% of the world's resources. Larger populations use more energy and resources, occupy more land and create more pollution. The effects of this on the planet are disastrous. In 2005, global industry used oil, coal and gas totalling over nine billion tonnes (oil equivalent) to make 67 million cars and vans and 105 million bicycles, to fly a couple of billion people around the planet, and to provide the infrastructure for nearly 2 billion mobile phone users and 400 million internet connected computers. However, it is the construction industry that is the biggest cause of carbon emissions in the world today. Buildings and their construction account for nearly half of all the greenhouse gas emissions and energy consumed in this country each year. This includes energy used in the production and transportation of materials to building construction sites, as well as the energy used to operate buildings. Globally the percentage is even greater. The Building Sector is the key source of demand for energy and materials that produce greenhouse gases. 40% of total consumption – can be attributed just to building operations. This includes heating, lighting, cooling, and hot water. That means that 40% of total consumption is linked to design. Every time an architect designs a building, they set up its energy consumption pattern and its greenhouse gas emissions pattern. And, since the average life of a building is 50-100 years, that is setting up a long-term pattern that will have to be lived with.

In the life time of an average building most energy is consumed, not for during the construction period, but during the period when the building is in use. That is, the energy that is used for the operational costs of the building such as heating, cooling, lighting,



Most energy consumed by a building is on operational costs



Images taken from AIA architects and Climate Change prepared by Edward Mazria

cooking, ventilation and all the other activities that use energy in a building. Typically more than 80% of the total energy consumption takes place during the use of a building, and less than 20% during construction of the same. Seventy-six percent of all power plant-generated electricity is used just to operate buildings.

Also in the coming years combining the demolition of older less sustainable buildings, with the remodelling and construction of new buildings, by the year 2035, approximately three quarters (75%) of the built environment will be either new or renovated. This gives us a great opportunity as architects to not repeat the mistakes of the past and create more sustainable building. Since only 20% of energy consumption is attributed to construction costs this redevelopment can be achieved while not having a terrible effect on the environment. It would be a better option than leaving the unsustainable, energy consuming buildings for years using up more energy than needed. With the right design, materials and construction processes we can produce building that enhance the environment and not destroy it. This transformation over the next 30 years is a make-or-break opportunity for the architecture and building community to avoid dangerous climate change.

From this it is obvious that architects have a huge responsibility in the task of reducing carbon emissions and curbing the effects of climate change. A change in architectural thinking is needed and it is needed urgently. We do not have much time to change our bad habits. Scientists have evaluated that in order to keep climate temperatures below dangerous levels, we need to keep global temperatures under 2.0 degrees above pre- industrial temperatures. They are currently at 0.7 degrees above pre-industrial temperatures. From this we have about ten years to have made considerable reductions in global greenhouse gases if we are to avoid catastrophic climate change. Since most of these gases are being produced from the building sector, we as architects have an unquestionably difficult task at hand. And if we fail in our task everyone on this planet will pay the price.

Looking to the Past as a Solution for the Future?

What happened to us in the last generation that caused us to have such a destructive impact on our planet? After all man has lived on this planet for hundreds of thousands years before us without notably impacting on the environment. It is only in the last two hundred years that has seen our relationship with this planet spin out of control. We have become dictators of the planet, controlling instead of living in harmony with it. This is reflected in the building of today - huge, permanent and artificial scars on the ground with no connection to site or no consideration of local conditions. We have allowed technology to dictate all aspects of our life, including our buildings and we have completely turned our back to the skills and knowledge we once relied on when we did not have technology and the only tools available to us were our close connection to nature and natural instinct of survival.



Vernacular architecture of the past evolved over time to make the best use of local materials and conditions and created comfortable dwellings for people living in even the most extreme climates while being almost completely passive and without hardly any harm to the environment. Our ancestors all those hundreds of thousands of years ago travelled north from Africa to Europe and as they went not only did they have to wear warmer thicker clothes, but they had to build stronger dwellings to protect themselves from the blistering heat of the deserts and the cold as they travelled north. This journey of man resulted in an enormous diversity of buildings, all constructed of local materials and suitable to the climate, landscape and society of the region.

However, what remained the same no matter where they were was the underlying metabolism. Humans have the same core temperature no matter where they are - that is 37.5 degrees C - and the same mechanism to maintain this core temperature even in the most extreme conditions. The skin, body-form and behaviour of these people did adapt to different regions. For example, in hot climates people's skin grew darker so as to regulate the production of vitamin D in high levels of ultra-violet (UV) light. In the north, people evolved to have lighter skin, hair, and eye colour because of lower levels of UV. Also people in hot climates grew taller and thinner so as to have a high surface area: body volume ratio so they could lose heat rapidly. In the north people were shorter and fatter so as to conserve heat. So if people were able to adapt their bodies in response to different climate, they certainly could adapt their building techniques to different climates.

Vernacular architecture is influenced by many different factors both from the environment and human behaviour. This means that buildings in different regions vary, some only slightly while others greatly differ. Even neighbouring villages may have slight variances in form and structure due to aspects such as local tradition and culture. What remains common between all of them is a building that is responsive to local environment and makes use of local materials that are readily available. They consider all physical factors such as sun, wind, water and the landscape when developing their form and aesthetic. The differences between regions led to a sense of cultural identity and individuality while at the same time making less of an environmental impact than modern buildings. Unfortunately regional architecture, which evolved over hundreds of years, differently in each region, has almost overnight been replaced by 'standardized' architecture. Based on western models, they are fully dependant on technology rather than design led problem solving. Worse still, the cultural identity of these areas are being ripped away by taking away vernacular building and replacing them with the same building typologies that is now the backdrop to almost every city in the world. Vernacular building was seen as

old fashioned and in the past. This new style of building was seen as the way forward.

However we cannot think like this any longer. We know now that the way we have built in the past few decades is not viable now or in the future. If we are to make any progress in making our buildings more sustainable we must look to the past and to vernacular architecture. This does not mean the future of humanity must return to the 'wilderness', or become nomads building huts from branches and leaves, although it is an interesting thought. In today's industrial world with its alarming population growth and dependence on technology this does not seem likely. It does mean however that we must study the methods used in the past to help us in designing for the future. While some architects are making efforts and creating sustainable buildings, it seems they are still reluctant to change the form of the building and so it remains virtually the same aesthetically as the modern buildings that caused the problem in the first place. However, they seem to forget that a successful sustainable building should be suited to its surroundings and have a strong link with nature. Perhaps it is in this respect that vernacular architecture can be of most help.

Green design has much to learn from the past. Most cultural epochs, for example, the Renaissance, are born by looking backward and by rediscovering and reinterpreting history. We must learn from the wisdom of earlier cultures, who did not have the technologies of today and who had to figure out for themselves the best way to light, ventilate, heat and shade buildings using only the earth's natural resources. Not only that, but for the way in which vernacular building is so beautifully embedded in and adapted to their context and climate. Buildings of the past offer a valuable resource for study. Their lessons and design devices can be studied and reinterpreted, using current technologies and lifestyles, to help us in building more sustainably in the future.

Modernism: A Critical View

Le Corbusier is arguably the most influential architect of the Modern Movement. He influenced an entire generation of architects who followed him, most notably with his book, *Vers une Architecture*, which he published in 1928. In this book he details his theories on a new type of architecture, an architecture that was not 'stifled by custom'. His theories on a new aesthetic for architecture would eventually become known as 'The Five Points towards a New Architecture'. They were:



- Pilotis: Elevating the mass off the ground by means of a series of columns
- Free Plan: Keeping the plan as free from sub-dividing walls as possible
- Free Facade: Simple facade with large areas of glass
- Ribbon Windows: The long, horizontal sliding window
- Roof Garden: Restoring the area of the ground covered by the house

These set of points or guidelines have inspired generations of young architects who came after him and even today in the 21st century. What Corbusier failed to point out is that out of these five points only the roof garden can improve thermal performance of the building in many climates. First of all, to raise a building off the ground is to expose a sixth face to the air, instead of letting it sit in the stable temperatures of the ground. It means the complete disconnection of the building from its site and as a result, from nature. The deep plan idealised in this type of building makes air conditioning

a necessity, only buildings with a relatively shallow plan can make use of natural ventilation. The free facade means that traditional buildings with strong walls and sensibly sized windows have been replaced with sheets of planar glass, used to 'increase the connection between inside and outside'. What they really do is increase the vulnerability of the building to the external climate and require huge amounts of energy to try and stabilize the internal climate of the building to create comfortable conditions for people to live in. Long 'ribbon' windows are nice to look at and let a lot of light in but are not easily opened and this has led to the virtual elimination of usable windows in modern buildings. The roof garden is the only feature of modern building that increases the thermal protection of the building. It can provide good thermal resistance to the roof and can control rainwater run-off also.

Le Corbusier without question was a great architect and his theories and ideas did change the way architecture was thought about. However, his points seem to have been conjured in a time and a place that thought that energy was infinite and actions did not have consequences (at least as far as environmental matters were concerned). How come then, his points still continue to have the same influence even though we know better? If Le Corbusier had a better knowledge of physics and the environment then 20th century architecture may have been different and we may not be in as much of a crisis as we are now. However elegance and minimalism held the greatest priority to him and he was not to know of the negative consequences of this desire.

The complete overhaul of cities to the modern style was aided unintentionally in part by the Second World War, a time in which enormous parts of European Cities were reduced to rubble. The rebuilding of the cities was to a scale never seen before. Entire cities were re-planned, and modern methods of construction were introduced. Steel, concrete and prefabricated structures allowed for rapid construction and larger scale projects. The result was that the old hearts of the cities were torn out, leaving areas unrecognisable.

peratures. The deep plan favoured in these building meant that natural ventilation was not possible. The internal partitions of these buildings are lightweight, gaining and losing heat quicker. Internal mass is needed to effectively heat or cool a building using air-conditioning systems. The only way to do this in these light-weight over-glazed buildings was to throw energy at them. This adds to the problem. Also, increased noise from traffic in cities meant that workers kept their windows shut using instead the air-conditioning over natural ventilation.



Another problem with over-glazing in modern office buildings is that, as a result of glare on computer screens, blinds are often left closed. This results in higher artificial lighting usage. This does not reduce the over-heating problem either as it is an internal shading device. Once solar radiation passes through the glass it is trapped so even with the blinds down, the building overheats. These buildings can be made comfortable by throwing enormous amounts of energy at them, but even then other problems can arise.



One such problem is poor air quality. One of the most important aspects of architecture is providing a person with a safe, healthy and comfortable place to live and work. This is compromised by using air-conditioning systems. The quality of air in air-conditioned buildings can be very bad. The filters, duct and plant of air-conditioning systems is often filthy, blowing air into a building that is often dirtier than if one opened a window, even in the city. In fact, it is a proven fact that workers in air-conditioned buildings take more days off than workers in a well ventilated building.



Architecture during the modern era has been reduced to little more than a 'pretty' packaging. With the facade relieved of providing essential functions such as providing shading and ventilation, it has become nothing more than a skin, influenced more by current fashions than a desire to connect to the site or even create a comfortable interior space. This has to change. We have come to a point where this lack of responsibility towards the environment is no longer acceptable. Architects need to stop relying on technology

The blame cannot however be put wholly on modern architecture, but also on modern culture and the emergence of capitalism. This brought with it ideals of its own, the constant need to develop and redevelop, that growth is good, profit is the main goal and that natural commodities such as fresh air, clean water etc. have no economic value whatsoever. Architecture was, under the guise of Functionalism, reduced to mere utilitarianism, minimal space standards and cheap construction. Buildings only had value in terms of efficiency of function, measured by profit, and no concern with any other issue. Worse still was the fact that every city began to look the same, using the same techniques and 'mono-functional' zoning which led to buildings being permitted which were unsuited to climate and place. This led to buildings which were far less successful in terms of function, climatic and constructional performance than the buildings before them.

As modern processes and technologies advanced, the concern for environment and sense of place further deteriorated. Plots tended to be levelled and cleared of all vegetation and natural features. The use of toxic and non-biodegradable materials became even more common. Most notably however, is the introduction of air-conditioning and with it the complete reliance on electricity, whose generation is the main consumer of fossil fuels. With it brought the ability to control the internal climate with the flick of a switch and so began the disregard for natural methods of heating and cooling a space.

Air-conditioning brought with it a new style of architecture, which can only be described as a 'glass box, sealed and tinted, it is a style that is at home nowhere. It is completely independent from its surroundings, severing all contact with nature. The excessive use of glass in their external envelopes creates uncomfortable indoor conditions. On a hot day, the building acts like a giant greenhouse, letting heat in and keeping it in causing overheating. Air-conditioning is required to alleviate this problem. On cold, winter days, over-glazed facades are useless at keeping heat in and central heating is required to be run consistently to maintain comfortable tem-

as a substitute for good design. Corbusier described the building as 'a machine for living', and modern architecture certainly is an energy guzzling machine completely dependent on technology rather than good design. Perhaps architecture in the future should be thought of as a more organic thing, one that unlike a machine draws from nature and the surrounding environment to sustain itself

Starting at the Source...



In order to cause a true change in architectural thinking, it must be tackled at its source- teaching of architecture to students-who are the future architects and will be the generation of architects that will have to deal with the changes global warming and energy shortages will inevitably bring. Sustainable design and building technology are fundamental to the education of architectural students. Architects have a greater responsibility to design buildings that are environmentally sustainable. The performance of these buildings must also ensure a comfortable and healthy atmosphere for the people who occupy them. Therefore, it is important that architecture students develop a thorough understanding of climate, building performance and human comfort at an early stage in their education. Architects are poorly educated in their duties with regards to being environmentally conscious. Students are poorly thought on issues of building performance. Although there has been noticeable improvement in its teaching over the past 5-10 years, it has to be said, it seems to be more seen as a thing that has to be addressed, a drawback that a solution has to be found for- than a core, integral part of teaching. It is still a fringe activity in design schools. It is not considered a design issue, more an ethical and technical concern. Recently, there has been a dependence on energy-consuming technology such as heating, cooling, ventilation and lighting systems to make buildings comfortable for an occupant. These systems are usually an afterthought once the form, layout and materiality of the building have been designed. An approach to design where building technology is integrated with concept design has the potential to reduce the need for high-tech systems and reduce the energy consumption of buildings. In most schools

of architecture, issues of building technology, sustainability and environmental performance are taught in lectures that are completely detached from the design studio. This leads to issues of environment and sustainability being thought of as a separate entity to their design. Students then find it difficult to apply the lessons learned in these lectures to their overall design. This results in building technology becoming an element that is added on in the later stages of the design process so as to fulfil a requirement and pass a module. Unfortunately this attitude towards building technology usually follows the student with them into their careers, resulting in buildings being built that are not environmentally sustainable. Also, these lectures usually do not make the subject engaging or stimulating. Many students find it a boring necessity, and its important relevance to architectural design is lost. A major conceptual shift is needed, moving from an artistic, historical approach of thinking to a more technical and scientifically measured approach. This is not to say form and aesthetics should be ignored completely. Both can be combined together easily, sustainable issues should be seen just as another tool with which to design. Architectural schools need to transform now, if the future architects are not learning these important lessons, they will not implement them in future buildings and no progress will ever be made in the reduction of wasteful energy usage.

Architects Take Note

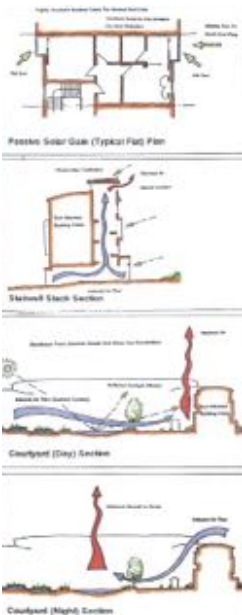


It is clear that architects need to change the way in which architecture is thought about. It can no longer be thought of as the opportunity to create huge, shiny, 'iconic', buildings that look impressive but have nothing else to offer in terms of complexity or cleverness of design. It seems clients want their buildings to be bigger, taller, more glazed and more lit up as a status symbol, to showcase their power. There are many architects who are willing to jump through hoops just to please the client, erecting monstrous skyscrapers and bulldozing natural landscapes all for a commission. It seems the first step architects need to take is to grow some morality and guide clients to make responsible environmental choices.

The architecture of the future must have sustainability at the heart of its design. Architects, when sitting down at the beginning stages of the design process, must think about the environmental impact in every step they take. This sounds easier than it is, especially when there has been a style that has been conformed to for so long. Speaking the truth, it was sort of an easy way out in respect to the architect, leaving him free to design whatever he wanted and using technology to control the environment. Now the architect must use the skills he has learned to create architecture that is responsive to its environment. No longer, can he use technology as a scapegoat for an inadequate and environmentally unresponsive design. Future architecture must be environmentally responsible and have excellent design. This will not only be good for the planet, but also create opportunity for architects to be more creative and innovative and hopefully breathe new life into architecture that has become increasingly dull and uninspiring.

Shading devices should be placed on the exterior. Even when these steps have been taken to cool buildings, in hot climates this may not be enough. In this case efficient cooling systems may be used. For example by providing openings at the top and bottom of a building, cool air will enter at the base of the building, while warm air will rise and be extracted from the top opening.

To effectively heat a building it must have mass. Therefore glass buildings are not effective when heated. Solid structure of brick concrete and stone therefore are better. Radiation is absorbed and stored, slowly being released. Also in warm weather a solid building with fewer openings means that less solar radiation passes through and the interior stays cool. With this information in mind, perhaps architecture in the near future will change its form to a more solid architecture instead of the thin glazed facade of modern buildings. The use of solid building material may be sufficient in warm climate but in more temperate climates walls must be insulated.



Reduced consumption of energy in use is the most important factor in sustainability; however there are also other factors of building design that need to be addressed. Much of the damage done to the planet is a result of the use of non renewable sources of energy, fossil fuels being the main source, and building materials (such as hard woods felled faster than they can be regrown or not replaced at all). Architects need to use more environmentally conscious when it comes to the resources on which they draw from to build. That means using materials that are renewable such as wood that is taken from sustainably managed sources and using materials that are almost inexhaustible, such as mud, clay and sand (for glass). It is also important that the architect specifically outlines energy systems that are non-depletable such as the energy from the sun, wind, and water (hydro-electricity). In this way, any energy that is needed to run a building can be taken from sustainable sources.

Perhaps the architectural aesthetic of the future will be solid, thick skinned building with smaller openings and less glass. It certainly seems like the wisest choice. In a warming

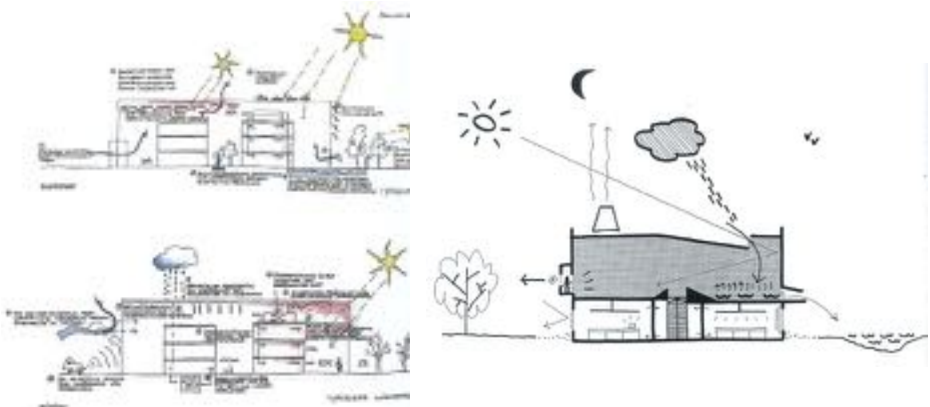
There are a number of ways in which architects can make buildings more sustainable both in terms of environmental responsibility and quality of life. All architects should strive to achieve as many aspects of sustainable building as they can. Firstly, buildings must consume less energy than they are presently. This is of course the main problem architects face as buildings consume almost half the total energy of the developed world. It is even possible for buildings to consume no energy at all. This would be the ideal situation obviously. Passive design can improve a buildings energy performance in three areas: heating, cooling and lighting.

Artificial lighting is a building's primary consumer of energy. It is impossible to eliminate the need for it during night time hours but the use of lighting during the day can be reduced enormously, simply through good design. Deep plan buildings must be avoided as much as possible, by introducing atrium spaces or open courtyards architects can achieve this. Windows must be big to capture natural daylight. They should also be shaded by overhangs or by being recessed so that high summer sun is excluded and low winter sun is admitted. There are many devices now available that can direct light deep into a building and to reduce excessive light levels near glazing, providing a more uniform distribution of light in a space. Higher ceiling also help in brining natural light deeper into a building.

The dependency on air conditioning must be abolished. By not having a deep plan, architects also allow for a building to be naturally ventilated. It is also a desire that temperature can be controlled by the occupant. By opening a window the occupant can achieve a comfortable indoor temperature. Also the fact that it is fresh air rather than air conditioning has a positive impact on the occupant. It is healthier and more natural. A building must also be protected from unwanted direct sunlight. This can be achieved through shading windows and other apertures. The type of shade needed depends on the position of the sun and the geometry of the building, it is the architect's job to have this knowledge and select most suitable. Shutters, blinds, louvers, awnings

Buildings will more and more be seen as a protective shell, a shelter from the outside. That is not to say that they should completely turn their backs to the outside and to nature.

A truly successful green building cannot be thought about as a self contained object. It should have a harmonious relationship with its surrounding also. The ideal situation would be a building that appears to have grown organically in its place it is so well integrated with its surrounding environment. Architecture of the last few decades seems to have totally disregarded this ideal in favour of abstract buildings that are imposed in a place and stand out from the surrounding environment. While this on its own does not do damage to the environment in terms of energy output etc, it does influence and act as a catalyst for the problem of unsuitable buildings for different regions. Also it does visually damage the environment as it usually involves the removal of natural landscape features and a disconnection from nature. To remedy this situation architects must become more informed about local materials and building traditions. The architect must also base their design on the results of rigorous surveys of the site. The architect must tap into what makes a site unique and have a sense of the place before he/she begins designing. Only once the architect has an intimate relationship with a site can he/she know what the best design strategy is. The art of seamlessly embedding architecture into its surrounding landscape is a skill the architect of the future must learn.



Conclusion

Compared to this environmental crisis, all other problems that seem so important, social, political, economic etc. really are just trivial and pale into insignificance. Who is going to care about recessions, wars and civil rights if humanity perishes from the effects of global warming? Yet, for such an important matter, it has fallen on deaf ears. Some world leaders even refused to acknowledge that global warming even existed! On top of this architects are still designing buildings that are unsustainable even though they know better. Why are people being so unwilling to acknowledge this crisis? Do they even care?

Perhaps the answer lies in the fact that the human race as a whole generally find it difficult to deal with drastic change. It seems the actual process of changing, the extent and the speed of the change that needs to happen and the consequences if this change does not happen is difficult to contend with.

‘Conventional wisdom protects the continuity of social thought and action. But there are also grave drawbacks and even dangers in a system thought which by its very nature and design avoids accommodation to circumstances until change is dramatically forced upon it.....the rule of ideas is only powerful in a world that does not change. Ideas are inherently conservative. They yield not to attack of other ideas but to the massive onslaught of circumstances with which they cannot contend.’

There is truth in this claim by John Maynard Keynes; it is difficult to walk blindly into a situation without first testing the waters, ensuring it is the right path to take. We do not have that luxury however, it is now or never. People definitely are worried, even if they do not show it or verbally express it; I doubt there is one person who, in the company of their own thoughts, hasn't thought about the future with concern to the environment and climate change.

So the question that remains is, can we change our ways or is it already too late? One thing that is for sure is the challenges that face us are huge, if not impossible and the task lies with this generation alone to make the change. However, we must think positively. Change is happening albeit slowly. A change in leadership in America has meant plans are now being made to tackle climate change. New technologies are emerging that offer hope for the future. Architects are changing their ways also, making sustainability the heart of the design process. Clearly architecture alone cannot bring about sustainability. However because buildings impact on and transform the environment and because they influence how people live their lives, buildings and their architects have a huge role to play in the battle for sustainability.



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The Atmosphere of the Architectural Environment: Architecture and the Senses



Stephen Barry

Introduction

The eyes want to collaborate with other senses. All the senses including vision can be regarded as extensions of the sense of touch as specialisations of the skin.¹

I am greatly interested in the architectural environment. The subject of materials and assembly also greatly interest me. I am unsure why exactly that this is the case. In this dissertation, I will attempt to understand and examine some of these feelings of interest. The interest may stem from how materials, form, space, light and landscapes can appeal to the senses. This manifests itself in many ways.

I will examine the sensory responses in terms of materials, space, form and light.

My first proposal was to examine the atmosphere of materials, how a material has the ability to reflect a mood or atmosphere of space or building. This can differ from person to person. As an example, concrete is a beautiful material. It has the properties to take almost any shape. However, in my opinion, there is a misconception that concrete is a cold and brutal material. There is something comforting about

the safety and heaviness of concrete. It can encapsulate a space that gives the inhabitant a sense of security because of its fantastic material and structure properties. Safety and reassurance are feelings which humans crave and find comforting from birth. A baby is more comfortable with someone or an object that they can relate to and associate with wellbeing. On the other hand, timber is perceived as being a warmer and more natural material. This is just a simple example of how materials can influence the mood or atmosphere of the inhabitant. As this dissertation develops with more research, there will be an expansion on these theories and properties.

The next thing which entered my mind was that it is not just materials that can reflect our mood and atmosphere. It is a combination of different elements within the architectural environment that ultimately result in the creation of an atmosphere. The elements which contribute to this emotional response to architecture are material atmosphere, the relationship of objects, form, space, light and context within the landscape. These combined elements have the ability to create a purer and more emotional architectural response within the inhabitant or visitor.

The joining of materials and use of many different/related materials are intertwined in the atmosphere of materials. Carlo Scarpa was the master of understanding materials and the joint. Japanese architecture has quite a unique and tentative relationship to materials. Architects such as Kengo Kuma and Tadao Ando are examples of architects with an excellent sense of materiality and junction. This is another avenue of exploration is this dissertation which interests me. Juhani Pallasmaa is a Finnish architect who is particularly sensitive to designing with the spatial experience in the forefront of his mind, and has written many articles discussing this topic.

*The way spaces feel, the sound and smell of these places have equal weight to the way things look. Pallasmaa is not just a theoretician; he is a brilliant architect of phenomenological insight.*²

There is also a case for a way of thinking about creating a purer architecture which is not created for “that one photograph in a magazine.” It is an idea about an architecture which is much deeper and meaningful, and responds to the need or want of the inhabitant. We all want to feel

secure. We all need nourishment of the body and soul. This can be achieved through the senses, as the brain works in many mysterious ways.

1 What are the senses?

*The Renaissance system of the senses was related with the image of the cosmic body; vision was correlated to fire and light, hearing to air, smell to vapour, taste to water and touch to Earth.*³

The senses refer to the psychological methods of perception on the body. Our nervous system has a specific system dedicated to each of the traditional senses. The traditional senses are sight, touch, hearing, smell and taste. The senses respond to specific physical phenomenon.

Within architecture, sight, sound and touch are the primary means, by which we understand form, space and materials. Architecture is concerned with the visual. I think that this mode of thinking needs to be reviewed. We have lost some of the ruling forces in sensory architecture. We need to focus on an architecture that has the habitant and the experience of space as part

of the main design process.

There is an obsession with the visual within modern architecture and we have experienced a loss in the olfactory and auditory dimensions of architecture.

*Its fixation with appearances, surfaces and instant impacts that have no sustaining power over time.*⁴

People are sensory beings and inside the conscious of each person is something which responds to elements within a building or space. Sensorium is a word used to describe the phenomenon which refers to an organism's perception and how it experiences and interprets the environment within which it lives.

*My perception is not a sum of visual, tactile and audible given: I perceive in a total way with my whole being: I grasp a unique structure of a thing, a unique way of being, which speaks to all of my sense at once.*⁵

It is the architect's duty to intelligently build, using all the senses. In my opinion, architecture goes beyond the visual. It is a finely tuned process by which, the visual, tactile, olfactory and aural stimuli are implemented.

2 Visual perceptions

*Until recently, architectural theory and criticism have been almost exclusively engaged with the mechanisms of vision and visual perception. The perception and experience of architectural form has most frequently been analysed through the gestalt laws of visual perception.*⁶

The general perception of architecture is that it can only be appreciated visually and not in terms of the emotions that it causes in our being. Vision or sight is said to be the ability to interpret information from visible light reaching the eyes. I do not agree that architecture is only for the eyes. In my opinion, architecture is something deeper and fundamental. It is a sensual entity to be experienced. It is metaphysical in essence. Many parts of the human existence can be considered to be metaphysical: thoughts, feelings, memories, dreams, ideas or any other thing that goes beyond the physical world we live in. Humans have dealt with these intangible elements of life since the beginnings of consciousness.

3 Materials

During the industrial revolution, a significant cultural discovery addressed the staggering impact of new technologies on all reaches of society. Historically speaking, the discovery and utilisation of materials such as concrete and steel changed the course of architecture. By understanding a materials basic properties, pushing their limits for performance and at the same time being aware of their aesthetic values and psychological effects, an essential design role can be regained and expanded.

Sensory responses to different materials

*Vision Reveals what the touch already knows. We could think of the sense of touch as the unconscious of vision.*⁷

The reciprocal relationship between materials and humans is the basis for attachment and even obsession. The study of material culture thus connects us to fundamental issues of humanity. I propose that certain sensory components should be recognised as materials, such as light, sound and smell. Development of innovative materials must take place in parallel with

new approaches to engaging human senses. Such thinking will provide increased awareness of the many subtle messages that surround us within the architectural environment. Different materials have the ability affect different emotions. Take wall construction for instance; how does an opaque wall differ from a transparent one? An opaque wall might be directing the movement through the space in order to create a route within the building, a sequence of movement and experience. A transparent wall might lend itself to views or light. Similarly, sound and scent can perform, inform and transform; their impact is strongly felt even in the absence of a material artefact, in the traditional sense.

Reassuring Materials

Reassuring materials could also be classed as natural materials. We can all remember a space from our past that we loved to enter. For instance, I remember the entrance to my grandfathers' workshop very well. The workshop was in an old stone out-house. It had a heavy oak door with black hinges and black handle. There was something about this space which was reassuring. I would go there sometimes to



Fig 1: Steven Holl, School for Art & Art History at the University of Iowa

Fig 2: Interior View

Fig 3: Staircase

be on my own. The workshop seemed to resonate with the smell of the grandfather. Maybe it was because my grandfather smelled like all of the things that resided in the workshop; like timber, grease, steel and stone. What I am trying to get at is, that materials that we grew up around, tend to be reassuring materials. Obviously, this differs from person to person, but for me personally, the smells, textures and sensory qualities of timber, stone and iron are reassuring. I am at ease when surrounded by these materials. I am brought back in a memory to a time and place, where these materials are familiar and related more to an experience rather than a visual quality.

High emotion materials

*By understanding a materials basic properties, pushing their limits for greater performance and at the same time being aware of their aesthetic values and psychological effects, an essential design role can be regained and expanded.*⁸

High emotive materials have an extremely sensual quality. The way these materials affect us is through a psychological connection to time and space. Concrete for example is a man-made ma-

terial which is constituted from natural materials. Elements of earth, water and fire are combined to create a dense emotional material. We perceive this material as being artificial yet familiar. There is a surreal juxtaposition.

It could be said that rich architecture is full of juxtapositions. The familiarity of concrete comes with an unconscious sense of respect from the fact that it is a modern material, but also steeped in history. All it took was for man to find the constituent natural materials and combine them in the correct mixture to form a type of 'ultra-material.' The surface treatment of concrete can have an affect on how deeply the material moves us. Does the concrete have a scent? A texture? A sound? Or even a taste? Of course it does. Materials are just as much a part of the visual as any other sense. The fact that materials can appeal to all of the traditional senses is the reason why I class materials themselves as being an experiential sense, as materials are of the senses.

Passive materials

I class passive materials as being materials which do not instil emotion in people. The materi-

als I am talking about are man-made, false and empty if you will. In my opinion, these synthetic or modern materials have no standing in architecture. That is unless it brings distinct advantages that make the production of this material viable. Materials such as ETFE, PTFE and PVC do not appeal to the senses.

These materials do not relate to space and time, and so have less of a psychological affect on humans. These materials carry the aura of the visual, rather than those associated with deep emotion responses, such as smell or memories. The very existence of passive materials is of the scientific, rather than the visual. These materials are not a part of the sensory experience; because science, itself is more about the factual rather than perception. Science is not to be experienced; it is to be accepted as so far that it exists and is factual.

*All perception begins in the oral cavity, which serves as the primordial bridge from inner reception to external perception.*⁹

It is therefore, up to the architect to justify the loss in sensual experience when choosing these materials. There must be a valid reason or advantage to specify the use of a passive material. Be

it sustainability, environmental or otherwise; the architect must be aware of the loss in sensory responsiveness and justify it.

4 Form

Surface

Simple surface applications can change optical properties. A surface can be painted, have a coating applied, left natural or have some other type of surface texture applied. It is up to the architect to decide what surface treatment to apply and what this does to change to the optical properties of the surface or material that the surface is constructed from. Another surface treatment is light or the lack of. By creatively lighting surfaces, many psychological effects can be achieved that subtly transform mundane environments.

Scale

Scale is an interesting aspect of architecture. It has been used for generations, in many civilizations for different purposes. The architecture of the Greeks and Romans always had a scale. The scale of buildings had to do with its function. Take for instance the Parthenon; it was built as a temple to the Greek goddess

Athena. Its function was spiritual. Many spiritual buildings employ the idea of grand scale to heighten the spiritual experience. There are other ways to heighten experience other than having a huge building. How a building deal with the issue of human scale can be a problem.

You can't say that big is bad; it lacks human scale. Human scale is not so easy, it has to do with proximity and distance.¹⁰

Subtle differences can affect the invitingness of an entrance or a space. The building size, dimensions, the buildings own mass in contrast to my own, all of these are basic elements of scale. More subtle instances are the use of details, such as, a thin door vs a thick door and a thin wall vs a thick wall.

5 Sound

Acoustics are an essential but undervalued part of the design process and how we experience architecture. It has the ability to affect the size, shape and materials we use in a space. Architects need to be aware of how sound works, reflects, refracts and how it is absorbed. These qualities have affected the design of buildings throughout the

ages. Sound can be contained, amplified, reflected or absorbed for the purposes of architectural concept. Aural architecture is a relatively under-explored area.

A space is understood and appreciated through its echo as much as through its visual shape, but the acoustic percept usually remains as an unconscious background experience.¹¹

We are not normally aware of the significance hearing in spatial experience, although sound often provides the sequential range in which visual impressions are embedded. Aural experiences in architecture can be intensified by reducing the availability of other sensory elements. One cannot underestimate the power of sound when light is removed. When light is removed in a space and we can only hear the space, we sculpt the space in our minds eye by listening for sounds and tracking the echo of our footsteps. It leads to a richer experience of solitary interaction with a space and makes the scale comprehensible as we can't see in the darkness.

Many of today's cities have lost their echoes through the contemporary open spaces and wide streets; they do not return sound. The interiors of modern building

also do not reflect sound; they absorb and censor the aural experience. Peter Zumthors Swiss Sound Box for the Hanover Expo in 2000 is an excellent example of sensory architecture. It is constructed from 144km of timber and does not use glue, nails or screws to fix them in place. There are only cabled by steel cables. The timber is stacked in such a way as to let the senses to permeate through the spaces. David Burns gives an account of his first impressions on entering the Swiss Sound Box;

*It was the permeability of the screens. Not just in terms of light, but how they allowed the smells, sounds and views to permeate through.*¹²

If sound is said to influence the design process, why not incorporate it rather than accommodate it?

6 Light

Much the same can be said for light, as was said above about sound. Light can also be reflected, refracted and absorbed as well as focused and diffused. To a certain extent, light intensity has to do with the size of the openings and number of artificial lights in a space, but form,

materials and textures can also influence the light intensity of a space.

*In great architectural spaces, there is a constant deep breathing of shadow and light; shadow inhales and illumination exhales light.*¹³

Light intensity or atmosphere has the potential to set a mood for a space. Naturally lit spaces have a connection to nature, as it tries to replicate the exterior environment. Be it a sunny day or an overcast day; it sets a mood and recreates a time and place within that space. Artificially lit spaces do not do this. They are perceived as illusions or follies. They create a false constant mood within a space; free from external influence. Artificial lights, therefore, have less of an impact on the human consciousness.

It is therefore, the quality of light that needs to be assessed and not the quantity. There is no such thing a too little light, but too much light can overpower the senses. Glare causes disturbances to the reception of external stimuli, whereas darkness deepens the sharpness and sensitivity of the human senses.



Fig 4: Peter Zumthor, Swiss Sound Box

Fig5: Musician in Sound Box

Fig 6: Interior View

Natural

Lighting materials and surface systematically and look at the way they reflect light. Natural lighting utilises the sun and orientation in conjunction with day-lighting strategies to fill a room with light. The architect has a number of tools to 'sculpt' the light within a room. The form of the room and obstacles, size, orientation and day-lighting strategies can be influenced. Day lighting strategies include roof-lights, light-shelves, floor to ceiling openings and reflectors. However, light is constantly changing and even careful design and study of light has come only so far. We cannot design for changes in the season, time of day and weather. It is beyond our control; we are open to external influence.

In Peter Zumthors, Kunsthaus in Bregenz, there no windows, yet daylight is everywhere. Above each exhibition floor is an etched glass ceiling and light trap. The façade directs natural light, from outside, into the light trap and it is then diffused down into the exhibition space. Light is caught from all four sides of the building. The quality of light is surreal. The mind perceives a space with no windows or views to the outside, yet the eye perceives

the room as full of evenly diffused natural light. The space, thus, creates a juxtaposed reaction within our sensory being.

Artificial

Artificial lighting is man-made light, through the use of fluorescent tubes or tungsten bulbs etc. This light aims to recreate the light of the sun. As has been said above, artificial light gives a false sense of light. The light is constant and can be turned on and off at the flick of a switch, unlike the Sun. The case for artificial light is to illuminate an object or surfaces when the Sun is not giving sufficient illumination. Certain activities require a certain illumination in order for the inhabitant to carry out the task. Reading in a dull room is painful. One needs an even spread of light to read. Artificial light causes glare. i.e. Too much light reaches the eye from an object or surface and we cannot perceive the object or surface correctly. Too much light can have different affects on a human being. A task may take longer to complete, cause headaches or SADS.

Artificial lighting should be factored into the building at the beginning. Careful placement of



Fig 7: Peter Zumthor, Kunsthaus Bregenz, Exhibition Hall

Fig 8: Exterior View

Fig 9: Exhibition Installation

artificial lighting is needed. It is obvious that we need artificial lighting at night-time when the sun has set. There is no need for poorly designed lighting fixtures and illumination. The architect must understand how best to cross over from natural light to artificial light. Artificial light can be tolerable when the fixtures and illumination are carried out in a tasteful manner. The architect must design with glare, reflection, diffusion and particular illumination in mind. Diffusion gives a more balanced spread to the quality of light, reducing glare.

Darkness

Deep shadows and darkness are essential, because the dim the sharpness of vision, make depth and distance ambiguous, and invite unconscious peripheral vision and tactile fantasy.¹⁴

Darkness would be perceived as being a bad thing to incorporate into a building. As this chapter is about light, why not talk about the opposite of light. Without light, our eyes cannot recognise shape, form, materials or distance. Therefore, darkness is not of the visual. It is something much deeper, darkness is of the senses. Darkness itself is not a sense but a tool for all the

senses, excluding sight. When in darkness, our sensory responses to external stimuli are heightened. We become more reliant on our sense of touch, our sense of taste, our hearing and our sense of smell.

Japanese architect, Tadao Ando designed a church in Osaka called ‘The Church of Light.’ The name itself is a contradiction. It is actually the lack of light in this church that gives it a spiritual feeling. Ando creates a crucifix shaped gap in the wall at the front of the church. Here, light floods in and casts a solemn and humble layer of shadow on the congregation. The room is kept free from icons, paintings or statues. The quality of light is enough to set the mood of peace and tranquillity. The walls are constructed from in-situ concrete and the benches are from a dark wood. Ando is an architect with great insight into the sensory realm of experience and materials.

The Japanese have had from ancient times a heightened sensibility for light and shadow in architecture.¹⁵

Mood

Change in mood is caused, usually, by a change in our surrounds,



Fig 10: Tadao Ando, The Church of Light

such as our comfort zone or what we are accustomed to. Lighting can help to recreate a particular space or memory, but not to the same extent as smell. Light can replicate a sense of vitality, tranquillity, uneasiness, as well as variations and nuances of these feelings. Churches, in particular, use light to set a mood of humility, tranquillity and peace. Many churches are darkened to force people to dwell on the metaphysical rather than the visual. Light of a spiritual quality is said to be a thousand times better than artificial light. As discussed above, the quality of light in the Bregenz Kunsthau is of a surreal nature which instils a sense of awe, tranquillity and naturalness. It is almost of a spiritual quality in terms of how it causes an emotive response in the human consciousness.

7 Smell

*A particular smell makes us unknowingly re-enter a forgotten space completely forgotten by the retinal memory; the nostrils awaken a forgotten image, and we are enticed to enter a vivid dream.*¹⁶

How much can we understand about a space from its smell?

Our sense of smell has a powerful connection with memory and emotions. By introducing smells into building/spaces, we can heighten our olfactory experience and perceptions. Odours catalogue significant memories in the brain and those memories are involuntarily revealed when a person comes into contact with that smell again. Smell plays an important role in perception and memory, as well as emotions and motivations. The neurological link between our physical environment and our feelings, moods and memories, does that not have an impact on how we perceive, understand and relate to architecture?

*Memory can restore to life everything but smells, although nothing revives the past so completely as a smell that was once associated with it.*¹⁷

Sense of smell has a powerful connection to architecture and represents an untapped potential for our experience and perception of architecture. When we walk into a new space, we can tell who occupies the space, what sorts of activities occur there and what materials are used. For example a swimming pool is associated with the smell of chlorine and a stable with the smell of manure.

8 The Joining of Materials

The joining of materials is an undervalued sensory catalyst. As discussed above, different materials receive different emotional responses. What if one, joined two materials, not in a usual way, but a more contradictory way?

This avenue within the design process is relatively unexplored. If you join certain materials, can you create a different atmosphere within a space? Carlo Scarpa and Kengo Kuma are just two architects who combine materials to gain a richer experience within their buildings and spaces. I am using the term ‘materials’ to incorporate my proposed sensory materials of light, smell and sound, as well as traditional building materials.

*If a work of architecture consists of forms and contents which combine to create a strong fundamental mood that is powerful enough to affect us, it may possess the qualities of a work of art. This art has, however nothing to do with interesting configurations or originality. It is concerned with insights and understandings, and above all with truth.*¹⁸

Carlo Scarpa had a profound knowledge of materials and his first-hand experience with their transformation allowed him to not only predict their range of optical, acoustical, and tactile effects in a variety of forms, but also to delight in experimentation. He created rich, spatial architecture, and employed interesting ways of joining materials. Scarpa’s overall understanding of surface, material, light and junction displays is knowledge are skill in the area.

Kengo Kuma displays a unique vision of Japanese architecture. Again, Kuma’s knowledge base of materials, geometry and junction is commendable. Architects need to think in this way.

*If a work of architecture consists of forms and contents which combine to create a strong fundamental mood that is powerful enough to affect us, it may possess the qualities of a work of art. This art has, however nothing to do with interesting configurations or originality. It is concerned with insights and understandings, and above all with truth.*¹⁹



Fig 11: Carlo Scarpa
Fig 12: Kengo Kuma
Fig 13: Kengo Kuma
Fig 14: Carlo Scarpa
Fig 15: Kengo Kuma

9 Interrelationships

Materials vs. Form

Which comes first in the design process, the form or the material? Does the architect decide a space shall be a certain form and assign a material? No, the architect must decide the material first. The material must be fit for the purpose before it's form is decided.

It is the material that is conceived first, along with the emotions and responses associated with the material. The form is then conceived to strengthen or juxtapose the material.

Form vs. Function

The principle is that the shape of a building or an object should be largely based upon its intended function. While this may seem like a good idea from the perspective of the designer, it often leads to problems and is not a complete design solution. Form comes slightly before function in the design process, as the form is a product of its function.

Space vs. Mood

Space cannot exist without mood. No space can be created to exist

independently of mood. Mood is an inherent part of space. The architect needs to decide the mood of a space and design the space around that. Again, employing tools to enrich or subdue the spatial experience.

First Impressions vs. Subtlety

Peter Zumthor, in *Atmospheres*, describes the idea of first impressions. This is an interesting angle in the examination of space and atmosphere. First impressions can have the ability to generate a higher sensation within us. However, there is also a case to be made for an architectural concept which is more subtle in the way it moves the inhabitant.

First impressions can be powerful but also lead us astray. First impressions are associated with instantaneous experience. There is a case for subtle architecture which does not hit us at first. It is only through living and constantly experiencing that it affects us emotionally. It is up to the architect to decide whether he/she wants to instil instantaneous emotion or some sort of delayed reaction.

Conclusion

The Hausa people recognise only two senses; seeing and experiencing. In this culture, the vision sense is only a means for navigating the environment and the experience sense encompasses intuition, emotion, smell, touch, taste and hearing.²⁰

The physical world, and architecture as a part of it, provokes metaphysical reactions in the individual, such as feelings, memories and thinking. Thus, building becomes a very important matter in our existence and for our experience of the world.

There is also something to be said about first hand experience of this subject, being a sensory human being. I can call on past experiences of buildings and spaces that have touched me or

impacted on me. The same can also be said for spaces which did nothing for me. It is interesting that from beginning this dissertation, I now analyse spaces in the light of what atmosphere there is. I can use this in the future to analyse buildings and spaces which I visit and it is also useful when designing my own buildings in Design Studio Projects.

By exploiting all of the senses, it is possible to create a multi-layered experience that evokes a transparency of time, space, memory and feeling. An architecture of sensory experience.

Fig 16: Peter Zumthor, Brother Klaus Field Chapel, Exterior

Fig 17: Exterior Detail

Fig 18: Nave Detail



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Signs, Symbolism and
Architecture;
How they Relate and Succeed

Reidin Corbet

Signs, Symbolism and Architecture; How they Relate and Succeed

Reidin Corbet

We are surrounded by signs and symbols continuously everyday of our lives; though perhaps we are not always aware. They occur in magazines we read, films, actions of people, art, advertisements, and architecture to mention but a few. This topic has always interested me; things not being what they seem, and needing a second glance to recognise the true meaning of their existence, and reasons for their position in space. Often these symbols are derived from history or legends and perhaps are slightly adjusted each generation they move through.

For example one of the many symbols, or emblems for Ireland is the shamrock; this descended from the old story of when St. Patrick came to Ireland and brought Christianity, he explained the three persons in God to the inhabitants of our little island, through the shamrock; the Father, the Son and the Holy Spirit, each being represented by a leaf on the shamrock. While it can never be justified if this really happened or not, Ireland grew primarily as a Catholic country, and the symbol of the shamrock took its stronghold in the Irish mind.

This however, is only one story of one symbol, and I am fascinated by the other possible stories of how and define them. Economy's can be aided by suc-

cessful icons, as they become international attractions affiliated with those countries, and its human nature to want to see them in person. I will examine symbols of cities, states, nations and people and define what makes them sensational. Following that, I will investigate the study completed by Venturi, Scott- Brown and Izenour in their book, 'Learning from Las Vegas' which helped inspire this topic from the offset.

Finally I would like to discuss Public Spaces, Squares and Iconic Landmarks, and their success becoming famed icons celebrated globally. I hope to discover and explore through the course of my dissertation come to a conclusion and what interests people most about signs and symbols, is it purely a psychological, magnetic pull that attracts them to such landmarks?

Chapter One; Defining the Icon

An ‘ icon can be an image, a symbol, a logo, picture, name, face, person, or building or other image that is readily recognized, and generally represents an object or concept with great cultural significance to a wide cultural group’
(<http://en.wikipedia.org/wiki/Iconic>)

According to Charles Jencks in his book ‘The Iconic Building’, he refers to icons (eikon) as ‘a likeness, image or similitude’.

A monument is ‘a structure either explicitly created to commemorate a person or important event or which has become important to a social group as a part of their remembrance of past events. They are frequently used to improve the appearance of a city or location.’
(<http://en.wikipedia.org/wiki/Monument>)

After reading the book, ‘Learning from Las Vegas’, by Robert Venturi, Denise Scott Brown and Steven Izenour, I felt compelled to write about how symbols and signs are a form of architecture and often aren’t recognised as such. A short blurb of the book, would describe the authors findings on Las Vegas, as a City of symbols, basic architecture with signs attached; the signs predominantly being the architecture and not the physical structure of the building. The terminology the used to describe this concept was ‘the decorated shed’ (Venturi, ‘Learning from Las Vegas, p87).

Expanding on the idea of symbols,

I thought about monuments, icons, iconic architecture and public space combining a lot these ideas. More thought went into monuments and icons/ symbols on a national and international level, and as I began to look around me, icons were suddenly more profuse in my daily life. I thought about Las Vegas and its international symbol being a neon sign, (a paradox in itself) just as the Eiffel Tower is to Paris and the Statue of Liberty is to New York. People see the icon and immediately think or associate with the city, or nation in question.

On studying monuments (locally) I found generally they are located in public spaces, such as squares, round-bouts, and parks. Clearly they are for the public's benefit to view and admire.

There are two types of monument, one celebrating heroic actions in the form of human figure, and the other being a metaphorical, such as a building or physical form representing some important cultural aspect of that area. In 'Art, Space and the City', Malcolm Miles, it is pointed out that 'monuments are produced within a dominant framework of values, as elements in the construction of a national history, just as such buildings as the Sydney Opera House contribute to a national cultural identity; they suppose at least a partial consensus of values, without which their narrative could not be recognised' (Miles, 'Art, Space and the City', p 58).

This re-establishes my point of the importance of monuments on an international spectrum, and as a nation having an identity. In my opinion, it is very important for a country to have a symbol or icon



Above; an image of the Eiffel Tower, Paris

Below; an image of the Statue of Liberty, Liberty Island, New York.



that differentiates them from the rest, just as Sydney Opera House does so for Australia. It was originally designed so that people would buy airline tickets to Australia with Quantum Airways, which of course worked and has since mushroomed into a universal icon for the city, state and continent. It is a logo for seen on postcards and in magazines, sketches, cartoons and this according to Jencks, is a sign of a successful icon- a suppressed, solid image.

Miles continues on to say that ‘Individual monuments may not retain their currency as particular figures fade in public memories’ (Miles, ‘Art, Space and the City’, p 58). This suggests the fact that monuments based on the human form, are possibly not as successful as they are forgotten as generations die out. While this is a sad occasion, it is possibly something we can learn from, and if the contribution of architecture to public, international monuments are a positive, more successful approach to this situation.

It is hard to be decisive in this argument at this point, as from personal experience, when an individual monument of a public, national figure is current, people have decidedly more allegiance to that monument, and more empathy with its cause than that of a building. For example, it would be more insulting to a nation to publicly attack a celebrated public figural monument than that of physical form whose meaning is not obvious.

When Gehry’s Guggenheim museum was first unveiled, it was not liked by the locals; it was seen as ‘as an imperial American gesture’ (Jencks, ‘The Iconic Building’, p 19) and was sceptical of its predicted success. It was even identified

as a prime location for a terrorist attack which thankfully didn't take place. However eventually locals began to appreciate it for its worth to the area. It is now worshipped more than a cathedral- perhaps a showing factor of the times we live in.

Previously, before the iconic movement spurred on by Gehry's Guggenheim, the tallest building in the town was predominantly the most important, be it the cathedral or the clock tower, the town was both physically and mentally centred around these aspects; they were a focal point in the running of the town and were perhaps seen as a meeting place and place of importance. There was a hierarchy of importance, and the more important the building, the taller it was, and of higher significance. They were the 'icon' in the town and this image reaches out to people.

So, what makes these successful in their purpose? Form of the object, location and celebration of same makes these successful on an international scale; people are in awe of their magnitude and celebrate in human achievement. On a local scale depending on the monument/national symbol, they are successful in different way. People's pride in their heritage can be claimed as a success, people gaining commercially from tourists can also be granted as a success. It is only when you study failures do you realise what can be classified as successful. Failures being vandalism (lack of pride), litter, and perhaps in other cases when such monuments fall into disarray, clearly the local people don't have respect for it.

Similarly, when the World Trade Center in Manhattan, New York was attacked, September 11th, 2001, this was



Above; an image of Frank Gehry's Guggenheim, Bilbao, Spain

seen as an attack on the west- the towers being a symbol of Western Capitalism. So undoubtedly not only were American citizens offended and distraught about the attacks, so were other members of the United Nations- it was a very pointed and calculated attack. From this action, it is clear to see how icons and symbols can be personally relevant to someone, and how easy it is to disturb peace and insult both a nation and its people on such a large scale.

Below; an image of the World Trade Center, New York, also known as they Twin Towers, before their attack, September 11th, 2001



Chapter Two; Defining Signs and Symbols

A sign can be defined as “something that stands for something else, to someone in some capacity”.
(<http://en.wikipedia.org/wiki/Signifier>)

As complicated as that sounds, it is an enthralling topic. Signs are used as a means of communication, and don't necessarily have words on them; symbols are enough to portray the message (such as road signs, MacDonald's, toilets; these symbols are universal). Signs and symbols have been circulating for centuries, in many forms and as a result, some have been turned into icons which we associate with certain places or subjects.

For example, people are attracted to Times Square, New York because they

have so often seen the iconic image of the bright lights and the flashing signs; the image is evocative, exciting, eccentric and electric, and of course attractive to tourists as an amazing place to be. This too, is reminiscent of Piccadilly Circus in London which has a magnetic quality, from its enormous ‘Sanyo’ and ‘TDK’ advertisements which can be seen passing through.

Likewise with Las Vegas, the iconic image of it being a city of neon signs is attractive in itself. But also if you study or analyze this city, you will realize that the signs are also a symbol of the architecture of the city, they dress the buildings and represent the design that would be classified as architecture in other cities. In learning from Las Vegas, Venturi, Scott Brown and Izenour highlighted this fact and as a result it interested me in signs, symbols and the forms they take.

Symbols in the city- usually these are iconic; the Sydney Opera House for Sydney, the Eiffel Tower for Paris, the Statue of Liberty for New York, and the Spire being a relatively new one for Dublin. It has always fascinated me how these icons became symbols of these cities, as I am sure it was in that sequence it happened; icon first, then symbol. Furthermore, I have asked the question to myself, is it a necessity for a city to have an icon? Dublin hasn’t always had one, is it a politically fuelled concept of attracting tourists and hence improving our economy? Or is it for the social status of having a symbol, as every other city does?

I’d like to think it was more than a political move on our governments behalf, as a nation, our capital needs an identity and a recognizable one such as the spire



Above; an image of The Strip in Las Vegas at night



Above; an image of the remains of Hadrian's Wall, Northern England

Below; an image of the Star of David; a symbol associated with Jews



speaks to foreign countries about the adventure and attractions there are in Ireland and that we too are an exciting country to come and visit; just as you would read from the attraction the Eiffel Tower holds, though to a much higher magnitude, indubitably.

Of course another perspective of signs and symbols which I find alluring is the concept of symbols as a language. They speak to you without physically making noise; one always recognizes the 'tick' symbol as being a sporting brand- Nike; the star of David is universally recognized as the sign for Jews, the Irish flag being a symbol combining North and South despite different political beliefs- the white representing the neutral force between both sides. This brings me to physical symbols that have significant relevance today.

For example, Hadrian's Wall signifies the border between Scotland and England, and can be seen for miles and miles by passers-by. It automatically registers with them, be it consciously or sub-consciously, that they are crossing the border between these two countries. Likewise, The Angel of the North represents North-Eastern England.

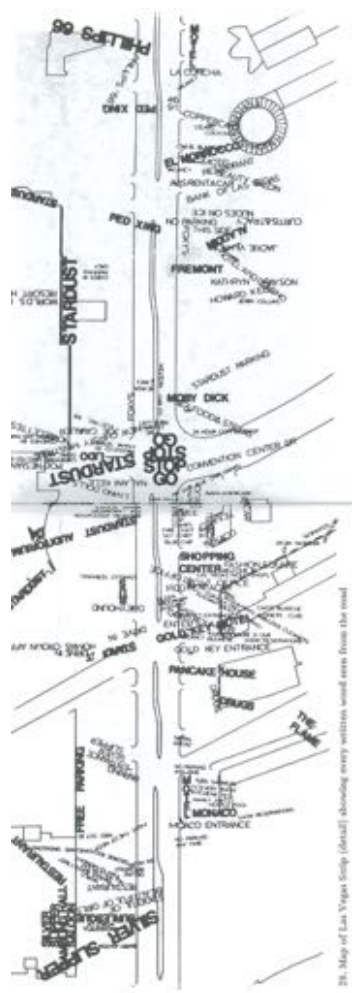
After reading Robert Venturi and Denise Scott Brown's works, 'Architecture as Signs and Systems' and their collaboration with Steven Izenour, 'Learning From Las Vegas', I considered the studies they did of the Las Vegas strip, and the University of Pennsylvania. They studied the movements of people, their desired destinations, their living quarters, places of interest, nodes of activity and their findings were incredibly interesting, and sym-

bolic in themselves. Their representation of the information and their innovative way of putting forward that information in a comprehensible manner was impressive.

In ‘Learning From Las Vegas’, their resources and depth of study into every possible representation they could make of the city, was an intelligent paradox. They were investigating Las Vegas as a permanent exhibition of landmarks, signs, symbols and icons, and the manner in which they are demonstrating their research is a symbol of the city in itself. Among these representations are figures or abstract maps of undeveloped land, asphalt, vehicles, buildings, ceremonial space and illumination levels. They further these findings with comparative studies of churches, wedding chapels, and shops. In these diagrams we can clearly see patterns beginning to emerge, and systems of people’s footprints.

One particular study caught my attention, their study of ‘Every Written Word seen from the Road’ (p 30). The study reinforces the idea of Las Vegas being a city of signs, and the signs being the architecture, rather than the buildings.

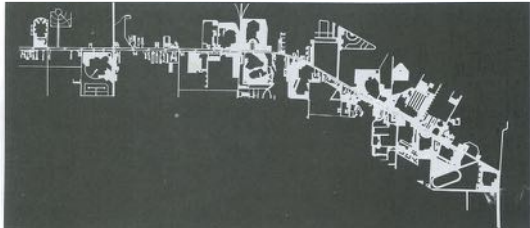
Evidently, it is clear that symbols are a form of communication, and the clearer the message; the more successful the symbol. In Las Vegas, signs, symbols and icons are vying for our attention, the bigger, more colourful, higher, most unusual or original- the better. Emerging from that, it would suffice to say, the same could be applied to architecture; a building which has something different and unique to say to the voyeur, has more chance becoming successful in its appeal to people in visiting it, and being charmed by it.



28. Map of Las Vegas Strip (detail) showing every written word seen from the road.

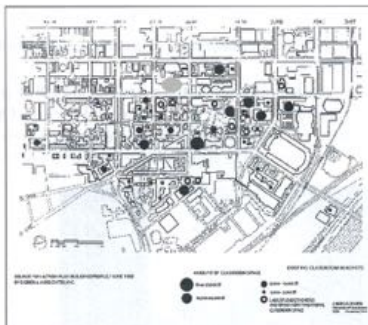
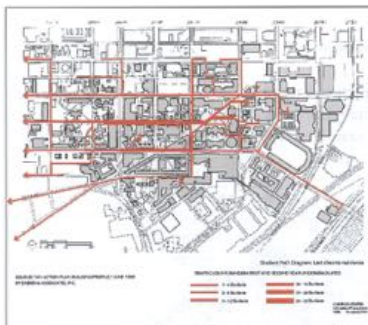


Undeveloped Land in Las Vegas



Asphalt in Las Vegas Strip

Above and Below, images of Robert Venturi and Denise Scott- Brown's studies on Las Vegas and the campus of the University of Pennsylvania



For example, the exterior of the Disney Hall in Los Angeles, symbolises the acoustic management of the sounds, and is reflective of its interior, whilst also the hall is a working solution to unify a 'diverse and fragmented city' as Jencks points out in 'The Iconic Building'. It was to create 'ethnic peace'. This amazing and novel work of art did just so, and symbolises this initiative as a whole.

Chapter Three; Signs and Symbols Communicating as a Language and Learning from Las Vegas.

Robert Venturi, his wife Denise Scott Brown and their friend Steven Izenour completed an exciting and groundbreaking study of Las Vegas in the early 1970's. It focused on how space, speed and distance in this extreme and eccentric city can be measured by signs and symbols in space. Tourists commuting on the highway next to Las Vegas are distracted and lured by the big bright graphic signs that adorn the roadside, advertising Las Vegas and its addictive entertainment buzz, 'signs for guidance- enormous signs in vast spaces at high speeds.' (Venturi, Scott- Brown and Izenour; 'Learning from Las Vegas', p 9).

As a result, of their success, signs mushroomed round the vicinity, competing with each other to be bigger, better and more enticing to the consumer, asking them to indulge in their casino, their hotel, their market, and the bigger the sign, the more hope of tempting the consumers into their haunts. Consequently, the signs became the architecture garnishing basic, simple sheds. 'The sign at the front of the building is a vulgar extravaganza; the building at the back is a modest necessity' (Venturi, Scott- Brown and Izenour; 'Learning from Las Vegas', p 13).



Above; an example of a 'duck', the Long- Island Duckling, Flanders, New York

Subsequently Venturi and his colleagues evolved the idea of the 'decorated shed' and the 'duck' where they became symbols of describing two categories of architecture in the city; one being a plain building with a sign attached or indeed a steeple in some cases for a chapel, and the other being a type of architecture that evolved, as the building being the sign, not exclusive to Las Vegas only. ((Venturi, Scott- Brown and Izenour; 'Learning from Las Vegas', p87). Examples of a 'decorated shed' would include the Stardust Building which houses a hotel and casino; it has a large, starry symbol at the top, conveying 'stardust' with a secondary sign below containing specific details. A great example of a 'duck' would be The Long Island Duckling, Flanders, New York (Venturi, Scott- Brown and Izenour; 'Learning from Las Vegas', p87). Both concepts are means of conveying a message, or trying to communicate with prospective consumers.

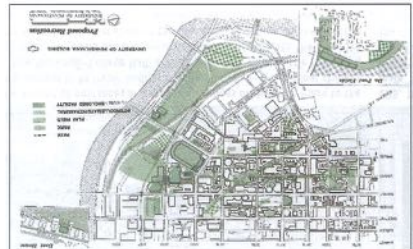
They are trying to appeal to the eye, catch attention, and be remembered. This is not entirely unlike the concept of iconography and monuments which I dis-

cussed earlier. Basically these buildings are crying out that they too are monuments, and crave worshipping, though of a different kind, but worshipping nonetheless. They are successful in communicating their message to their user.

Venturi and Scott-Brown used what they had discovered and demonstrated it in their work. The process in which they had analysed Las Vegas and its movement, or activity proved valuable to them as they designed a Master Plan for the University of Pennsylvania (Venturi and Scott- Brown; ‘Architecture as Signs and Symbols’, p 131). Their system of analyzing worked in the same manner as before, helping find a reasonable logical solution.

First they distinguished the nodes and junctions or main intersections of movement on campus, just as they identified in a study of comparative activity patterns in Las Vegas of food stores, wedding chapels and automobiles rental. (Venturi, Scott- Brown and Izenour; ‘Learning from Las Vegas’, p 24). Then they pursued a study of the University’s green spaces and arteries between the main nodes on campus just as they had done in Las Vegas; a study of undeveloped land, asphalt and buildings (Venturi and Scott- Brown; ‘Architecture as Signs and Symbols’, p131).

They continued their examination of the site, with studies throughout the campus during a sample of student’s timetables and saw the busiest patterns and most used access routes (Venturi and Scott- Brown; ‘Architecture as Signs and Symbols’, p132). In my opinion this is comparable to their investigation of a map of Las Vegas ‘showing every written word seen from the road’ (Venturi, Scott- Brown



More examples of Venturi and Scott- Brown’s work on the University of Pennsylvania

and Izenour; 'Learning from Las Vegas', p 30).; both diagrams show intensity and popularity of natural choice by the average human being; being the chosen pathway in the University or the point of most concentrated interest in Las Vegas.

These diagrams are relative to signs and the message they communicate-one can read clearly from their findings, and relay the message. Therefore, similar to signs, they are a successful means of communication and ironically relate to that of which they studied in Las Vegas, producing signs of their own.

There use of symbols is explicit in their project, Guild House; a conventional style of architecture, which they pushed to the extreme of ugliness (Venturi, Scott- Brown and Izenour; 'Learning from Las Vegas', p 128). The square double hung windows bring to mind strict language seen in public housing, however, they slightly distort the common element, so slightly bringing through the symbolic concept, quite similar to the themes of Pop Art; and also they are at a larger scale confusing and making people question the building as they observe it.



Above; an image of the Guild House which Venturi Scott- Brown and Associates designed

There is some unity between this building and its relative buildings on the same street, being the white strips of brick at the top of the façade, and regarding the grid it is on. It's oversized 'Guild House' sign and large granite column at the entrance, (http://www.greatbuildings.com/buildings/Guild_House.html) complete the design as that of a decorated shed. Clearly the building is monumental as well as being symbolic.

Chapter Four; Public Spaces and Successful Iconic Landmarks

Furthering on from my initial analysis of Venturi, Scott Brown and Izenour's study of Las Vegas and the patterns throughout the city, I decided to focus on Times Square and how it has become the landmark it is today. From scrutinizing the map of Manhattan Island, it is clear to see Times Square occurs at the location where Broadway intersects with 7th Avenue, and 42nd Street all of whom are extremely dominant and important streets. Manhattan is based on a grid plan, with twelve main avenues running north-south and are broken by many streets oriented east-west; creating blocks. Broadway is an exception to this rule and runs diagonal through the entire island of Manhattan. It is the oldest north-south through-way in the city.

Seventh Avenue is a main artery connecting Central Park with the north and south of the island. It also hosts famous landmarks such as Penn Station, Carnegie Hall and Madison Square Garden. Similarly, 42nd Street is known for its theatre's and restaurants, a favourite haunt of tourists and also marks the start of the famous Lincoln highway which stretches west to San Francisco. All these elements contribute to the fantastic collision of protagonist streets at Times Square, and result in an extremely successful Public Square, famed the world over.

Likewise, Piccadilly Circus also is a focal point of major intersections in London. It connects Haymarket, Coventry Street and Shaftesbury Avenue as well



Above; an image of Time's Square at night

as accommodating Regent Street traffic on the periphery of the main space. It is close to a major shopping area and is located close to the renowned west-end. As a result, it has become a popular point of interest; gathering place.

There are many comparisons that can be drawn between Times Square, Piccadilly Circus. Both are well-known for their neon signs and advertisements. These in themselves are a major tourist attraction. Unlike Las Vegas where the architecture is the sign, and the buildings are relatively informal and not overly impressive, in both public spaces as these, the signs merely embellish what is already attractive. Nevertheless, where ‘the lights are much brighter’ and ‘the neon signs so pretty’, as the song goes; there will be people and atmosphere.



Above; an image of London's Piccadilly Circus

Both are located at significant intersections in the heart of the cities they lie in, adding to their increased wealth and fame, due to the sheer volume of traffic that passes their doors. Both are well-served by subway or underground lines, Times Square had its own station before it became the success we affiliate with it today.

Both also are extreme hubs of entertainment and attract crowds from across the globe to experience a piece of the action. They are iconic public spaces in their own right, and are symbols of their respective cities.

Both Jorn Utzon's Opera House in Sydney Harbour and Frank Gehry's Guggenheim Museum in Bilbao, has had the same effect in attracting tourists from the four corners of the globe to see their in-

credible designs and visit the nation or city.

Jencks wrote; ‘an iconic building has many and often divergent likenesses to the most bizarre and contradictory things’. This would be the primary reason they are often so powerful and amazing.

To begin with, the Sydney Opera house is doubly iconic, as Jencks points out, both for the fact it is a bizarre reduced image of logo and also as it is an iconic sign; similitude between visual images. Though there were problems from the beginning, Utzon’s design originally being a reject, and the furthermore, the problems between Utzon and client throughout construction, it was finally realised in recent years, just what Utzon and his innovative design contributed to both Sydney and Australia as a nation. People are attracted to its majestic, dominating presence over the harbour in Sydney.

Its success is partly due to the abundance of metaphors associated with it. It catalyses the imagination to associate it with such things as ‘orange segments, wings of a bird in flight...white sea shells... white sails...unfolding petals of a flower... turtles making love...fish swallowing each other (Jencks, ‘The Language of Post-Modern Architecture’, p41)’, to mention but a few. The shiny tiled surface of the exterior also intensifies this metaphorical image. As Jencks clearly recognises in ‘The Language of Post-Modern Architecture’ it is quite a witty building, and allows people to draw unexpected yet credible comparisons.

Norman Foster’s Swiss Re Headquarters in London is also an iconic build-



Above; an image of Jorn Utzon’s Sydney Opera House



Above; an image of Norman Foster's Swiss- Re Headquarters, London

Below; an image of Cesar Pelli's Pacific Design Center, Los Angeles



ing of our time, both for its organic design and innovative and complex environmental systems throughout. The building is naturally ventilated, its design with a natural narrow base, allows the building to swell as it ascends, giving the illusion on the ground of more breathing space in an already highly dense city.

Likewise, Cesar Pelli's Pacific Design Center, in Los Angeles, can be viewed as a successful icon. Though it may not be as well-known and celebrated as many of the others mentioned in this discussion, nevertheless, it is an icon. I would presume Venturi and Scott-Brown would classify it as a duck- the function of the building is to house an ornament and moulding production line, where it displayed and sold them. Ironically, the building's form is similar to that of an enormous piece of moulding, cut in section (Jencks; 'The Language of Post-Modern Architecture', p 47). It is widely known now, as the 'Blue Whale', due to its facade composing mainly of glass.

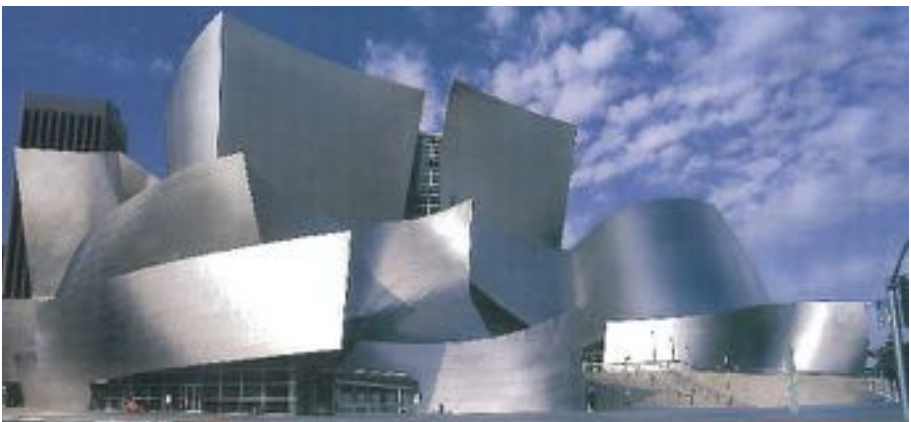
Frank Gehry's Guggenheim in Bilbao, was the turning point for icons having a relevant place in architecture. The form and design were generated from his studies of fish and their anatomy, form and composition though it appears random in design. It is covered in titanium tiles that give the illusion of fish scales. It alone turned around the economy of the failing city of Bilbao. Tourists flocked to see it, and every year; its turn-over surpasses that of the last.

It invokes feeling and emotion in those that visit, its scale is barely comprehensible, and since this fantastic explosion of revenue that the city had enjoyed since the building was completed, every city

wants a ‘Bilbao’ from Gehry. In its first year after it opened, the city enjoyed an influx of additional 1.3million tourists, the following year that increased a further 1.1 million and by 2000, Bilbao had another 3 million extra tourists flocking to the city to see the amazing Frank Gehry intervention in the city (Jencks; ‘The Iconic Building’, p 18). He pushed the limit in his design, admirably. The building itself is fantastic work, and aptly is a museum.

This irony also adds to it being an icon; people attend a museum to view and critique famous works, and in this case the shell which houses such works, is in itself an item to be viewed at the museum. This truly epitomises the icon.

Below; an image of Frank Gehry’s famous, Guggenheim Museum at Bilbao, Spain



Conclusion

From my study of icons, symbols, monuments, iconic landmarks and iconic architecture, I believe I have developed a greater awareness of how and why such things are successful. It is human nature to enjoy being shocked and awed by magnificent achievement. Unique and original design is always triumphant; like Gehry's Guggenheim. It is impossible to comprehend the sheer magnitude and level of detail and planning that went into such a thing.

From my point of view as a student architect, I can only imagine the stress and thought that went into each impossibly minute detail, the level of examination that went into the structure, as it seems so light as though it is barely balancing on its neighbour. The building evokes a sense of warmth and happiness though it is silver in appearance; the sun illuminates the surface to a beautiful degree. The similarities that can be drawn from it to almost any individual object are endless, and it allows the imagination to run wild.

Times Square epitomises how the world sees New York; a flurry of excitement, atmosphere, activity, and celebrity. We are familiar with New Year's Eve being counted down in Times Square, similar to how we view Sydney; the harbour where we associate New Year's Eve fireworks display. Having visited the Square, I am well aware of the animation associated with it. The neon lights, the noises, the smells, the addictive atmosphere is amazing.

Clearly the formula to success in

such a public area, like Piccadilly Circus and Times Square, is entertainment, a large cross-section of people travelling through the area, a junction of main arteries of traffic, restaurants and bright lights. However unsophisticated this judgement may seem, it seems to be what works in these areas, along with a good reputation built, which of course takes time and patience to grow. Las Vegas is hugely successful as a city of entertainment.

However, in my opinion, it wouldn't enjoy the success it has today, if it wasn't for the revolutionary step of bombarding the consumer with advertisements and neon signs; the vibrant colour and lights are attractive to everyone, and also add to the special ambiance that this city holds- everyone travels to this city for a good time. Therefore there is a pretty special positive atmosphere here and it has been proven that people are more likely to spend more when they are in good form. Hence the city is a success and I can understand why.

Furthermore after considering Venturi, Scott-Brown and Izenour's investigations on the city and their highlighting of the 'decorated shed', I have realised that the city was incredibly cost- effective to 'build'. People adding steeples to their bungalow, or adding a sign to a shed is an extremely innovative approach and a sign of good entrepreneurship. Most of these buildings already existed and people manipulated their assets to their best advantage. They must be commended on their achievements.

As should Australia and their vision of what an icon such as Sydney Opera House could bring to their country

economically. Though it was an uneven road to the finished product; it clearly was worth the wait and commotion surrounding the design. It is an emblem for the city, nation and continent. Quite beautiful and majestic on the harbour, it helped give the city amazing world-wide status; an icon of the 20th century, undoubtedly.

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Modernism and its regard to context

-Sean Collins

Outline

I have had a fascination with the work of Robin Walker ever since we visited O' Flaherty House on a class trip. Its design was so radical that it has never seemed to mature and date, even today, after almost half a century. Even though the building is so pure in Modern terms, the house still displays a regard for context. For me, it is one of the most successful pieces of architecture in Ireland of all time. In this dissertation I aim to learn what exactly it is that impressed me so much and what made this building so successful, looking at the Modernist style and its principles. However, when I put the question to myself, would O' Flaherty House be allowed to be built in today's system of planning, the issue of a sites context and a buildings relationship to it was raised. In essence, through the discourse of my dissertation I hope to study Modernist building examples which would be regarded as fitting to their context and site responsive. From this study I hope it can be of benefit to my own designs. Since it is such a broad subject I would like to concentrate my study to the works of Robin and then step forward in time to look at the works of his son Simon and see how Modernism is approached in a contemporary way.



Chapter 1

Robin Walker



The Restaurant Building

Robin Walker graduated from UCD in 1947. After graduating, he worked and studied under Le Corbusier in France on a French Government Scholarship, working on projects such as the Unite d'Habitation. He then went to Rhodesia, Africa, and the United States where he worked with Skidmore Owings Merrill and Mies van der Rohe. While in the United States he graduated with a MSc. in City and Regional Planning at the Illinois Institute of Technology in 1958. He returned to Ireland and joined Michael Scott's office where he later became a full partner and it soon became Scott Tallon Walker. He was RIAI president from 1968-1969. He won the most prestigious award for architecture in Ireland, the RIAI triennial gold medal, for the Restaurant building in UCD, and the

Gold Medal for housing for O' Flaherty house in Kinsale.

Mies influence

After returning from America Robin was devoted to the principles of Mies. It is clear that O' Flaherty house is a reworking of Farnworth House, and the Restaurant Building is an interpretation of the New Modern Art Gallery in Berlin.

I have intentionally excluded some of his buildings such as the Restaurant due to the fact that even though it is such a beautiful and successful object of Modernism, I do not think it is site specific, but more of an object of art. Through the course of Robin's career he became more sensitive to context.

New Modern Art Gallery in Berlin



Chapter 2

O' Flaherty House

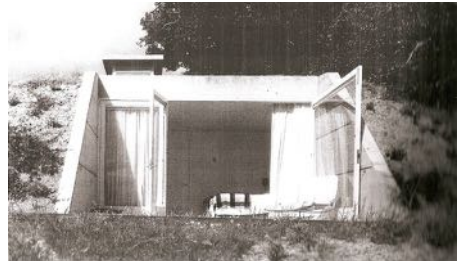


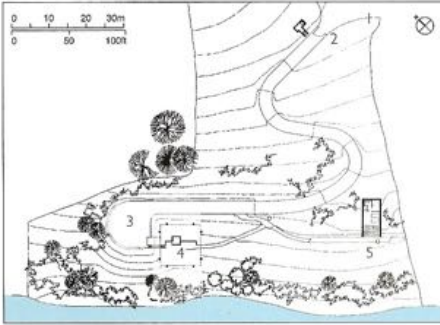
Perched on reinforced concrete stilts on a hillside overlooking the River Bandon Estuary, with a distant view of the town, this concrete and glass weekend house combines strength and elegance in a small structure.

'The house is raised off the ground creating a sense of noble repose. It is designed in concrete in response to its coastal location, steel might have corroded in the sea air. The concrete also responds to the predominately grey coloured buildings of Kinsale'(1).

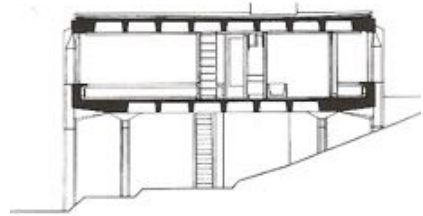
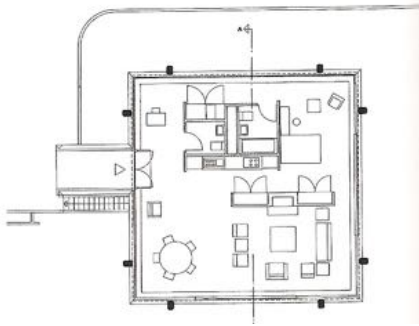
The house is not visible from the roadside due to the severe slope in the hill. The one bedroom guest house combined with a sauna bath is designed as the complementary opposite to the main house. Where the main house is raised on stilts, the guest house is buried into the side of the slope. One house on site is very visible, the other is almost completely hidden, two completely different edge conditions.

The house is of square plan, with the layout of walls and furniture conforming to a subdivided grid of squares measuring 3 foot x 3 foot each (I understand this to be the space required for the width of a person to pass through keeping the design to a minimal human scale). There are two concrete columns placed on the outside of each facade, supporting the floor and roof slabs. Each column is very slender with no





special detailing apart from the primitive capitol. This is for structural purposes. 'They are placed regularly with the space divisions of 1:4:1'(2). Placing the columns to the outside leaves the interior space completely open.



leaving the existing landscape untouched. It may also have an idea of classical orders of placing a building above ground level. This distancing of the house from the sea might seem as if the sea is thought of as an object to be viewed from a distance, but due to concrete in the house of floor to sill level which obscures the view of the slope to the sea it means the immediate view is of the sea surrounding the house. So in essence, the house, instead of being placed at the water's edge with direct views of such, the house is set back and the persons experience is a framing of a projected view that of one at the water's edge. In conclusion, the house is deeply contextual in that it makes a huge effort in preserving the existing site, raised above the ground level and carefully cutting and slotting into the slope.

Influence on Robin Walker

I will look at two of Mies Van Der Rohe's works which are related to this house and examine them.

Resor House

The site for this unbuilt house extended across a narrow river and enjoyed unimpeded views of the Grand Teton Mountains. The house was conceived as a bridge over a river with the bedroom located on one end and the services on the other allowing a large open living space in which free standing walls and furniture elements articulated particular activity. 'Its simple volumetric form and the manner in which this was emphasized through its physical detachment from the ground anticipated the Farnsworth house'(3). His collages for this design had an idea of framed views of the mountains, that of which would project your sense of place, perhaps an idea borrowed in the Walker house. This meant that



**Farnsworth House,
Plano Illinois**

internally the building was also related to the outside.

This entirely open glass pavilion is Mies's most radical domestic design. Meant to serve as a weekend getaway house on a secluded wooded site near the Fox River, the house is raised from the ground by steel I columns due to flooding.

'While the prosaic result of this is protection of the living volume from inundation, the poetic effect is clearly a lightness and a sense of space'(4).



Space flows under and over as well as through the house due to the internal space being enclosed completely by glass. I think Mies further heightens our awareness of the existence of architectural space by cantilevering the roof and floor planes beyond the columns at either end of the structure. I believe this suspended effect is increased by locating the living volume asymmetrically on the raised floor plane, and by placing an elevated terrace midway between the ground and the plane of the floor. There is a great idea expressed here of the house as a defined enclosure within a continuum. This is also evident in the internal experience as the outside is visually brought in and the inside brought out. There is a sense of placement at all times throughout the house, and at the same time a beautiful picturesque backdrop.



The steel is painted white so to be of neutral pallet to its surroundings. This evokes the changes in season when they occur, highlighting the green in Spring and Summer, the brown,yellow, black in Autumn and white of Winter. In its relationship to natural surroundings there exists no suggestion of formal composition; the buildings occurrence in the landscape would seem accidental were it not for the harmony which has been established between the architecture and the terrain. 'Independent, yet at the same time interdependent'(5), this alliance between the organic creates a convincing image of how Modernism can regard its context.

Farnsworth House vs. O Flaherty House

Comparing this house to Robin Walker's house in Kinsale I think there is clearly many similar ideas but also differences. It is clear that both houses try to tackle the problem of how to relate a new object (that being the house) to a

Modernism and its regard to context

site where the object would very obviously stand out. Both architects know that an entity is required for it to provide shelter and to be categorized as a house- and in this case raised above ground level to achieve great views or to avoid inundation. It is through details in the design that the objects relate to their site. Both houses have an idea of space flowing over, under and through the building by the use of glass, relating the house to the site. The interiors relate to the outside through the use of glass also. The one point where I feel the Farnsworth house betters the O Flaherty house is in each house's use of columns. The exterior columns on each facade of Walker's house create a sense that the roof and floor planes are enclosed. This defines finite planes, as opposed to infinite ones like that of the Farnsworth house. In my opinion it breaks the continuum of the building flowing into the landscape. That said I still feel both houses are excellent examples of how Modernism can respond to its given site and therefore can make a building regard its context in a different sense to that of trying to hide the building completely from view.



Chapter 3
Bóthar Buí

Here I am going to look at another successful example of Modernist architecture that I have visited by Robin Walker, which is site responsive and completely contextual to its site. This is a description of the holiday house Robin designed for himself and his family along the Beara peninsula coast in County Cork. After this description I hope to compare and contrast this house with Robins own house in Dublin city: St Mary's Lane, which, in some ways is the complete opposite of this one due to the fact that it pays no respect to the context its set in, but instead creates its own context by the use of courtyards.

**Bótharbuí,
Beara peninsula, Cork**

Gregarious, social and artificially natural, this holiday home is sited on a steep wooded slope facing across the Kenmare River to the Reeks of Kerry. Initially Robin searched the coastline of the Beara peninsula for the ideal site until he found a small settlement consisting of the remains of a cottage and two smaller scaled attending botháns (Irish for shed) surrounded by a native oak forest. Only up until recently could the house be accessed by car, meaning that the only means of access up until then was from the sea- This meant the site would have been designed around a person's movement upon ascension from the water. He rebuilt the existing ruins, keeping a commemorative layout which already oriented and guided the actions of the previous inhabitants. However he confronts the memory of the past with a new topological spatial order by adding three new blocks of a modern idiom, carefully placed in between the trees and vegetation already existing on the site. There is a juxtaposition here between the rugged and timeless forms of the ancient blocks



and the new modern blocks- “solid walled on three sides, with glazed seaward sides perched on concrete piers”(7). Here there is an idea of keeping the house raised off the ground to allow the ground to flow freely underneath and between the buildings, leaving the existing landscape untouched. There are “steps and paving formed by slate flags, which run continuously into the old interiors.”(8)



In my opinion the continuation of the stone into the interiors is the architects way of expressing the two different edge conditions present- the blocks which are built directly on to the level parts of the site (the ancient blocks) allow the stone to continue into it whereas the other blocks only allow the stone to continue as far as the entrance to it. This is due to the fact that when you step into these new blocks you're stepping on to a new horizontal plane which rises above the sloping ground to make the space more habitable.



Modernism and its regard to context

The site sets up a dynamic relationship between the building and mountainside. There are a multiplicity of microcosms created by the different blocks, each with their own topological attributes. Each new block has an obscured view of the Kenmare River and the Reeks of Kerry. This is a result of the architects successful placement of each block around each other.

Every block has its own function- the ancient cottage holds the function of kitchen, one bothán acts as single bedroom, the other holds the services, two of the new blocks contain three rooms each (two bedrooms which are divided by a bathroom in the centre) and the last block contains the living room which is the biggest of all the structures and completely open in plan.



The three old blocks have an A-pitched roof, rebuilt to the original form they would have been, almost 2.1 metres at its highest point. The three new structures have mono-pitched roofs and ascend almost parallel to the slope of the site, around 4 metres at its highest point. In my opinion, the determining factor for their shape is from the approach a person has to the site. As a person makes their way from the water up the slope to the house, the blocks gradually emerge from behind the trees and vegetation- which camouflaged them from view initially. To give the person ascending an impression that the new volumes respect the scale of the ancient ones, they appear that they are also 2.1 metres in height whereas in actuality its a visual illusion- the angle at which the person looks up at the new blocks is similar to the angle of the roofs, meaning

that the roofs appear miniscule. The corollary of this is that the blocks have a greater sense of space on the inside due to the rising roof.



A quality which is inherent in Robins work is an idea of floating, levitated matter, here expressed in the projecting suspended floor plates. Here the architect heightens our

awareness of architectural space flowing into the new blocks by using this cantilevered effect. Another idea of levitated matter is expressed in the bath tubs, located inside the bathrooms of the new blocks. Here, two timber joists are the only elements acting in suspending a bath tub. For me, this would be an amazing experience: bathing in a tub of water with almost no support, which in turn would evoke a feeling that the whole experience is done while floating.



The space inside the new blocks is completely different to that one experiences inside the ancient ones. By the use of floor to ceiling glazed doors, almost entirely on one facade, space flows freely between inside and out. To enhance this flowing space the glazed doors can be opened allowing fresh air and the sound of nature to enter the blocks. This creates a great sense of placement.



Other motifs the architect uses to achieve this is in the construction of the building and material selection. Since the house was only to serve as a holiday home, it would only be used for a couple of weeks during the summer by himself and his family. This meant the house didn't need to be detailed to keep out cold temperature, due to it not being used during the colder months. This allowed for a simple construction of single leafed walls and tin roofs. This resulted in the house being very economical, but more importantly more haptic and sensory. I experienced this myself while standing inside one of the new

Modernism and its regard to context

blocks on a day that was overcast, raining and slightly breezy. Due to the thinness of the walls the branches of the trees could be heard to brush up against them due to the breeze and rain could be heard patting on the roof: another successful overlapping of the interior and exterior.

I think this is an amazing example of how modernist architecture can fit within a rustic, almost bucolic, context of rural life.

Chapter 4
St Marys Lane



No. 1, Saint Mary's Lane, Ballsbridge, Dublin

Aloof, withdrawn and artificially international, this house is located in the heart of Dublin city. Robin only built four private houses in his lifetime, two of which were for his family- one in Dublin and one in Cork (Bótharbuí). The house, and even the address itself (the lane never had a name before) was designed by Robin in 1964. The site for St Mary's was located by identifying ideal corner sites with the right orientation- a living garden space and courtyard being integral to the concept of the house. Robin found eight such sites within walking distance of his office and wrote to the owners- only one replied. The rectangular site he acquired was part of a large vegetable garden and Orchard on the corner of St Mary's Road: A double fronted site.



There were three existing granite garden stone walls approximately 2.2m high which defined the site. Two of these walls were the fronts to St Mary's Road and St Mary's

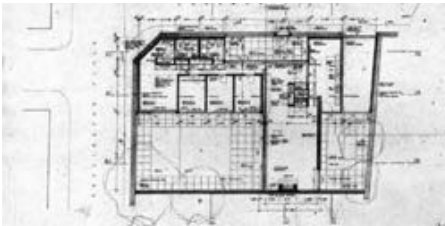
Lane. A new concrete block wall was erected to divide the site from the main garden which effectively enclosed the rectangular space by four perimeter walls. A door opening was cut out of the Stone wall facing St Mary's Lane (hence the name). The diagram of the house which is contained within this enclosure is very simple- a flat concrete roof slab is poured over the site leaving three "holes" or courtyards, the largest one to the southwest corner, the next largest at the southeast corner, and the smallest, the entrance court in from St Mary's Lane, along the centre of the north wall. This entrance court acts as the threshold, defining the transition between outside and inside; the Lane and inside the house. I felt this to be a very important detail in creating an autonomous atmosphere to the house which is otherwise located behind a granite wall conjoined to other perimeter walls stretching the length of the lane, and thus giving the lane a sense of monotony.



While the building presents a completely closed exterior, within the boundary all interior courtyard walls can be full-height glazing, as they are completely secluded from the street.



The accommodation is designed for a family with small children – three child's bedrooms plus one master bedroom, a common bathroom and dressing area, a living / dining open plan room, a kitchen which mediates between this and the entrance hall, and, at the end of the site, a garage. All of the rooms enjoy unique relationships and daylight from the courtyards, and most of them have through-views from one courtyard to another due to the open plan of the main spaces.



Modernism and its regard to context

The architectural feature that impressed me the most was a pair of glazed sliding doors in the living room that look out on to the main southwest court. The two panes of glass in these doors are two of the largest in the house, almost stretching floor to ceiling. Even when the doors are closed there is a direct spatial connection between outside and inside. But these doors slide completely into a bookshelf pocket wall, thus opening the room up completely to the garden in summer. The floor throughout is exactly level with the courtyard paving so that the visual and physical connection between inside and outside is uninterrupted. This is achieved by concealing a drainage trench around the perimeter of the accommodation.



What amazed me, as regards the courtyards, was how well they succeeded in helping illuminate the interior spaces. The house is orthogonal in most respects except for its overall orientation due south. The rectangular plan is offset approximately 45 degrees meaning the living room with



its main glazed facade faces southwest on to the main courtyard allowing mid-day and evening light to penetrate into the room—the times during the day that a family would occupy this space the most. There is also a glazed door in this room on the northeast facade which allows a controlled amount of morning light to enter. The bedrooms face south east and on to the same courtyard so as to get morning and mid-day light. The kitchen also faces southeast, however it looks on to a different courtyard.



The third courtyard, the entrance court, reflects light back into the hallway, a work room adjacent to the kitchen, and one of the bedrooms located on the northerly side of the house.



Again, common in Robin's work is this idea of weightlessness and floating matter which is expressed here in the detailing throughout the house. Corners are designed carefully (no architraves or mouldings are used, except the skirting), the plaster stops at 2.4m above the floor, where it meets the downstand concrete ring beam which reinforces the edge of the slab. The result of such austere walls gives the impression that instead of the wall having to bare its own weight down onto the ground, it appears instead that the wall is in tension between the ground and the ceiling. A mere four concrete columns provide the only necessary internal structural supports – the roof otherwise bears on the perimeter walls (columns provide the structure, the walls define the space). A small core – typical of the Mies plan – conceals a boiler, services and storage in a plywood box around which the plan moves. The cork tile floor echoes the grid of the concrete flags paving the courts outside. This said it seems there is no overlaid grid, instead the structure adapts itself to the optimized required living spaces.





St Mary's Lane vs. Bótharbuí

"The courtyard house is a mechanism of both isolation and expansion, for the construction of the self".(1) The courtyard house -in this context St Mary's Lane- is a carefully designed space consisting usually of formal gardens, water, and seating. The house provides a sense of safety and privacy due to its enclosure of boundary walls around the perimeter. "The flow of space is confined within a single rectangle formed by the outside walls of court and house conjoined."(2) It is an urbane housing type that can fit well into a variety of different settings, including single-family housing. This is due to the fact that it doesn't require a context to relate on to, instead it creates its own context, the formal courtyard which interiors can relate out on to. The formal garden is a motif

used to exaggerate where one is situated by placing them in a cultivated image of the natural world. The Villa -in this case Bothar Bui- is the perfect complement to the urban model with its isolating perimeter walls, built into the landscape and relating on to it; it provides the urban retreat to the wild. The Villa fills a need, psychological and ideological. It represents virtue and a reflective realm where philosophical life can be experienced: the cultivation of the soil for the cultivation of the mind. There are also the practical advantages of the Villa's natural surrounds- the healthfulness provided by air and exercise, and delightful natural views of the landscape.



Chapter 5

Simon Walker



Simon Walker is the son of Robin. Prior to applying to study architecture in UCD he spent some years working in countries such as America and France doing furniture design where he obtained a Menuisier C.G.C.P. His furniture designs are very fitting and complimentary to their spaces they are set in. He has collaborated with his brother Corban, an artist, and was recently selected for exhibition in the Lives Of Spaces exhibition in the Venice Biennale '08. Dane House has been featured in an issue of Vogue Magazine. Simon is a very skilled writer and has many publications.

It is evident that Simon is greatly influenced by his father in the few works of his that I've seen. He approaches a project with great sensitivity to context and his buildings are always site responsive in their relation to the site, but what is unique about his work compared to his father's work is that he does it in a contemporary way.



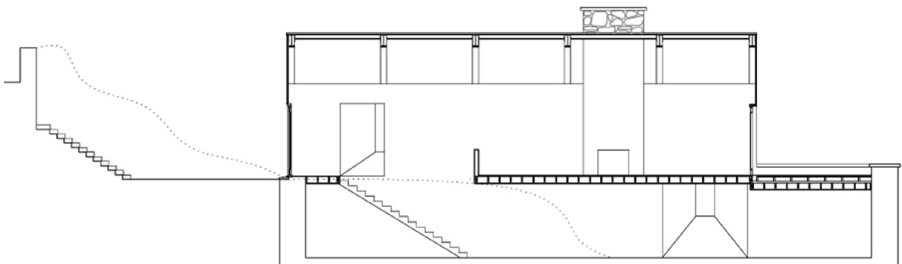
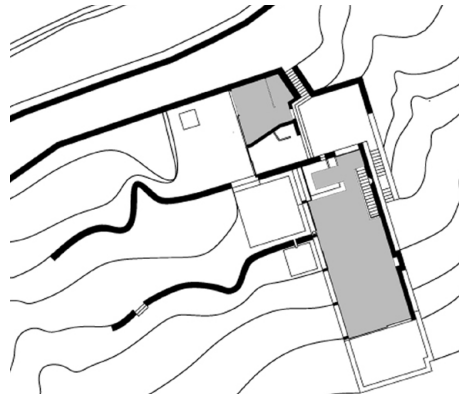
Chapter 6 _____
Dane House



Dane House
Coomnahorna Caherdaniel,
Co. Kerry

Nestled in a rural valley, this holiday home for an artist hides neatly underneath the adjoining roadway and into its immediate landscape. The steeply sloping site was bought by Thomas Dane with the intent of building a modern house with the precedence of *Bóthar Buí* in mind. The site boasts fabulous views of the surrounding hills and the Kenmare River in the distance. There is a strong South West prevailing wind which blows through the site and transmits the sound of the distant River beautifully. The concept was that the house would take the order of farm buildings in the valley spatially and the form of the building would be taken directly from the topography of the site. The house is partially cut into the slope creating a longer more habitable ground floor plane

and allows another floor level to be placed above it without the overall roof line being too visible and pronounced from the roadside. In section the house steps down from road level to a small entrance court. From this entrance court one can access the main living room of



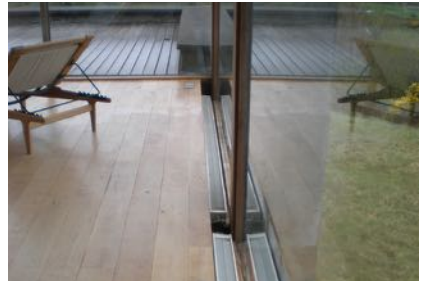
the main building, or the other separate building which holds a bedroom and ensuite. The living room, which has kitchen and dining area functions, steps down again to the ground level which holds three bedrooms, a bathroom with sauna and a utility room. I think the differentiation between public and private spaces through the use of separate floor levels and separate structures works very well. The private spaces are a mix of solid and void on their facades to create more privacy in comparison to the public living space whose facade is completely open. The arrangement of the two buildings bound a South facing courtyard and a sloping landscaped garden which is accessible from both structures and the entrance court.



My favourite architectural feature was the space that was created within the Living room.

Modernism and its regard to context

The huge panes of floor to ceiling glass and the rake of the ceiling creates a space merged with landscape. Upon entering this space the ceiling frames a view by running almost parallel with the exterior hill and adjoining landscape. There is an idea of floating here as there are no fixed objects internally which disrupt this flow of space; The timber floor stops short of the glass and the radiators are recessed and hidden under the floor level, this gives an impression that they are not actually there and the floor continues up to the glass.



The seemingly weightless furniture designed by the architect compliments the space and is easily distinguished from the chunkier fixed furniture that does not. The table uses a system of backbone and ribs on its underside to prevent deflection and



warping, as it is constructed of solid Irish elm. The advantage of using this structure allows the legs to be positioned right at the corners, imparting a sense of levity which gives the massive board a delicate, floating quality.



This can also be seen in other pieces such the chair and leg rest.



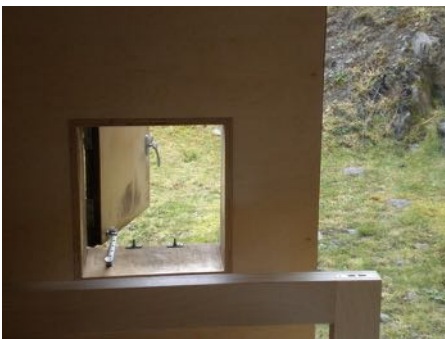
The construction externally is extremely contextual to the site, consisting of local materials, concrete and stone. "By making the stone cladding, the mortar, and the point at which the stone and concrete join together explicit, it explores the nature of the mix between these materials over time."⁽¹¹⁾ It also uses a concrete roof to emphasise the closeness of its form to the landscape and the slate cladding fits in with the existing buildings nearby. I really like the way the materials complement each other such as the Iroko timber used on the window and door opes which has weathered to a shade of silver which is similar to that of the concrete.



Internally plywood, Irish elm timber and white plasterboard are used to help illuminate each space throughout the house by reflecting light off the walls, the floor and the ceilings. Not only does this create a quality of space but also an economy of construction due to low cost of plywood and plasterboard.



A small design detail which impressed me was the open's found in each bedroom to allow fresh air in. If one was to open the large glazed door (whose function is to relate inside and outside and allow light to enter) an undesirable amount of cold air would enter the room, whereas the small open controls this airflow.



Chapter 7

Robin + Simon

I am going to talk about the principles of Modernism and how they have been retained in the past decades by comparing the work of these two architects.

Structure

Quality of space and clarity of structure are critical elements in Modernism. A key characteristic of the modern movement is the notion of floating by creating a focus on the horizontal line and reducing the number and size of the vertical ones. This gives a dynamic floating and flowing effect which contrasts with Classical principles which is about emphasis on verticality, weight and mass. This floating and flowing resonates between building structure, space and furnishings. Unquestionably, for me, the building paradigm I have looked at in this discussion which portrays the purist example of this floating effect is the O' Flaherty House. The clear differentiation between the two thick horizontal lines raised off the ground by 8 slender vertical lines creates a sense

that the horizontal lines are about to float away, and the columns instead of showing mass and weight, appear like strings in tension holding them down to the ground.

It is clear that Simon too tries to achieve this modernist idea of floating. In Dane house the vertically aligned columns are differentiated between the horizontal first floor and roof plane, aided by the use of floor to ceiling glazing. The facade at ground to first floor, with its mix of solid and void is recessed from the columns so that these solid walls don't cause confusion and appear to be load bearing. I think myself it could have been more convincing if the recess was of a greater depth. O' Donnell and Tuomeys furniture college in Letterfrack comes to mind.





Modernism and its regard to context

a huge relationship between its interior and exterior context. Of the houses I've visited it is the living room space in Dane house and the O' Flaherty house which created the strongest relationships to their context. The large panes of glass in Dane house allow an unobstructed flow of space outwards and creates the strongest link with the landscape. The same can be said of O' Flaherty house with its glass perimeter envelope.



(Photo of the furniture college taken by me while attending EASA 08)



Space + Materials

Structure is placed away from the centre of the plan and kept to the perimeter and the corollary of this is that it leaves an unobstructed field of space in plan. This interior space through the use of glass can flow freely outwards and relate to its immediate context. This detailing creates

Furniture

Furniture plays a huge role with enriching the character of a space. Here, each furniture design again should display an emphasis on the horizontal line and minimal verticality. This gives the impression that no piece of furniture is fixed, and all pieces are part of the free flowing space continu-

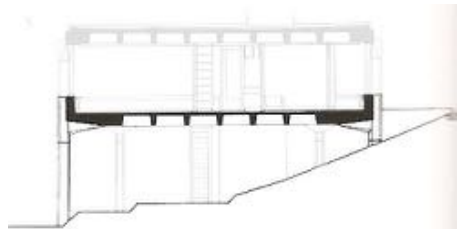
um occurring through the room. The best examples of this are seen in Dane house and St Marys Lane where both architects chose and designed furniture to enhance the character of the room.



Dane House Furniture



The table in Dane House reminded me of the structural section through O' Flaherty house.



O' Flaherty House section and furniture



Modernism and its regard to context



St. Marys Lane furniture



Bothar Bui Furniture



The alteration of the original bed in the master bedroom by Simon to just a mattress compliments the space effectively as opposed to the original bed which appeared larger and more dense.



Similar detailing which I liked

A design detail I experienced and enjoyed in the Restaurant Building by Robin was the stair down from the main college path to the loading bay. I really liked the way the space is compressed down to a human scale by the two parallel walls and as you approach the bottom of the stair the space opens out giving it a preconceived sense of grandeur and importance. Unfortunately the loading bay is quite a destitute space which was a disappointing terminus. I was elated to see this detail emulated in Dane house as you descend the stair down from road level to the entrance court. The importance of the court as being the threshold between living room and bedroom, inside and outside, and public and private is characterized by the descent of the stair.



Dane House Court



Restaurant Building Staircase



Chapter 8 _____
Conclusions

Essentially these buildings could be understood not just as site specific responses to “context” understood as landscape, but a response which embraces local traditions of building to create such an Internationally Modernist work which in turn relates it to the country of Ireland.



Robin Walker's Restaurant Building

It is clear that modernism has changed a lot in recent times. Six decades ago its preferable purist forms, while being aesthetic objects of art, resulted in buildings sometimes not matching their surrounding context and they displayed no effort of a response to their site; The building could have been helicoptered onto another site and worked just as well (or as badly) there.

It is fascinating to trace Robin's work from the mid 60's to mid 70's. At the beginning of this time period he is after returning from America influenced fully by Mies. However, his ethic isn't to copy and replicate the works of Mies, but instead rework it; O' Flaherty house and the Restaurant building take the lesson of Farnsworth and the New Modern Gallery in Berlin and translates them to concrete. This results in designs distinctly Irish and original. Mies did not build his exemplary works in concrete, so that was the task facing Robin when he returned, and he accomplished it *within* the Irish landscape, and *within* the Irish context for building.



O' Flaherty House

Robin's ethic then can be seen to broaden and become more sensitive to “context” understood as landscape and site in works such as Bothar Bui. The design shows beautiful sensitivity to preserve the original site yet adding the new modern idioms, which are complimentary of the site and still embrace local building traditions.



Bothar Bui

Simon's ethic seems to be continuing where Robin left off with Bothar Bui. Sensitivity to site and context, and with the advancements in local building his designs can be executed with sharper detail.



Dane house's success with relating to its landscape internally is from the glass used; the availability of such large panes of glass was not feasible in Robin's time. However, from the visit to Dane house, it is evident there is another lesson to be learned: sustainability.

Sustainability

Sustainability is something which was not considered in Robin's time. All glass used back then was single glazed and ineffective for retaining heat. Dane house originally used double glazing, but due to the fact that the panes of glass are so large and the site is quite exposed to strong winds, some glass began to slightly deflect from these winds and this broke the vacuum seal between the two panes of glass. This created an air gap into the seal, and on a cold day when the house is heated internally, it causes condensation, ruining the view outside. Since the seal was now ineffective the only solution was to reduce the broken double glazed windows to single glazing.



Glass is modernism's favourite material, but I think a balance must be found between the poetics of large panes of glass and the functionality of having smaller panes of glass giving greater strength and encouraging better sustainability.

Modernism, the style that links inside to outside

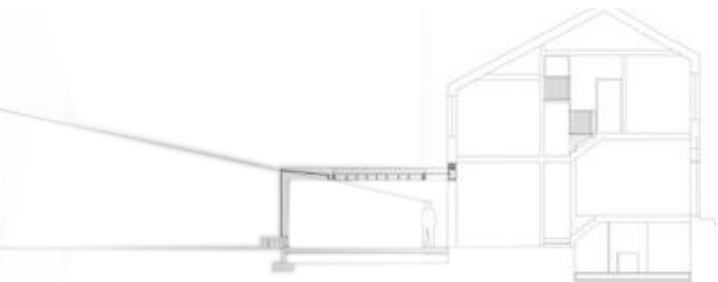
It would take a lot of trial and error, I feel, to master the most suitable glazing system which works sustainability and poetically. That said, when glazing is used to full advantage it can result in powerful, unique and beautiful relationships created between inside and outside which are completely site specific. This can be seen in a lot of Simon's work. Dane House and a house extension he has done in Ranelagh are perfect examples.

It is clear from this dissertation that through
-embracing local traditions of building
-carefull selection of material
-designing with the collaboration of structure
and space
-and executing a sensitivity to site context,

contemporary Modernism is, without a doubt, one of the best style's which can relate to any given context, and because of its richness through austerity, it can be very economical too. I think Robin best summed it up when he said "Quality is a necessary constituent of good architecture. It has to do with the choice of materials, techniques and, through the manner in which things are juxtaposed and put together, the expression of the spirit of a work. Richness is not a factor. It is as possible, as easy, to achieve good quality with inexpensive means as to achieve it with an overabundance of riches. There is appropriate quality, which is perhaps the same as a sense of propriety."



Extension in Ranelagh which frames a view of the local church

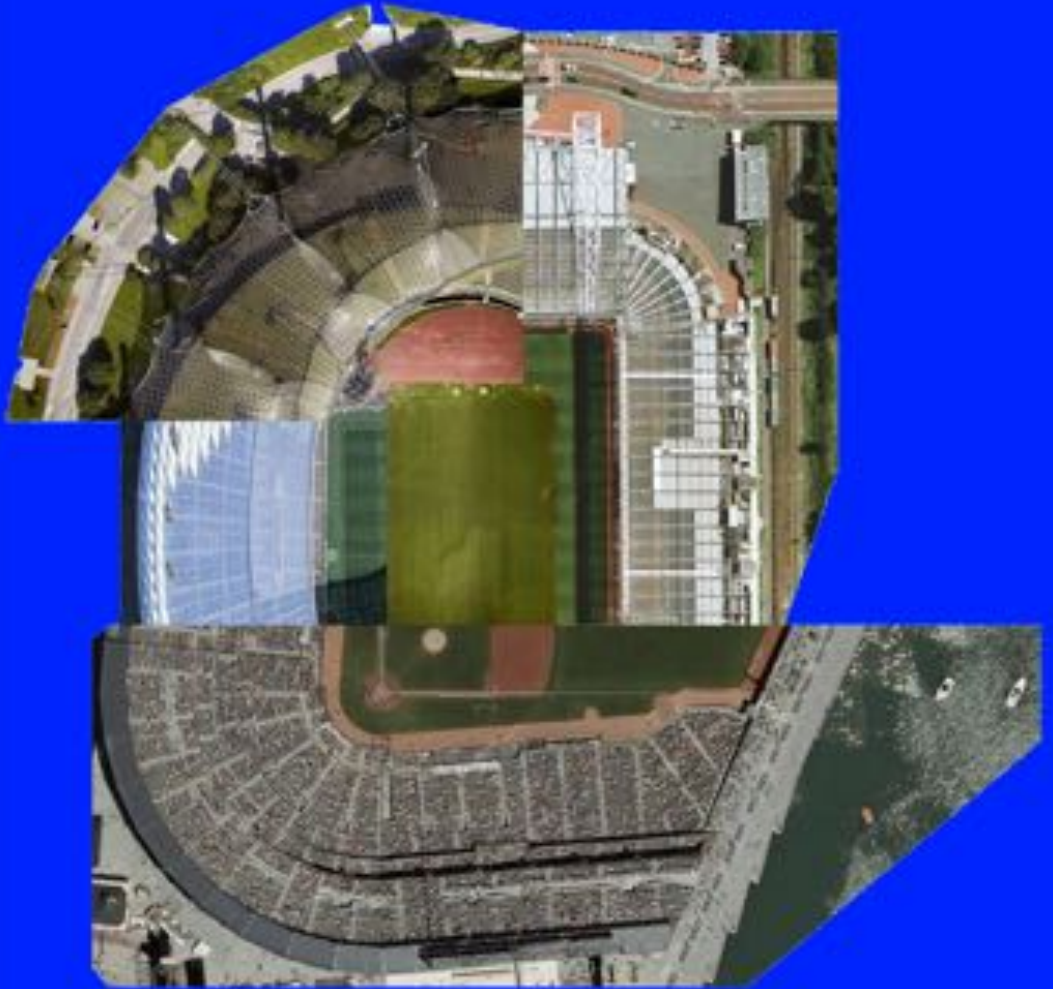


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Evolution of the Structure in Sport

1



Jeremiah Cahill

Where it all began....

‘The first thing to be taken into consideration when staging a sports festival is the scenery. Before actors appear, the scenery strikes the eyes of the spectator ‘2

1

THIS WAS WRITTEN by the founder of the modern Olympics, Baron Pierre De Coubertin, in the late nineteenth/early twentieth century after the modernisation and structuring of many ancient games and local sports. The relevance and implications of these words has grown exponentially since they left the pen of Baron Pierre De Coubertin. With the coming of the Enlightenment and birth of modern science came the realization that the body, once again, is a machine to be maintained. Not since the height of the Greek Olympians from the seventh century B.C. to third century A.D. has sport had such a central role in our lives as in the last century. Sport to many the common man has become a modern day religion with its own prophets, messiahs and disciples(1). The stadia of today have become churches and cathedrals of the modern era bringing whole towns, cities and regions together as a modern community.



‘Sport is not an intellectual pursuit, it demands the engagement of the heart not the brain.....it is not so much a pastime as a religion complete with its cathedrals and rituals’³

Sports worldwide have taken up the mantle of bringing people together and giving the feeling of belonging to something bigger than themselves. This fanatic following has inspired the buildings of sport to become places of homage and reverence. The stadiums and sport centres which are part of the everyman’s idea of architecture and have become iconic yet natural for him to go to and enjoy are some of the best examples of architecture and people integrating successfully. It is this characteristic of the stadiums that the strength of the building type is derived from. This has motivated designers of stadia to push the boundaries in technology and design to create buildings equal to the sport. Would you paint a pretty picture only to put it in an ugly frame? Probably not and the stadium acts as the frame in which the picture of athletic talent can blossom in the best possible surroundings to the adoration of the onlookers.

In much the same as a theatre set for a play or a musical the stadium if designed correctly can enhance and increase the occasion of the match, game or event. It is not a passive backdrop for the event but an active piece in the creation of the atmosphere in the overall puzzle of the event. The stadiums of today, for the most part, fulfil this aspect and try to exceed their regular function of staging of the sport but this has not always been the case. The stadiums which have become national icons and bring local pride are designed and built after learning from the advances of precedents that have gone in the hundred and fifty years before them.

From the humble beginnings of simple pitches to the modern monumental arenas, stadia have undergone rapid transformation in the past one and a half centuries. In my opinion, this evolution has been in reaction to four major stages.

- The codification and professionalisation of modern sports.
- The impacts of TV nationally and globally.
- Becoming safer and more family friendly.
- Regeneration of dilapidated areas.

It is these factors that have driven stadiums forward from craters in the ground. The four factors do not follow a strict chronological order although they do seem to follow on from each other loosely.

‘To stage an event in a nondescript setting is to dull its aura. As for the spectator, for much of their lives most people live and work in unremarkable surroundings. All the more reason therefore that the stadium should be their Xanadu, their Hollywood, their Never-Never-land and dream factory all rolled into one’⁴

1. Idea partially adapted from Stadiums; architecture for a new global culture, Rod Sheard, 2005

2. Written by Baron Pierre De Coubertin, von Gerkan, Marg un Partner, Stadia and Arenas, 2004

3. Sarfraz Monzoor, The fall of the last good man, The Guardian (UK), 14 April 2004

4. Simon Inglis, Foreword pg IX, Sports Architecture, Rod Sheard, 2001

'Ponem et Circenses'

'The general need to satisfy; that is the architects basic task here.He prepares such a crater with art, as simple as possible,so that's its jewel becomes the people themselves.'⁵

The stadiums of today, for the most part, fulfil the above aspect and try to exceed their regular function of staging the sport but this has not always been the case. The stadiums which have become national icons and bring local pride are designed and built after learning from the advances of precedents that have gone in the 150 years before them. From the humble beginnings of simple fields for pitches to the modern monumental arenas, stadia have undergone rapid transformation in the past one and a half centuries. The strong effect of the ancient arenas of ancient sports on the modern stadiums of modern sports is paramount as it gives a logical starting point for the creators of the first modern stadiums.

The precedents of stadia from the early amphitheatres to the colossus Coliseum created the basis from which the first stadiums of all sizes could learn from in the second golden age of sport. The geometry of all the stadia from the first golden age of sport provided a knowledgeable founding for early stadia of the 19th century. It is this geometry of the simple circle to the more flattened elliptical shape which has stood the test of time as the logical and accepted form for stadia design. The simple undecorated and functional design of the early amphitheatres coincided with the early stadia of the 19th century which were both no more than craters with the athletic spectacle in the centre. The growth in popularity of stadia in the first and second era of stadia created the need for larger more complex stadia. In ancient Rome and Greece the amphitheatre lost its functional appearance in Augustan times when it began to be monumentalized in cut stone, with substructures and imposing facades, decorated with architectural character.

This provided inspiration for the second golden age of stadia as the architects of modern stadia followed the only built precedents available such as the Coliseum in Rome. The corporate boxes which are the

choice seats of all stadiums are modern versions of the tribunals upon which the upper classes of the Roman Empire watched the sport of their days. The crowd control idea of the Romans 'ponam et circenses' or bread and circuses was one which seemed apt for the industrial revolution of the 19th century.



2

3



‘Where crowds gather history is made.’⁶

The mass exodus of the countryside to the industrial cities brought populations to highs not seen since the times of the Roman Empire and with it the need for sport. The killing fields of roman amphitheatres were replaced with the symbolic killings fields of football, rugby or baseball pitches. In the period of 1850 to 1900 almost all major world-wide sports of today were created and made professional. The codification of sport occurred during these years for with the major rules and regulations being drawn up for soccer(1863), rugby(1871), Aussie rules football(1859), American football(1869), and baseball(1845).

4



The sport which thrived most during these primitive days of professional sport was undoubtedly soccer which expanded at a phenomenal rate becoming a global sport in decades. Notts County first professional club came a year after the codification of soccer, 1864, and were one of many early clubs to play in dire conditions at the beginning of the professional era. Most clubs played in simple pitches with embankments to all sides being the only luxury at those times or else ground-shared with cricket clubs which would have been just marginally better. The early stadiums grew only as spectatorship grew, as was true for all sports, and the sports were recognised for their monetary value. This brought about the first improvements to stadiums with covered stands, bars, dressing rooms and corporate boxes coming as a result of this injection of cash. The crowded stadium which brought the money for change

‘To most players in the world, Wembley is the Mecca of stadiums. To win a World Cup there would be the highlight of anyone’s career.’⁷

As popularity grew so did the architectural merit in the stadiums grow as the stadiums became symbols of grandeur and outward expressions of power and success. The growth in popularity of soccer led to this becoming not just a local phenomenon but grew to national importance when in 1924 with the British Empire Exhibition.

The centrepiece of the 1924 exhibition was the Wembley Stadium which ignited much interest in the exhibition as a whole. The site chosen is of some architectural interest also as it was the infamous site of ‘Watkins Folly’. This was the site of Sir Edward Watkins failed attempt at a British version of the Eiffel Tower. In 1901 he attempted to build an 1150 ft tower but only reached 200 ft after the foundations were found to be unstable.

The decision to build a national stadium and FA cup final venue was made in 1914 after using the grounds of Crystal Palace football

club, aptly named after Paxton's glass and steel masterpiece, for twenty years. This decision proved to be justified as Wembley became an English institution and the envy of the world. Architects John Simpson and Maxwell Ayrton designed a stadium with a variety of styles such as Romanesque arches and colonnades, faux monumental masonry and the art deco of the central hall all synonymous with Empirical grandeur architecture of the world exhibition.

Built with a design loved by millions, and was fronted by the most world renowned showpieces, the twin towers. The brilliant white twin towers, 126 ft high, gave a dramatic effect felt by all who approached them. The twin tower motif was a symbol of power and grandeur was an expression of British confidence for the entire world to see in a decade of turmoil. The initial capacity of Wembley was 126,500 yet in the 1924 FA cup final four days after being finished a reported 200,000 people attended. The terraces of ferro-concrete withstood this stern test and the reinforced concrete structure continued to do so for another 80 years.

5



The stadium underwent much refurbishment over the years with floodlights added in 1955 and significant facelifts in 1963, 1973, and the early 1990's. The venue of the 1966 World Cup final, 1963,68 and 71 European Cup finals, multiple FA cup finals and numerous England internationals was a listed building, albeit grade 2, but despite all this historic backing the twin towers were taken down in 2003 to be replaced by the colossal arched stadium by HOK and Norman Foster Architects.

5. *Johann Wolfgang Van Goethe, Italian Journey, Verona, 16 Sept 1786, pg 7, Von Gerkan, Marg und Partner, Stadia And Arenas*

6. *Spiro Kostof, The City Shaped: Urban Patterns and Meanings Through History, second edition, 1999*

7. *Sir Bobby Moore, www.wembleystadium.com*

‘Lights, Camera, Action’

‘If ever there was a marriage made in heaven it was between television and sports’⁸

Wembley stadium was one of many stadia to be refurbished around the 1950's and 60's with many more being newly built in this era. The factor for this explosion in change, necessary change, was TV. Television and sport are an inseparable couple and since the 1940's have grown in proportion to each other, helping each other out along the way. In 1937, a few hundred Londoners were the first to enjoy watching sport on TV with the very first outside broadcast coverage of British sport with a 25 minute viewing of a men's tennis match in Wimbledon. This is seen by many as the first date in the run up to the now long lasting marriage between the two. Televisions growth from a measly 5,000 sets sold in 1946 to 75% of households having one 10 years later, show its meteoric rise with sport holding its hand along the way.

Like all relationships it has had its low moments too with the majority having been in the tentative first few years. These low moments came from an initial drop in attendances at stadiums where television got an early foothold. The Boston Braves Baseball team felt this negative impact, even after winning the National League in 1948, when in 1949 crowds fell by 81% due to signing a TV deal for the next three years. It wasn't just single teams that were hit by an early introduction of TV, as the sport of College American Football was hit severely. Between 1949 and 1953 attendance declined by almost 3 million. The National Collegiate Athletic Association formed a television committee and introduced strict rules for limiting broadcasts. Even then it was not until 1963 that attendances rose back to the levels of 1949.

‘You didn't have have to be an expert to acknowledge that the Astrodome was far ahead of its time’⁹



6 'WELCOME TO THE ASTRODOME EIGHTH WONDER OF THE WORLD'¹⁰ emphatically said the brainchild of Judge Roy Hofheinz and his 2 architecture firms would become one of the most advanced and famous stadiums of its era. The Houston Astrodome, opened in 1965, was one of the first to recognise the need for stadia to match the comforts of home. Judge Hofheinz suggested the only way baseball would succeed in the hot, humid, wet summers, infected with mosquitoes, of Houston was roof the stadium leading to the extravagant solution of the 645ft span dome of the Astrodome. Judge Hofheinz was proven correct in 1962 when the temporary Colts Stadium was used while construction was underway with the Astrodome. The players complained of the conditions and the fans just stayed in their comfortable homes.

The roofing of the Astrodome was to be the solution to this dilemma. The dome was capped by a 300 ton tension ring which sat on lamella trusses that span the domes huge circumference. To allow the grass to grow the roof was made transparent with the use of Lucite skylights throughout the dome. This meant it was the first stadium with adequate lighting for colour TV at a luminance of 300 lux. This idea had a problem unforeseen in the drawing up of the plans and was only found out in the first season of play. The transparent skylights gave a lot of glare when players looked up to try catch high balls and were

blinded. The solution to this problem was to whitewash 30% of the dome but unfortunately this led to an even greater problem as the grass was unable to grow minus the light. Unfortunately what the photo to the right doesn't show being black and white is how the dead grass was spray-painted green in an attempt to cover-up the problem. This led to one of the biggest developments in sports arena with resulting answer to place synthetic grass in the stadium, later to become known as Astroturf in honour of its birthplace.



7

'I believe before it is all over, everybody in the United States will be visiting this stadium.'¹¹

This problem was to be alone in the building of the Astrodome as there are many successes in its design. Its true strength is in how it tackled the aforementioned problem of removing fans from their comfy homes and attract them to the stadium. The piece de résistance of the stadium was its \$2 million dollar, 4 storeys high and 474ft long scoreboard that had over 50,000 lights that created black and white animations, seen to the right, to excite the crowd.

The industrial steel structural design mirroring its surroundings betrayed the luxury of the interior with its padded and upholstered theatre-esque seats, luxury sky boxes, first to introduce them in the world, 49 concession stands and 4 restaurants, it was the envy of the nation.

8



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It had an air conditioning unit so powerful, that coupled with high humidity, it caused it to rain indoors! To create a comfortable acoustic level in the stadium and to avoid echoing in the large dome the design called for half the roof to be covered with acoustical coating, the lower third of the domes walls to have sound proofing wooden panels and each seat to contain shock absorbers. With the bountiful comforts and the scoreboard, the fans came out in there millions with over 12 million visiting in the first 3 years of its life and 1 and a half million of those paid to tour the building with no game taking place.¹²

The success of the Astrodome is its ability to live even beyond its use as a baseball stadium to the versatile centre it is today with rodeos, concerts and presidential conventions. The greatest accomplishment of the Astrodome as a stadium is in its design to be built for the spectator in the stadium or in front of the TV. Since the existence of modern stadiums they have been one of only a handful of buildings that can accommodate the population of a town or city and certainly the only type that can captivate the entire gathering. The advent of TV has increased this captivation to a national and global stage.

8. *Ellis Cashmore, Making Sense of Sport, pg276, 2005*
9. *Simon Inglis, Sightlines: Astadium Odyssey, p266, 2000*
10. *Scoreboard message at the Astrodome Stadium*
11. *President Lyndon B. Johnson, Opening game, Houston Chronicle, THE TOP 25/From no-hitters to bullfights, Dome has been home to it all, Harry Shattuck, 04/08/1990*
12. *Figures and statistics obtained from The Houston Astrodome, Craig And Katherine Doherty, 1996*

To Our Fans - 1965 HIGHLIGHTS OF
SPACE-AGE BASEBALL - INDOORS



**THE ASTROS FIRST YEAR
IN THE ASTRODOME**

Price: **50¢**

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9

10



9

Safety last?

Football is a gentleman's game played by hooligans, and rugby is a hooligans' game played by gentlemen!

Where these developments in creating a comfortable family orientated stadium were taking place around the world and in most sport, there was an unusual slowness in development of this kind in soccer/football. The reason for this inept and plain lack of change has been attributed to many reasons such as a lack of institutional governing of the Football Associations, hooliganism and ageing stadiums. Football matches were seen to be quite unsafe, due to the violent actions of football hooligans. Football hooliganism had spoilt the family atmosphere of football games for many with people fearing bringing their family to a football game due to the violent reputation that football hooligans had given the sport. Football stadia around the world were also old, decaying dinosaurs that were considered dangerous for families.



11

The changes that swept through most other major sports and stadiums only gradually penetrated the sport of football even despite the windfall of money and popularity. The few developments that came in the 60's and 70's were poorly planned and designed due to weak regulations that allowed for substandard and unsafe new stands and terraces.

The dilapidated stadiums of Britain got the most coverage round the world due to the multiple disasters over the years with tragedies such as the 66 people who died at stairway 13 in Ibrox Stadium in 1971, the 56 who died in a fire in Bradford City's Grounds may 11th 85 or two weeks later when in Heysel Stadium in Brussels 39 died when fighting broke out between the 2 sets of fans and an old wall collapsed. These tragedies were not without warning as they had been preceded by 4 reports:

- 1924 Report by The Departmental Committee on Crowds
- 1948 Enquiry by Home Secretary Hughes

- 1969 Report by Sir John Lany
- 1975 Wheatley Report

Despite this series of disasters the reports were rarely adhered to and if so were only loosely so. It was not till 20 years ago almost to the day on the 15th of April 1989 (12) at Hillsborough Stadium in Sheffield that the authorities brought about change in the design of stadiums and the control of stadiums. Hillsborough Stadium had once been regarded as one of the country's leading stadiums having been chosen as a venue for the 1966 World Cup and many FA Cup finals and semi-finals. This was mainly due to the improvements the stadium had undergone to attract back television audiences to the stadium with improved comfort including a new 10,000 all-seated cantilevered stand in 1960. It was considered so modern that it was mentioned in Nicholas Pevsner's guide to Building of England, the only football ground to be so honoured. Despite all these improvements over time this and other stadiums became run down and dilapidated. It was in the respected Hillsborough stadium that the final straw in a long line of tragic events that changed the nature of stadiums throughout Britain. Police made the fatal error of allowing 4,000 latecomers into the ground for the FA Cup semi-final resulting in overcrowding and the deaths of 96 fans as crushing occurred in the west terrace. Bill Shankly's famous quote "*Football isn't a matter of life or death. It's far more important than that.*"¹³ never

12



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rang as hollow as in 1989.

Lord Justice Taylor's report into the deaths at Hillsborough and the disasters before it brought about change to the sport as a whole as new stringent safety rules recommended by the report finally rang through the leagues dilapidated stadia. One of the major changes was to have it mandatory for all stadiums to be all-seater stadia and this greatly curbed the hooligan element at matches creating a more family orientated arena. The first club to take the initiative with its 12,500 all seater Stand at the North Bank end of Highbury. Not only was it an all-seater stadium, it set a new standard in spectator facilities with supporters' stores, restaurants, concession stands and multiple bars. Where Highbury's new North Bank led the way in facilities the Alfred McAlpine Stadium led the way in a new standard for form.¹⁴

'The Lobb design fulfils these wider ambitions admirably. What this West Yorkshire town has acquired is a spectacular new landmark built alongside the River Come'¹⁵

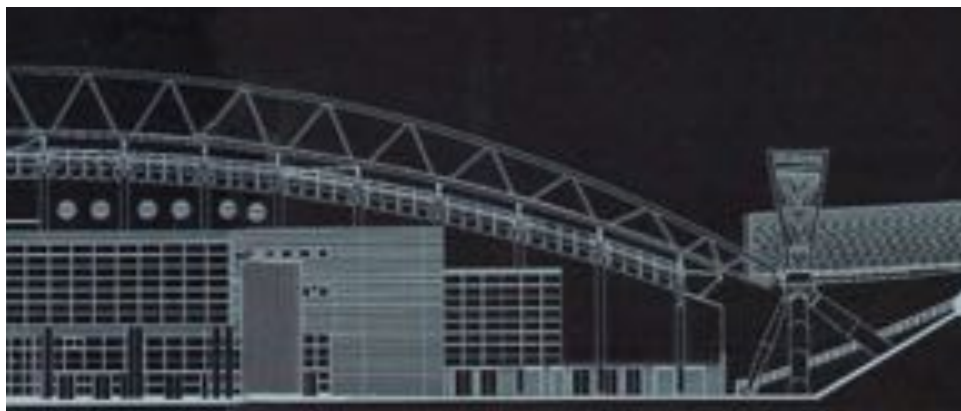
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The design by HOK Lobb Sports beat 5 conventional box designs in the competition for the new stadium of Huddersfield Football and Rugby with its exciting 'banana truss' led design(13 & 14). The dramatic curved form of the design opened up endless possibilities for future stadiums but it was not just purely a building of form. The form of the building was designed on the knowledgeable understanding of favour-





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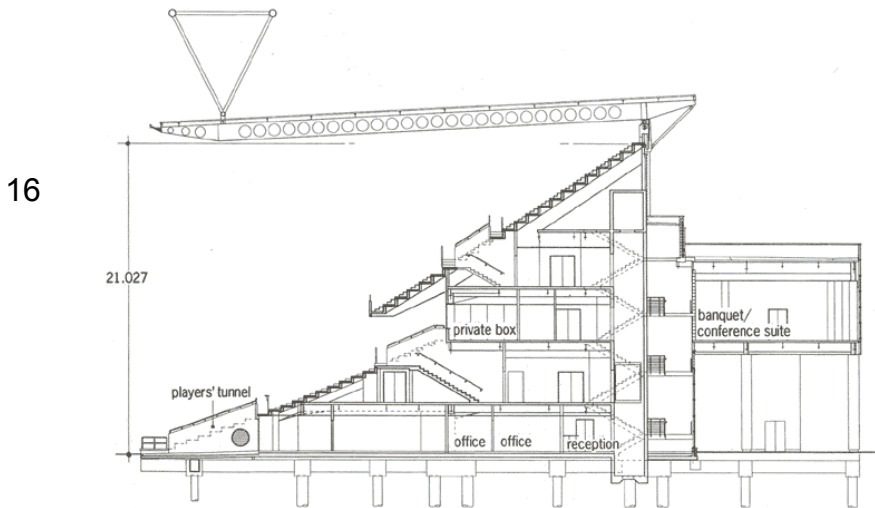
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able sightlines for the fans. The curved form allowed for fans at all times to be no more than the recommended maximum viewing of no more than 150 metres from the centre of the pitch.

McAlpine Stadium also has facilities paralleling those anywhere else in the world including 26 private suites overlooking the pitch, five guest lounges and a 500-person conference and banqueting suite 16 with the architects understanding the power of designing for TV and merchandising revenue in mind. The bold design of the Alfred McAlpine Stadium met all the new rules of the Taylor report and provided impetus for future developments of new British stadia and despite the strictness of the Taylor report the stadium still managed to create a design combining intimacy with safety.



13. *Liverpool legend Bill Shankly*

14. *Rod Sheard, The Stadium, Architecture for the New Global Culture, 2005*

15. *Dr. Brian Edwards, 'Stadium with a Swagger', The Architects' Journal , 1994*

16. *Dr. Brian Edwards, 'Stadium with a Swagger', The Architects' Journal , 1994*

Regeneration Generation

The ascendancy of sport as the new global culture means that's a stadium has a central role in the city – financially, political, geographical and spiritual'¹⁷

The stadium at the end of the 20th century and beginning of the 21st century entered a new generation, with a new direction as a tool for regeneration. The role of the stadium evolved to be seen as a vital new component in 21st century public space alongside shopping centres, cinemas and airports replacing to some degree the public spaces of old such as cathedrals, piazzas, and market places. These pieces of architecture are now a complex planning tool and can be powerful enough to instigate new developments in run down and forgotten parts of cities and are the modern regeneration tool. This is where the newest generation of stadia have come to the fore. State and local government have been willing lately to offer publicly or privately financial support to clubs to build iconic stadiums.

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Their reason to backing these projects that the governments believe the stadiums can be a catalyst for urban regeneration and are often designed to be the multi-faceted centre of a new community. This new generation of stadiums can act as the basis for structured growth in the rundown rust belts of forgotten 20th century industrial areas in most cities around the world. They are used as an icon to change the public's mindset and accept an area of neglect. The rest of the world's sport without the social trouble of hooliganism were the first to move in this direction of regenerative stadia with the American sports of baseball and American football best placed to begin the regenerative generation.

‘Although the location is stunning, it’s the architecture that brings out the potential of the site.’¹⁸

The wealth of the sports industry in America at the turn of the century placed its respective professional sports in the opportune position to be the leaders in the new design of stadia. The first stadia in America to appear as a regenerative tool in larger developments in the rust belts of industrial America were Oriole Park, Baltimore in 1992 and Coors Field, Denver in 1996. The latest stadium to be used in this manner is the AT&T Park in 2000. This stadium is situated in the Mission Bay area of San Francisco harbour which until recently was a run down area of the city. AT & T Park is the linchpin in the revitalization of the old 20th century warehouse district area which is to be transformed from the 300 acres of abandoned railway tracks to a vibrant area with housing, shops, offices and parks. The new stadium designed by HOK Lobb Sport is the impetus in a much awaited \$4 billion redevelopment of the Mission Bay area with the AT & T Park the first building to have been put into the area.

The stadium despite being an object of regeneration relates to its surroundings and the history of the area with the two street facing facades consisting of brick recounting the brick warehouses of days gone by. The internal structure is a large steel structure which compliments the Steel Lefty O’Doul Bridge adjacent to the arena. The stadium also has an interesting orientation faces out onto San Francisco Bay and the

Oakland Hills instead of the city having been changed due to wind conditions. This gives the stadium an unmistakable character as it reactivates the bay side and draws many boats in search of game balls on match days. The energy brought by the stadium to the area has converted the dingy slum into the hottest property in town.

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‘Moving just down the road to a 60,000 capacity stadium seems the ideal solution to me’¹⁹

It did not take as long for the stadiums of soccer to follow the example of the rest of the world with the precedents of American stadiums in the rust belts of Baltimore, San Francisco etc seen as the obvious example for the rust belts and rundown areas of cities around Europe. One of the best examples of this is the Emirates Stadium of Arsenal F.C. which moved from its hallowed grounds of Highbury due to its growth in stature and popularity in the footballing world. Where Arsenal had led the way in safety and facilities with the North Bank of Highbury Stadium, it has followed on from this in becoming the centre of a regeneration project in it’s native Islington area. The local council wanting to keep the club in the locality gave the club a 27 acre site, only one mile away from Highbury, to be integrated into one the largest urban regeneration projects in the UK. The Ashburton Grove redevelopment hopes to regenerate the

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Lower Holloway Road area which at the moment is one of the poorest areas in London.

‘£390m can buy you 60,000 seats, I used to argue, but not a home. It’s taken just four visits to change my mind; this stadium is every bit as imperious as Milan’s San Siro or Munich’s Allianz Arena, and the sense that the Gunners belong here continues to grow.’²⁰

The new 60,000 seater stadium is the centre piece of the new community with the stadium to be surrounded by over 2,000 new homes as well as community sports centre, health care facilities and children's nurseries. The 60,000 seater stadium is not just a glorified piece of infrastructure but a modern stadium designed to the highest standards. Designed by HOK Lobb Sport also, it follows the same principles of spectator viewing, providing viewing distances of less than the maximum of 150 metres throughout the stadium. The acoustics are unrivalled by most stadia and at the time of goals being generously described with 'The volume is deafening, on a scale which Highbury's 38,000 could never have imagined.'²¹ As with aforementioned Highbury Stadium, the amenities are abundant with the club shop being likened to the size of a supermarket and having many restaurants, bars and concession stands placed throughout the stadium. These are the shops opened for matchday but the stadium sits on a 5 metre high podium of shops and community centres which are available to the community on non matchdays as well. The most inspiring design aspect is the clean-edged roofline with the roof suspended by 2 primary trusses on eight structural cores which allows the roof to hover over the stadium like a halo.

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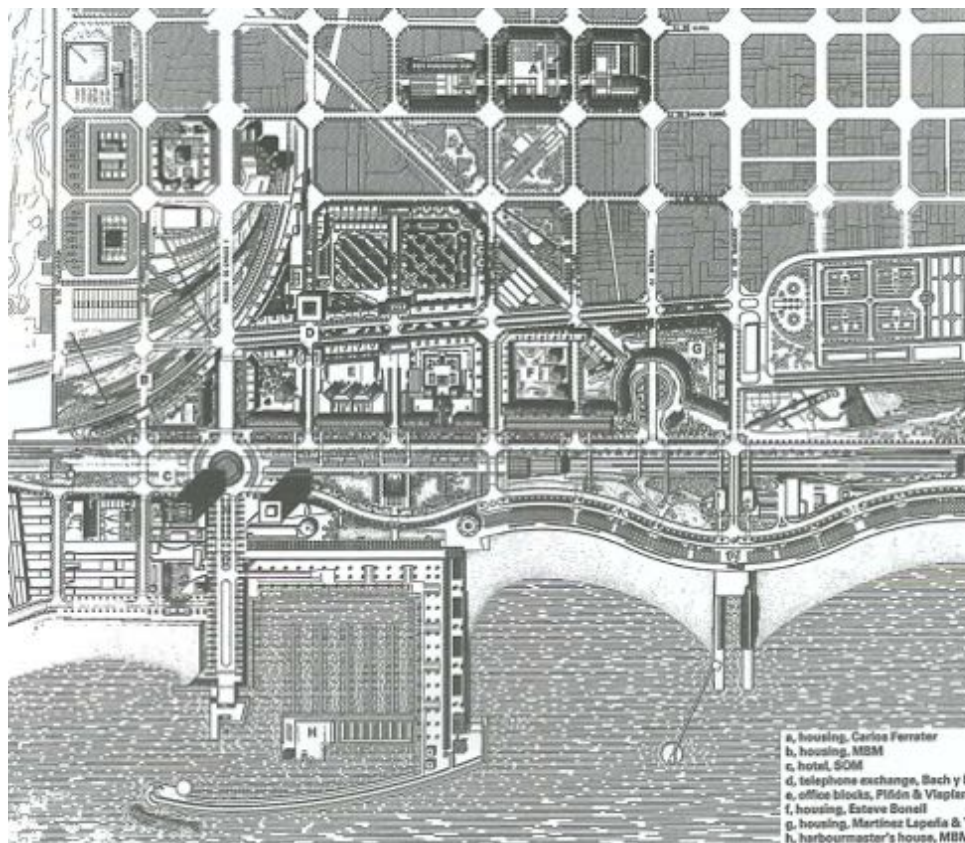
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‘Barcelona hosts the Olympics. But the city has done far more than simply build new facilities to accommodate them’ 22

The practice of using the stadium as a tool for redevelopment of an area is one which has long been used in the history of the Olympics as its travels from one city to another every four years. The Olympics has always been an excuse and a reason to clean up and redevelop the city as a whole with the greatest example of this being the Barcelona Olympics of 1992. The city of Barcelona was a city in major need of renewal after the neglect of the Franco era over, the Olympics being the impetus for an overhaul of the rundown and overcrowded city. The difference between the aforementioned regeneration projects is that they are unique and new being private projects while the Olympics have always been about showing off the city as a whole. The Olympics have also to build a residency complex as well as the main stadia. This is where the strongest parts of the Barcelona '92 Olympics regeneration are found as to put forward the city in the best light there were many new parks and plazas created around the city, opening up the city from its tight and shabby beautiful streetscape but still shabby and crowded. The residency for the athletes, Nova Icaria, created an Olympic Village that integrated with the rest of the city allowing it to merge seamlessly with the city after the games becoming a new community to the city.

‘Barcelona has seized the possibilities offered by making an Olympic Village to redevelop a derelict industrial area and to forge links between the city and the sea.’ 23

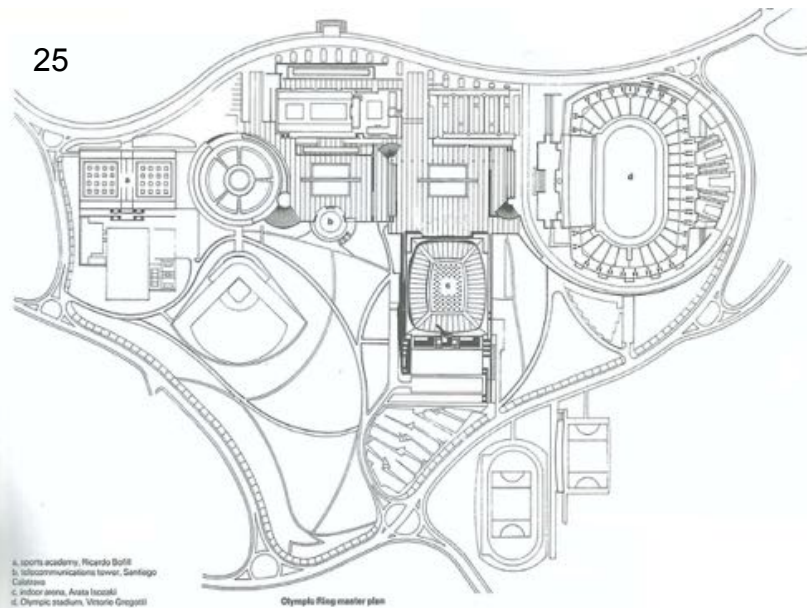


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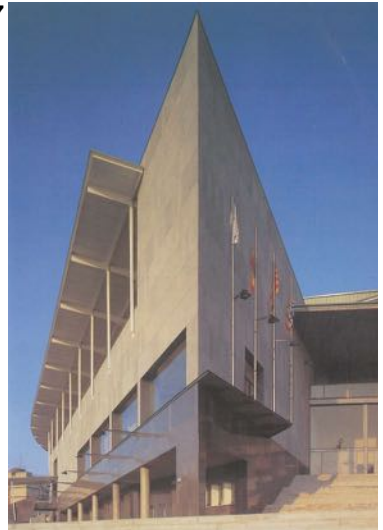
The Olympic Stadiums of Barcelona were not the most memorable ever to grace the Olympics but unlike the follies of other Olympic Stadiums these stadia were to be not unused arenas. Where stadia such as the much celebrated Beijing Olympics Birds Nest have become white elephants 22 of structures not finding a place in the city after the Olympics or other major tournaments have left town. The structures of the Barcelona '92 while mostly based in the Olympic Ring area were also spread out to other areas including the Archery Facilities, in Vall d'Hebron by Enric Miralles, Olympic Port, on the shore front to the Mediterranean by MBM Arquitectes, Basketball Arena, in Balladona by Esteve Bonell and Francesc Ritus and the Hockey stadium in the nearby town of Terrassa by Bach y Mora. Each stadium had its own vital merits to the overall Olympic redevelopment with the Olympic ring being a new multi-use sporting complex and also incorporated the rejuvenation of the Olympic Stadium from a failed attempt in 1929 to attract the 1936 Olympics. The Archery range designed by Miralles is probably the most daring and intriguing of the Olympic Stadia. The Basketball arena is not set as object in its area but plays a pivotal role in its setting. The Olympic Port at the edge of the Nova Icaria Olympic Village is the anchor point for the village in its connection with the Mediterranean Sea allowing the sea to almost become part of the urban fabric.



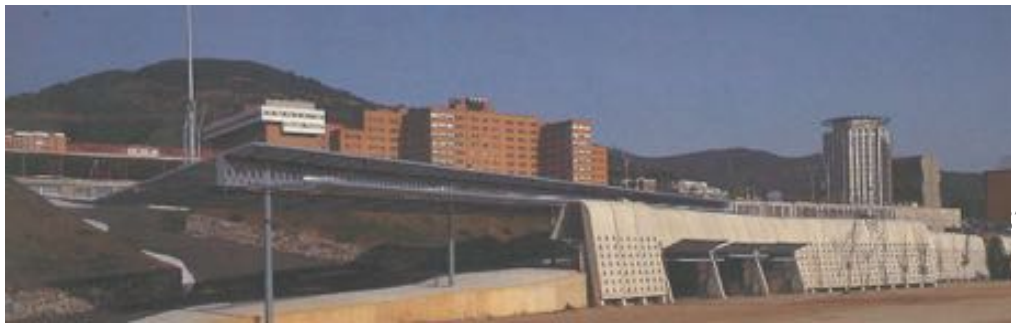


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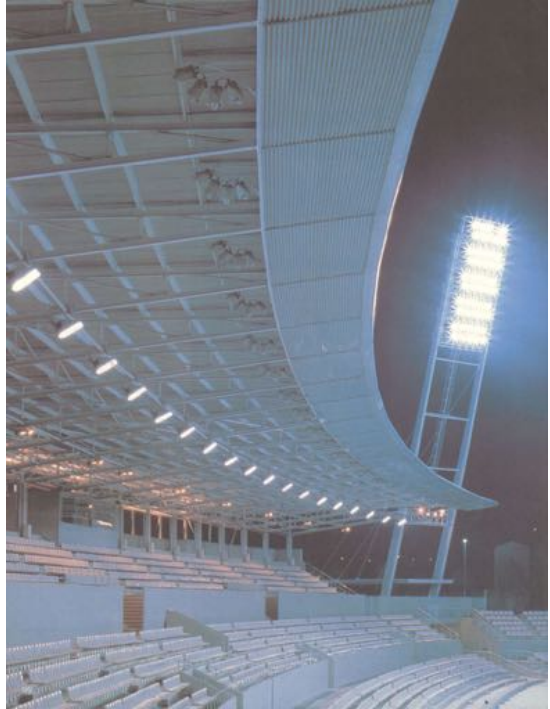
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17. *John King, A Beautiful Diamond Slightly Flawed, San Francisco Chronicle, 11/4/00*
18. *Dennis Bergkamp, Former player, Arsenal website*
19. *Paolo Bandini, Arsenal's Emirates Stadium, The Guardian(UK), Tuesday 26 September 2006*
20. *Paolo Bandini, Arsenal's Emirates Stadium, The Guardian(UK), Tuesday 26 September 2006*
21. *Peter Buchanan, Architectural Review, Barcelona, a city regenerated, August 1992 Issue*
22. *Peter Buchanan, Architectural Review, Urbane Village, August 1992 Issue*
23. *A white elephant is a valuable possession of which its owner cannot dispose and whose cost (particularly cost of upkeep) is out of proportion to its usefulness.*

Conclusion

Stadiums are the new modern icon for modern cities.

The stadium has entered a new importance in the world today as it has become one of the most iconic and powerful types of public buildings of our time. As civilisation has become more civilised the need for an outlet of our basic nature has taken hold in the domain of sport. The combative nature of ourselves is appeased by the competitive nature of sport while the need to feel part of something bigger is sports latest calling as western culture is beginning to reject religion more often. As the ascendancy of sport has continued unabated throughout the 20th century and into the 21st the has inadvertently become more important as a result. While they were not regarded in the same league as the architectural stalwarts through the ages such as churches, housing etc. The stadium with its connection with TV since the 50's has broadcast some the most memorable moments in 20th and 21st century history to many people . The association of TV and sport has created a connection across borders, religions and races as sport has realised its power to unify the world even for the shortest of times such as the Olympics or World Cups.

‘Sports Buildings were not simply regarded as serious architecture in Britain, perhaps in the way that industrial buildings had been treated before Norman Foster changed that perception’²⁵

The stadium has become the 21st centuries replacement for the public areas such as markets, churches and piazzas. It has become one of the most powerful regenerative tools in modern planning today. The evolution of stadia has allowed the stadia of today to become the landmarks of our cities and nations with the growth in 'monumentality' since the sixties moving the design of stadia to the forefront of modern architecture. The mindset of stadia as serious pieces of architecture has finally changed with the transformation from simple fields to the 21st monuments they are today.



1. Kaka celebrates after scoring in the Champions League revealing his faith.



2. Seating Plan for the L.A. Coliseum



3. Aerial View of the Coliseum in Rome



4. 1945 Match at Stamford Bridge, home of Chelsea F.C.



5. The well renowned twin towers of Wembley Stadium



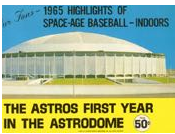
6. Astrodome Stadium at night



7. A groundsman painting the grass green at the Astro-dome Stadium before the advent of astroturf



8. 4 different views of the astroturf scoreboard selected scenes



9. A poster advertising the Astrodome the year of its opening



10. Interior view of the Astrodome



11. An example of hooligans



12. The crowds reaction at the 20th anniversary of the Hillsborough Disaster at Anfield Stadium on the 12th of April this year



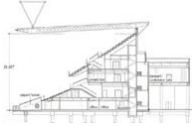
13. Elevation drawing of Galpharm Stadium



14. View of the Concrete bases at the corners joining the banana trusses



15. View from the west stand of Galpharm Stadium



16. Section drawing through the Galpharm Stadium



17. Nighttime view of AT & T Park



18. Aerial View of AT & T Park with the bay



19. Plan of the proposed development of Ashburton Area including the Emirates Stadium



20. Nighttime view of the Emirates Stadium



21. Section drawing through the Emirates Stadium



22. Proposed view of the Emirates Stadium in 2006



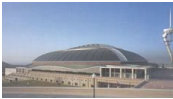
23. MBM master plan for the Olympic Village of the Barcelona Olympics 1992, Nova Icaria



24. Olympic port Barcelona Olympics 1992



25. Olympic Ring Barcelona Olympics 1992



26. Indoor Sports Arena Barcelona Olympics 1992



27. Basketball Arena Barcelona Olympics 1992



28. Archery Range Barcelona Olympics 1992



29. Hockey Stadium Barcelona Olympics 1992

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Le Corbusier: Self-made Man?

Anna Healy

Introduction

"Probably Corbusier liked to encourage the myth that his genius flowered suddenly into full maturity" William J. Curtis¹

The influence of Le Corbusier on the world of architecture cannot be denied. More than forty years after his death he is still being discussed in architecture schools all over the world and his architecture is being imitated. His work, both written and built is still topical. His buildings are still being visited by large numbers of people, year after year. Undoubtedly there are those who admire his work and those who detest it. His theories are dismissed by some, questioned by others and followed by others still. He may not have been successful in all that he did, but given that he is often referred to as the master of the 20th century I think it's safe to consider him a success in his own time, as well as in this one. On his death the then president of the United States, Lyndon B. Johnson, said: *"His influence was universal and his works are invested with a permanent quality possessed by those of very few artists in our history"*. The leader of the Soviet Union added, *"Modern architecture has lost its greatest master"*.

There is a great volume of writing about the work of Le Corbusier; I don't intend to add to it. Instead I intend to look at his life and prove that he wasn't the self-made man he portrayed himself to be, in that nobody is self-made. This theory came from Malcolm Gladwell's *Outliers: The Story of Success*. In this book he questions the reasons why some people succeed and others don't. Gladwell sees something profoundly wrong with the way we understand success. In the opening chapter he asks, *"What is the question we always ask about the successful? We want to know what they're like – what kind of personalities they have, or how intelligent they are, or what kind of lifestyles they have, or what special talents they might have been born with. And we assume that it is their personal qualities that explain how that individual reached the top."* He quotes from the speech made by Robert Winthrop to a crowd assembled at the unveiling of a statue of Benjamin Franklin, *"Lift up your heads and look at the image of a man who rose from nothing, who owed nothing to parentage or patronage, who enjoyed no advantages of early education which are not open – a hundredfold open – to yourselves, who performed the*

most menial services in the businesses in which his early life was employed, but who lived to stand before kings, and died to leave a name that the world will never forget.” In *Outliers* he puts forward a series of examples that prove that these kinds of explanations of success don't work. People don't suddenly rise from nothing. He puts forward his thesis in the following words. *“We do owe something to parentage and patronage. The people who stand before kings may look like they did it all by themselves. But in fact they are invariably the beneficiaries of hidden advantages and extraordinary opportunities and cultural legacies.”*² He argues that these factors allow them to learn and work hard and make sense of the world in ways others could not. His theory is that where and when we grew up has a significant impact on the likelihood of our future success. Along with this the culture we belong to and the legacies passed down by our ancestors shape the patterns of our lives, and therefore our achievements in ways, he says, *“we cannot begin to imagine”*.

Gladwell sees success as arising out of a steady accumulation of advantages, among them when and where you are born, what your parents did for a living, the circumstances of your upbringing and the traditions and attitudes inherited from your ancestors. He offers examples of successful people from varied fields, from Bill Gates to The Beatles, and unveils the extraordinary opportunities and advantages behind their success. Reading about Le Corbusier, and particularly about his childhood, I couldn't put this theory out of my mind; it seemed to apply to him so clearly. There are things about his life that are clearly unusual. Gladwell describes success as being *“grounded in a web of advantages and inheritances, some deserved, some not, some earned, some just plain lucky – but all critical to making [successful people] who they are”*.³ In examining the life of Le Corbusier in the context of this thesis the intention is not to belittle his success, but to see it, to a large degree, as a result of his particular advantages and circumstances.

¹William J Curtis, *Le Corbusier Ideas and Forms*, Phaidon Press, London, 1986

^{2,3}Malcolm Gladwell, *Outliers The Story of Success*, Penguin Books, London, 2008

1 The place of his birth, his early life and childhood education

Charles Edouard Jeanneret was born in 1887 in the Swiss town of La Chaux-de-Fonds, close to the border with France. Where Le Corbusier grew up is important for a number of reasons. Firstly it was there, at the age of three, that he attended a new state-mandated Froebelian Kindergarten. The first kindergarten was established in 1837. By the 1850s kindergartens had been established throughout Western Europe. The kindergarten idea was first introduced into the United States in the late 1840s, but didn't become popular until the late 1870s.⁴ As part of their education the children were given Froebel's gifts. Froebel "*envisaged that the Gifts would teach the child to use his (or her) environment as an educational aid; secondly, that they would give the child an indication of the connection between human life and life in nature; and finally that they would create a bond between the adult and the child who play with them.*"⁵ The first gift was six coloured woollen balls, the second was a wooden box with a sliding lid containing a cylinder, sphere, two cubes and a frame that could be assembled using the box as the base. The third, fourth, fifth and sixth gifts were four wooden boxes with sliding lids containing differently proportioned blocks. In all there are ten gifts, but it would seem Jeanneret only received the first and second gifts.

This seems to be one of the first important advantages in his life. These gifts meant that he handled the basic forms of geometry daily, even before he was made aware of letters or numbers. This understanding of form later became very evident in his architecture. The primary school



The First Gift



The Second Gift

that Le Corbusier attended after this was also Froebelian. As part of his school education Le Corbusier learned in detail about the Swiss lake dwelling. These were the late Iron Age dwellings of the La Tène people, consisting of woven timber structures built on man-made lake islands. Having been recently discovered there was great excitement about these lake dwellings when he was growing up, and a concern to pass on the knowledge of them to the next generation. As a teenager he came across quite an amount of information on primitive dwellings, including some detailed information about the Irish Crannóg, very similar to the Swiss lake dwellings.⁶ The fact that he had access to this kind of information is highly unusual. He happened to be in one of the two specific places in the developed world where lake dwellings had been discovered around that particular time and where detailed information was available on them. He had the eagerness and know-how to obtain this information. Throughout his life Le Corbusier was preoccupied with the earliest dwellings, such as these lake dwellings. It was very important to him to link his ideas to history, especially to primitive times. He admits to this himself in a lecture in 1929 *'If you knew how happy I am when I can say "my revolutionary ideas are in history."*' Who could blame him for this concern with the earliest houses? He found many different possibilities for their appearance and situation. Sketches of the variations he found in his teenage research recur again and again and are developed throughout his career.

"I have drawn for as long as I can remember..." (Le Corbusier)

It is said that he *"never stopped drawing from the moment he came back from school."*⁷ His mother was a music teacher and his older brother had followed in her footsteps. One can imagine that it was important for the younger of the brothers to show his artistic competency. In *Outliers* TheStory of Success Malcolm Gladwell refers to the 10,000

hour rule. "Researchers have settled on what they believe is the magic number for true expertise: ten thousand hours. *"The emerging picture from [such] studies is that ten thousand hours of practice is required to achieve the level of mastery associated with being a world class expert – in anything,"* writes neurologist Daniel Levitin."⁸ It is quite possible that Charles-Edouard accumulated 10,000 hours of practice at drawing in his youth. It is not so important whether or not he was a world class expert, but he was certainly competent in the skill of drawing. It was a skill he continued to use throughout his life as a means of interpreting what he saw.



Sketches 1907



Sketch 1946

At the age of fourteen he was enrolled in the Ecole d'Art at La Chaux-de-Fonds. The school was founded in the late nineteenth century as a response to the needs of the horology industry. So he was born in the right place, at the right time, to avail of this education that had such an impact on the architect he became. His teacher there was Charles L'Eplattenier. L'Eplattenier trained in Budapest and at the Ecole des Beaux-Arts and the Ecole des Arts Décoratifs in Paris. He *"believed that the most vital aesthetic principles were rooted in an understanding of nature, not at the level of superficial imitation, but at the level of underlying structure. He encouraged his students to abstract the essential geometrical features of everything they drew and to translate the results into emblematic patterns following simple laws of combination."*⁹

The fact that he had been taught to see beneath the surface of things to the structure was another advantage to him, and a very useful skill in his later interpretation of buildings. Thirty to Forty years later he still referred to the principle of his teacher. *"The fundamental principle is from the inside out (contrary to appearances)... Nothing is seen, admired or loved except what is so fine and beautiful that from the outside one penetrates into the very heart of the thing by study, research and exploration."*¹⁰

The artistic tradition of his family certainly played a part in his architecture. His father was involved in the watch industry; he was an enameller. This was a highly skilled and careful craft. It required precision and care. This kind of care and precision, and the assembly of small parts in a confined space that watch-making involves bring to mind the Petit Cabanon of Le Corbusier's later life.

La Chaux-de-Fonds was a town based around the watch industry producing artistically finished watches that were internationally renowned. It had watch-making posts throughout the world. It was also a place with deep social, ethnic, religious and ideological divisions.¹¹ It was a town that was in touch with the outside world, and interested in the discussion and spreading of ideas. In the early 1900s the town had nine newspapers, three of them dailies. This setting would have fostered a questioning nature in Jeanneret. Karl Marx described it as *"one unified watch making industry"*.¹² The town itself was like a factory, with many specialist workers working in individual workshops contributing to one end product. There was an emphasis on equality and productive labour.¹³ Hard work was encouraged and Edouard would have seen his father working long hours in his enamelling work. The community was bound by a collective concern. Watch-making connected the town

to global market conditions. Innovations in the industry created new branches for watch making, but also wiped out other markets. New technologies and production methods were both developed locally and copied from abroad. The entrepreneurs who became wealthy as a result of this would later fund the early works of Le Corbusier.

It wasn't only the circumstances of the town he grew up in, but its location, that was important to Le Corbusier's later success. The town was central to the main cultural centres of Europe with easy access to all of Europe's main cities. It was also situated a thousand kilometres above sea level and at high latitude, meaning that there was heavy snow for six months of the year. This extended winter meant that reading was a very important activity in the lives of the town's citizens. Reading played a major role in Jeanneret's formation, as it did in his family's culture. He read intensely, often marking passages with comments.¹⁴ This meant that for half of the year Le Corbusier was inclined towards reading, and probably drawing. There was little else to do. How many others of his contemporaries got this opportunity to spend such vast quantities of their time engaged in the act of reading? What he read is also significant: the writings of John Ruskin and Eugène Grasset, Owen Jones' *Grammar of Ornament*, Henri Provensal's *L'Art de Demain* and Edouard Schuré's *Les Grand Initiés*, amongst many others no doubt.

⁴Norman Brosterman, *Inventing Kindergarten*, Harry N. Abrams Inc. New York, 1997

⁵Joachim Liebschner, *A Child's Work: Freedom and Guidance in Froebel's Educational Theory and Practice*, Lutterworth Press, Cambridge, 1992

⁶Adolf Max Vogt, *Le Corbusier, the Noble Savage Towards an Archaeology of Modernism*, MIT Press, Cambridge, 1998

^{7,9,14}William J Curtis, *Le Corbusier Ideas and Forms*, Phaidon Press, London, 1986

⁸ Daniel J. Levitin, *This is your Brain on Music: The Science of a Human Obsession*, Dutton, New York, 2006, as cited by Gladwell, 2008

¹⁰ Geoffrey Baker, *Le Corbusier – The Creative Search: The Formative years of Charles-Edouard Jeanneret*, Chapman & Hall, London, 1996

^{11,12} J.K.Birksted, *Le Corbusier and The Occult*, MIT Press, Cambridge, 2009

¹³ Jean Antonio Ramírez, *The Beehive Metaphor From Gaudi to Le Corbusier*, Reaktion Books, London, 2000

2 His travels and further education

Le Corbusier's enrolment in the Ecole d'Art at La Chaux-de-Fonds was in order for him to follow in his father's footsteps to becoming a watch enameller. However he had poor eyesight, that was continuing to deteriorate, meaning that he could not follow this particular profession that was so taxing on the eyes. His teacher saw Jeanneret as one of his most gifted pupils, and thought he had the makings of an architect.¹⁵ His parents went along with this. In a way he was still following the path laid by this father. Edouard Jeanneret-Perret, was the architect for the La Chaux-de-Fonds branch of the Swiss Alpine Club. He designed prefabricated wooden huts for use on excursions. In time Le Corbusier came around to the idea of being an architect. This fundamental decision to choose architecture as his career, a career that was to make him famous, was not even his. It was a result of the unfortunate deterioration of his sight, and the influence of his teacher and parents.

Jeanneret's teacher L'Eplattenier had an undeniable impact on his future success. He remained loyal to his pupil throughout his career. When Le Corbusier was still in his late teens his master secured commissions for him and his fellow students, such as a design for a music room for L'Eplattenier's neighbour and the redecoration of the interior of a nearby chapel. There was one commission he specifically reserved for the young Le Corbusier: the design of a house for Louis Fallet, a small-scale watch manufacturer. The other students helped in the decoration and a local architect, René Chapallaz helped Le Corbusier in the translation of his ideas to reality. While on his travels around Europe Charles-Edouard wrote to his teacher. Among these letters he "*declared his rejection of all he had been taught in the past, calling architects who went in for decoration 'liars, and moreover damn fools'.*"¹⁶ Despite what seems to be a personal insult L'Eplattenier remained fond of his former student and continued to help him in his studies, acquiring a grant for him in 1910 to write on and study the decorative arts in Germany. This gave Le

Corbusier a somewhat official status, allowing him to visit schools, workshops and factories, and to make the acquaintance of the architectural elite in Germany. Le Corbusier returned to Le Chaux-de-Fonds at the end of 1911, to a position as a teacher at the Ecole d'Art, that L'Eplattenier had reserved for him. Jeanneret received two commissions for houses in the local area, of people involved in the watch making industry. It is more than likely that it was L'Eplattenier who secured these commissions for the young man.¹⁷

In 1907 it was his fees from the Villa Fallet, the commission that L'Eplattenier acquired for him, that funded his trip to Italy. His later Voyage d'Orient was partly financed by a series of articles about his trip for a local paper. It was on this trip that he came upon the monastery of Ema, a creation so suited to dwelling in his eyes that it was to stay with him, and become manifest in his own housing schemes, for the rest of his life. *"I thought I had never seen such a happy interpretation of a dwelling."*¹⁸ His travels on an ocean liner convinced him that life on a ship was an ideal one.¹⁹ He seems excited in his description of life there. *"I'm in the skin of a gentleman who has rented a small house."*²⁰ His travels seem to have had a major impact on his architecture, and therefore, can be considered invaluable to his success. His mother said *"He is doing what other people only dream of doing all their lives, and the only time possible, youth. He has the guts and will to live, far more than most..."*²¹ This statement by his mother proves that his travels around Europe were not commonplace. It is probable that he travelled by rail, La Chaux-de-Fonds being conveniently located on the continent of Europe. The railroad era began in the 1830s, when railway tracks were developed and it became a common mode of public transport. In the late 19th Century the railroad reached maturity and became a worldwide technical, economic, and social phenomenon. By the 20th century the railroads in Europe were being improved and refined.²² The development of the railroad as a public means of transport made this trip of Le Corbusier possible.

While on his travels Charles-Edouard aligned himself with people who were to become important figures in the future of architecture. Firstly he managed to track down the author of a book of great importance to his education in the Ecole d'Art at La Chaux-de-Fonds: Eugène Grasset. Grasset advised Jeanneret of the good work being done by a certain Auguste Perret who was experimenting with reinforced concrete.²³ Le Corbusier presented his travel sketches to Perret. Perret was immediately impressed and hired Charles-Edouard as his "right hand man". This appointment was to have a major impact on the future of Le

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Corbusier, and his future success. Here he saw the advantages of concrete construction that he was to advocate for the rest of his career. Concrete had been used to build the wonders of the Roman Empire, the Colosseum and the Pantheon. The Romans had in-depth knowledge of how to use concrete to its greatest advantage, but this knowledge was lost, and took centuries to rediscover. Reinforced concrete began to be used towards the end of the nineteenth century. Reinforced concrete combined the tensile strength of steel with the compressive strength of concrete. Concrete provided a covering for steel, important because of steel's unpredictability in the event of fire.

Le Corbusier went on to work in the office of Peter Behrens. Behrens was clearly an influential figure, three notable architects of the twentieth century: Le Corbusier, Mies Van de Rohe and Walter Gropius worked under his instruction in the early years of their careers. Behrens was involved in the design of industrial buildings, an interest of Le Corbusier. He was a founding member of the German Werkbund, an organisation focused on the improvement of the design of everyday objects.²⁴ The Werkbund tied the interests of the arts and craft movement and those of industrial design together. Le Corbusier was influenced by the Werkbund idea that "*architecture must have a major cultural mission in industrial society through the spiritualization of types for mass-production.*"²⁵ His travels broadened his ideas through the architecture he experienced, but also through the new ideas he came across.

Jeanneret was not trained as an architect in the conventional sense. His earliest education on the matter was probably in his reading and study as a child and young adult. He was first trained as an enameller, an artist in a way. He then practices architecture under the guidance of an architect before undergoing the sort of education perhaps more appropriate to an engineer: maths and structures. The fact that he did not have the conventional education of his peers was probably an advantage. He was not indoctrinated into an architecture school; he could stand back from architectural education and see its faults. To him, there were many. "*The man of today employs nothing at all and the result is the boulevard Raspail, but he proclaims that he is a free poet and that his instincts suffice; but these can only express themselves by means of tricks learnt in the schools. A lyrical poet let loose with a halter around his neck, a man who knows things, but only things that he has neither discovered for himself nor even checked, a man who has lost, through all the teaching he has received, the ingenuous and vital energy of the child who never tires of asking 'why?'*"²⁶

While in Paris Jeanneret enrolled in an art history course at the Ecole des Beaux-Arts, continuing his artistic education. Later, speaking about the École des Beaux-arts he says "*A method of teaching useful enough at the beginning has become a dangerous practice.*" He continued his practice of self-education, studying the buildings of Paris through drawing in his spare time.

^{15, 17, 21, 23, 25}William J Curtis, *Le Corbusier Ideas and Forms*, Phaidon Press, London, 1986

¹⁶Jean Antonio Ramírez, *The Beehive Metaphor From Gaudi to Le Corbusier*, Reaktion Books, London, 2000

^{18, 20}Le Corbusier, *Precisions: on the Present State of Architecture and City Planning*, MIT Press, Cambridge, 1991

¹⁹Peter Serenyi, *Le Corbusier in Perspective*, Prentice Hall, New Jersey, 1975

²²The New Encyclopaedia Britannica, *Encyclopaedia Britannica*, London, 1987

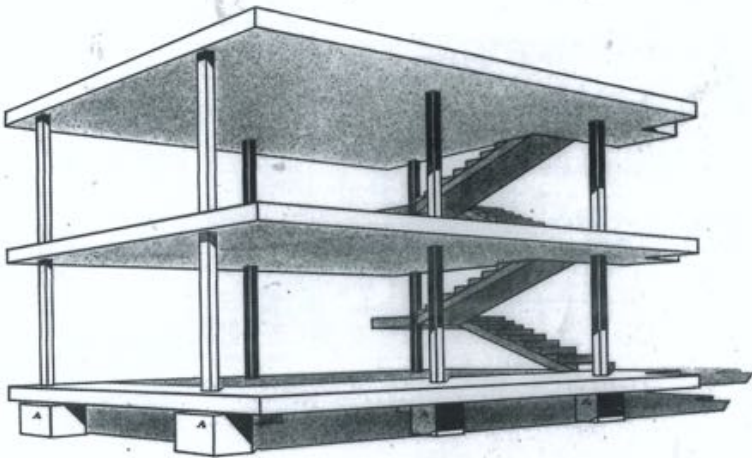
²⁴Stanford Anderson, Peter Behrens and a New Architecture for the Twentieth Century, MIT Press, Cambridge, 2000

²⁶Le Corbusier, *Towards a new architecture*, Dover Publications, New York, 1986

3 The time of his birth and working life

Having been born in 1887 the time that Le Corbusier became an architect in was an uncertain one. Reyner Banham terms it “the first machine age”. This was the period between 1900 and 1930. It was a time of total reform, with the questioning of past methods and ideas, many of which were abandoned. It was a time when new technology began to invade not only the streets but people’s homes. For the first time ordinary people experienced the use of machines first hand, from vacuum cleaners to cars. Le Corbusier seems to have embraced this uncertainty, and saw it as an opportunity. Mies Van de Rohe was a year younger than Le Corbusier, and had a similarly successful career by also embracing new technologies. Le Corbusier seems to have had a natural questioning nature and this uncertainty in architecture gave him the opportunity to question how architecture was being practiced and to develop his own theories. Jeanneret was outspoken against the repetition of styles from the past, which he described as “*a lazy respect for tradition.*”²⁷ He advocated a style of the present, based on the new machine aesthetic. “*Our own epoche is fixing its own style day by day.*”²⁸

Le Corbusier was twenty seven at the beginning of World War one, and fifty two at the beginning of World War two. It may seem somewhat flippant to say that somebody was lucky to live through the two World Wars, but, in a way, Le Corbusier was. They created a situation of an unprecedented demand for housing, and he seems to have been able to see the opportunities the aftermath of war offered. After the war there was a feeling that things couldn’t return to the way they had been. There was a sense of despair, but also of optimism for the future. Le Corbusier seemed to be on the optimistic side, with hope for what new things the future would hold. During the First World War Le Corbusier was in his hometown of Le Chaux-de-Fonds in Switzerland, which didn’t take part in the war. While there Jeanneret developed his famous Domino System. This is the most famous of several structural systems produced by Le Corbusier during this time. The system is different from post and lintel construction in that there are no connecting beams. The



floor slabs sit on six freestanding pillars. This means the slabs can cantilever out over the supports, allowing the facade to be independent of the structure. He envisioned this as a structural system that could be mass produced, in response to the destruction caused by the war. It was from this design that he developed his five points of architecture. By 1926 Le Corbusier was an established figure in the Paris Architecture scene, and had six schemes completed or in construction.

World War two offered another opportunity for reconstruction and yet again the urgent demand for housing. A shortage of skilled labourers to carry out the different crafts usually needed on site made Le Corbusier's ideas of prefabrication all the more appealing. There were significant developments in technology during World War Two. Armies developed jet aircraft and ballistic missiles. Military aircraft increased in size, speed and range, and aircraft carriers were developed.²⁹ There was a rapid development of new equipment and industry was focused towards supporting the war effort. This meant that when the war was over the factories that had been so busy in the production of planes, cannons and lorries were now idle. Aircraft manufacturers attempted to break into the housing business. The Voisin Company produced two prototypes of the Maison Voisin. Le Corbusier claimed no part in their design but they were very close to his own ideas.³⁰ Two years after the war

ended Le Corbusier started work on the Unite d'habitation at Marseille. Le Corbusier's post-war buildings rejected his earlier industrial forms and utilized vernacular materials, brute concrete and articulated structure.³¹ This was his own version of the recreation of life on an ocean liner. For all of his life Jeanneret spoke tirelessly about the ecological and economical advantages of high rise buildings over the endless multiplication of suburban homes with their tiny gardens. This was an idea that was revolutionary at the beginning of the twentieth century but was a universal reality, by the late 1950s.³²

The aftermath of the industrial revolution is critical to the development of Le Corbusier's career. He was extremely impressed by the specification method employed by Ford in his factories. *"Houses must go up all of a piece, made by machine tools in a factory assembled as Ford assembles cars."*³³ Specialization is certainly economical but can be criticised in that it brought an end to craft, to one whole thing being made by an individual from start to finish. There's a satisfaction in creating something from start to finish. This would appear to be missing from Ford's assembly line, where tasks are simply repetitive. Le Corbusier, however, saw things in a different light. *"The spirit of the workers booth no longer exists, but certainly there does exist a more collective spirit."*³⁴ Mechanisation seemed to have, understandably, overwhelmed the general

population. In describing this mechanical revolution Le Corbusier said, *"It makes him travel twenty, fifty times as fast as before, makes him produce a hundred times as much as before, offers him sights and interests a thousand times as varied as before."*³⁵ His take on this was that society was in a state of confusion, *"caused by fifty years of progress which has changed the face of the world more than the last six centuries have done."*³⁶ Jeanneret saw mechanisation as reinforcing classical laws, and saw the future of architecture in recovering classical laws and making peace with the machine.³⁷

Reyner Banham sees Le Corbusier's architecture, along with that of other architects of what he terms the "machine age" as an attempt to keep up with technological advances, but questions if this is possible. *"The architect who proposes to run with technology knows now that he will be in fast company, and that, in order to keep up, he may have to emulate the Futurists and discard his whole cultural load... If, on the other hand, he decides not to do this, he may find that technological culture has decided to go on without him. It is a choice that the masters of the Twenties failed to observe until they had made it by accident..."*³⁸ A

larger part of Le Corbusier's success, in my opinion, was due to the fact that he did choose to "run with technology." He was probably less suspicious of it than most, given that he had grown up in an industrialised town, and the advantages of new technologies were impressed upon him early in his architectural career. His advocacy of prefabrication and his work in reinforced concrete mean that he is still a very relevant reference for architects today.

^{27,28,33,34,36} Le Corbusier, *Towards a new architecture*, Dover Publications, New York, 1986

²⁹ *The New Encyclopaedia Britannica*, Encyclopaedia Britannica, London, 1987

^{30,35,37,38} Reyner Banham, *Theory and Design in the First Machine Age*, The Architectural Press, London, 1960

³¹ Dennis Sharp, *The Illustrated Encyclopedia of Architects and Architecture*, Quatro Publishing, New York, 1991

³² Jean Antonio Ramírez, *The Beehive Metaphor From Gaudi to Le Corbusier*, Reaktion Books, London, 2000

Conclusion

Inherent in this examining of the advantages that made Le Corbusier successful is a suggestion of what it takes to make an architect successful. It is evident that there are factors that are important. These include the ability to understand and examine things through drawing, a certain amount of knowledge about the ideas that have come before you, first hand experience of great architectural examples, some knowledge of related fields, a special understanding, the experience of working with influential architects, the courage to forge ahead with your own ideas and an inclination towards hard work. These however, aren't all always necessary for success and don't in themselves guarantee success. The accumulation of these factors is dependant on your particular historical, social, geographical and familial situation.

In *Outliers*, Gladwell sees success as arising out of an accumulation of advantages over ones lifetime.³⁹ I've identified advantages in Le Corbusier's life that made him who he was. He grew up in a place where hard work was valued and the whole town was like a sort of assembly line for the watch making industry. In this place he had a family that were interested in the arts. His father was an enameller, a careful and artistic practice. His mother was a music teacher, and poetic thinker. He spent his childhood reading and drawing, two activities surely central to the success of an architect. In his youth he was immersed in history, specifically early dwellings, and in the study of nature with regard to its structure. Circumstances were what led him into the career of an architect. He had the advantage of a teacher who believed in him, and continued to put himself out for him, meaning he practiced architecture even before he had learned an awful lot about it. This in part funded his travels. The location of his town and recent transport improvements meant that he got the opportunity to travel through Europe, getting to experience great buildings for himself. This was surely an important aspect of his later success. While on his travels, he aligned himself with important figures in architecture, especially Perret. He was born at a time that meant he was engaged in his profession at a time of great uncertainty, and through both world wars. Unfortunate in some ways, but

very luck in others in that the rebuilding that was needed afterwards provided a great opportunity to see his projects built. The industrial revolution and the mechanical revolution that followed had a huge impact on the kind of architect he became. Unlike others he didn't see it as a negative, as something to be scared of, but as an advantage to run with. He embraced all the things the industrial revolution brought with it. He took the assembly line of Ford as an example of greatness.

He designed in the belief that reinforced concrete was the material of the future, and prefabrication the future construction method. In a way he was right, and that is one of the factors that means he is still influential today. Reyner Banham describes Le Corbusier as "*one so widely regarded as a transgressor of laws, as the arch-revolutionary of twentieth-century architecture.*" He also said "*the real revolution lay in his completed buildings.*"⁴⁰ In writing I am conscious that there are those who disagree in part, or totally, that Le Corbusier was as great as others would believe him to be. As he said himself, "*Architecture goes beyond utilitarian needs. You employ stone, wood and concrete, and with these materials you build houses and palaces. That is construction. Ingenuity is at work. But suddenly you touch my heart, you do me good, I am happy and I say "This is beautiful." That is Architecture. Art enters it.*"⁴¹ I don't agree with all that he said or did, but even by looking at photographs of his architecture I've had the feeling that there is something special, of the character he describes, in his architecture. In conclusion, a quotation that in its first two lines relates to my thesis, and in the second two to the merits of hard work, and the practice of architecture:

*"The heights by great men reached and kept
were not attained by sudden flight
but they, while their companions slept,
were toiling upward in the night."*
(Henry Wadsworth Longfellow)

³⁹Malcolm Gladwell, *Outliers The Story of Success*, Penguin Books, London, 2008

⁴¹Le Corbusier, *Towards a new architecture*, Dover Publications, New York, 1986

⁴⁰Reyner Banham, *Theory and Design in the First Machine Age*, The Architectural Press, London, 1960

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ANTONI GAUDÍ AND HIS INFLUENCE ON BARCELONA

Introduction

Architecture has defined cities, landscapes and whole civilizations. Why is this? What is the cause for architecture to define the nature of places and civilizations? For my dissertation I will be writing about "Gaudí's work in Barcelona and it's effect on Iconic architecture effecting urban areas in today's architecture".

My reason for wanting to write about Antoni Plàcid Guillem Gaudí (or Antoni Gaudí as he is known today) has been there for quite some time. But, since I visited Barcelona in 2007 it never really hit me that Antoni Gaudí has had a massive impact in the city of Barcelona which may not have been perceived from the creation of the projects but in recent times has become extremely popular because of it's eccentric style and individuality. What most interests me about Antoni Gaudí is the use of geometric forms derived from nature and how it compliments with the living condition of the occupants. How can one man have developed such a unique way at looking at architecture which I believe has not been matched today. How did he develop the level of detail in his buildings to such an extraordinary level. Was Gaudí's work driven by the Spanish social conditions of the time, was his work a result of a personal attempt at monumentality?

As an exemplar to this I am going to use 'La Pedrera Casa Milà' and 'Sagrada Família' as case studies for this study. I want to ask the questions why did he use these forms and materials in his buildings. Were these changes, which also impacted on his study through representative monumentality a driving force in his Modernist designs.

From this dissertation I will be focusing on the headings below and trying to investigate more into what has made Antoni Gaudí

- Gaudí life
- His works with case study of La Pedrera Casa Milà
- the state and changing nature of Barcelona before, during and after Gaudí's time
- Gaudí's influence on modern day architecture

Chapter 1

I. Early Years

Antoni Gaudí, born on the 25th of June, 1852 in Reus near Barcelona. Gaudí was the youngest of five, his parents Francesc Gaudí Serra and Antònia Cornet Bertran both came from Copper-smith backgrounds, which had a role in Antonio Gaudí's development. In his younger days Gaudí worked in the family workshop, where he developed a deep admiration for the solid form of the objects he would make and a keen interest in the spatial workings, which in turn led to his ability to represent and understand three-dimensional space. He was diagnosed with rheumatism in his youth and as a consequence could not play with friends his own age. As a result of this he became very aware and interested in nature and the form of trees, flowers and animals. In the early stages of his studies he became very interested in drawing and architecture.

II. College

Gaudí had to enroll in a preparatory course at the faculty of science before entering the Escola Tècnica Superior d'Arquitectura (Provincial School of Architecture) in Barcelona in 1873. Due to the social change underway in Catalonia this defined how the young student architects were thought. They were thought various disciplines such as technical, scientific, artistic, historic and archaeological to try and change the professional figure and make it quite different from the already taught professional architects and Academics. Gaudí during his time in the Provincial School of Architecture was taught with projects, which would have an impact on the cultural climate of Catalan identity. Projects such as restoring old churches, convents and old palaces and most of all public buildings, which would represent the city through representative monumentality. On completion of his

studies Gaudí had achieved only average grades but did well in his 'Trial drawings and projects'. He graduated in 1878 and Elies Rogent is quoted to have said on Gaudí's graduation

'Who knows if we have given this diploma to a nut or a genius. Time will tell' (Colquhoun 2002)

III. Post College

After Gaudí had finished college and graduated he set up his own architectural studio. His first commission was a textile factory which was completed in 1878. From this he began to be noticed by wealthy patrons and government people. He was given the commission to decorate the interior of churches and small chapels. This to me clearly shows that Gaudí at the time was more interested in the complexities of the detail in architecture than in the mass monumentality of large-scale projects. He began to be consulted by government officials and subsequently designed street lamps along the seafront promenade, which are still there to this day. Below is another street lamp designed by Gaudí (Fig 1-1). Gaudí then was still not involved in any large projects so, in addition to his architectural studio, he became an assistant to his college professor Joan Martorell i Montells. Subsequently he began to design a neo gothic style church, a Jesuit and Salinas church too.

Gaudí's break in point came after he met Eusebi Güell i Baçigalupi who had noticed him at the Exposicion Universal when some of Gaudí's work was on show. He was commissioned to design a hunting lodge for Güell which started him off on the path to creating the famous works which the architect is most famous for today. The one thing about Gaudí's work, which is so, distinctive is the fact that he seems to have refused to conform to the standard architect or designer of the time and almost

(1) Quote from Elies Rogent at Antonio Gaudí's Graduation

refused to join walls at right angles. Instead he used parabolic, elliptical and hyperbolic forms to define most if not all of his work. A list of Gaudí's Life and works is at the end on page ???. The use of nature, form and structure is in my mind the defining attribute to Gaudí's work. This flows into his level of detail and constant search for fluidity and meaning to his work. This is why when he was commissioned for the Sangrada Familia his only unfinished work he then became engrossed in it's construction towards the later years deciding to decline other project offers and becoming a recluse living onsite at the church. His legacy along with his completed masterpieces is the master plans, models and formwork studies he created before his death so the Sangrada Familia could be completed after his death. I have had the opportunity to see this in person and am writing about it in another section. Gaudí was knocked over by a tram and subsequently died on the 10th June 1926 at the age of 74.

Gaudí's work, which stems from the observation and adaptation of the works, and writings of Viollet le-Duc and John Ruskin. Gaudí said to his followers that 'discovery of French rationalism as being fundamental to him during his time as a student. This along with other texts seems to support the fact Viollet le-Duc was indeed the an thesis to his work from early on as a student. Gaudí's work derived from two principals, one being from Viollet le Duc which states that study of buildings from a mechanical form and the second one which stems from the Art Nouveau style of the time that the imagination should be free of all previous styles and conventional methods. Clearly Gaudí adopted the methods of Viollet le duc by becoming both architect and engineer in his designs.



Chapter 2

IV. Catalonia & Barcelona

Barcelona underwent a complete revival and cultural shift back to the Catalan roots after Spain was thrown into turmoil because of socialist and republican revolts. This was ended by the collapse of the kingdom of Queen Isabella II in 1869. Catalonia was determined to re-find its identity by making major social changes. The revival of the Catalan language which is said to be the start of the Modernist era. Also coupled with the wish for autonomy from Madrid. The people of Barcelona wanted in essence to be different, to create their own identity and be culturally different. Of course the way this was going to work was through a complete change and new way of thinking which would lead to a new identity through industrial development, social transformation and cultural and artistic debate.

Following the demolition of the city walls in 1854, Ildefons Cerdà, drew up an urbanization plan called 'Eixample' which called for a rationality and effective growth of the city through having no boundaries and a grid pattern of urbanization based on primary and secondary services. The scale of this was undoubtedly the largest undertaken in Europe, which covered 550 city blocks and nine square kilometers. It also meant that the streets could be widened from the old medieval size of 4 meters to the new 20 meters width. The plan was for there to be little hierarchical variation in the road widths except for the east to west diagonals, Gran Via and avenida, single east to west horizontal avenues crossing at points of the diagonal. Cerdà's plan was to have large green spaces in each block but because of the major economic revival every bit of land was required to be

used. Thus the small court yards in the centre of the hexagonal blocks were developed. Art Nouveau was underway and this was clearly evident in the asymmetrical elements, which made the Casa Milà through surface and ornaments.

Modern day Barcelona is a thriving coastal city with a wide diversity of cultural qualities. You cannot walk around the city without noticing the quality of architecture and the culture. What is clearly evident is that tourism plays a huge economic role in the success of this city through Gaudí's works which are spread north and south of the Avenue Diagonal. Las Ramblas, which seems to be the meeting place in the city for people to dress up and walk up and down. It is definitely one of the great streets in any more modern cities with its twenty five to thirty meter width. It's central tree lined promenade inviting people to a different view of the streetscape by having a better vantage point on where they want to go. Unquestionably the most intriguing aspect of Barcelona in the works by Gaudí which have helped to define this city from its standard mediocrity to a high class, visual appealing place to be. A centre for cultural change in its time.

Chapter 3

IV. Casa Milà

Casa Milà, built between 1906 and 1910 was one of Gaudí's last main projects before his final unfinished Sangrada Familia. Given the name 'La Pedrera' meaning quarry it is arguably one of Gaudí's most iconic finished buildings. Unlike Casa Batllo, which was built very near, it offered Gaudí a new challenge, a corner site. Built around two courtyards stretching up to the sky they acted as light wells to allow light to enter all parts of the building. The building was intended to be lived in by the owner Pere Milà who would occupy the first floor while the rest of the building would be apartments. The structure of the building was a series of columns and beams so that the apartments built around the courtyards were built in such a way as to allow for the free transformation of the partition walls acting as an open plan much like corbusier's Villa Savoy. Much is said about the natural free flowing façade (fig 3.1 1) of the build but the most interesting aspect of the build in my opinion is the attic.

The attic is one of the highlights of the building offering at 800 square meters acting as a continuous floor space, but not in the traditional way you might think. Gaudí in his quest for knowledge in the organic and living used a skeleton structure like a rib cage to create the attic floor through a series of arches and passage ways. Built with brick arches Gaudí's ingenuity and his clever approach enhance this space making it different in many ways to what had been done in the rest of the building. During a tour of the house I saw a study model in which Gaudí used a chain hanging from its ends, which he turned upside-down. Further fitting to this is the terrace with its uneven undulating surface fitting in with the organic structure of the attic below.

'The whole building is less of a sculpture and more an enormous sculpture that seems to have been molded by from soft plasticine'¹ .

This is very true when you see the terrace, which has a series of unusual ventilation stacks, stairwell and chimney towers ranging in height from 2.5 to 4 meters. From the picture (fig 3.1 2) below you can see the organic undulating nature of the roof surface changing the person visual perspective of both the building and the city when they are walking along the roof terrace. This is more like an urban landscape than a roof.

The entrance was also unique, as he had planned to reserve the stairs as service access to the apartments above and using lifts as the primary feeder to the apartment units. The apartments in turn were in essence open floor plans which through the scheme were adaptable if needed. Taking great care and detail with the natural light the two light wells allowed for the maximum amount of natural light to enter into the building. This was also helped by the elevation, which shows the windows getting smaller on each subsequent floor offering the right proportion of light to be distributed in each room. Gaudí said in his personal writing's

'I would not be surprised to see in the future if, this house were converted into a great hotel, given the facility with which the distributions can be changed and the abundance of bathrooms.'²

From this quote Gaudí's vision was not just one of irregular shapes and forms which would create a greatly different form to the existing but instead through his highly focused attention to detail this created an elaborate free flowing building which keeps all the virtues of architect-

(1). Ranier Zerbst, Antoni Gaudí-The Complete Works 2002

(2) Living Gaudí, The Architects Complete Vision 2002

ture which are needed such as light, use of space, functionality and even aesthetic qualities in keeping with it's surroundings. Originally it was not going to be built but thankfully it was as it epitomizes Gaudí's amazing architectural qualities.



Figure 3.10 Casa Milà Facade



FIGURE 3.10 - ROOF TERRACE CASA MILA

CHAPTER 4

Currently Barcelona is synonymous in tourism and architectural terms with Gaudí's work throughout the city. From Park Güell to the Casa Milà to the Sangrada Família it epitomizes what Barcelona is about. Tourism played a huge role in the success of this beautiful city with its peaceful serene wide streets and footpaths. Las Ramblas which is I believe an amazing place to walk because of its social interactions and its architectural qualities. You are automatically drawn to what I would call iconic architecture at its purist form. Elaborately designed buildings from the grandeurs of the façades to the architectural detailing of the hinges and door-knobs. The natural free flowing facades of Gaudí's buildings compliment yet contrast the streetscape they inhabit in a very positive way for Barcelona.

As far as iconic architecture goes there is a lot to be desired. You have the architects of the modern day like Foster, Koolhaas and Geary who have built their reputations from designing intricate and lavish buildings which serve their purpose but are like parasites infecting the cities and landscapes they inhabit. Why is it that this kind of architecture is allowed to happen? Put it this way, compare the Casa Milà to Frank Gehry's Guggenheim Museum in Bilbao. They are completely different functional buildings but they both serve as tourist attractions in the present day. The fundamental thing which is different is that Gaudí did not set out to feed his ego and build a strange yet compelling building where as Gehry's Guggenheim in Bilbao seems to be derived from feeding his already huge ego. It was designed without any regard for its context to the city of immediate surroundings. Especially extenuating this thought is the video 'Sketches of Frank Gehry, where it shows him designing through cutting up pieces of

a model and sticking them somewhere else. Gehry said about comments made about himself

'So they say the guy's an artist, he's not organized, it's just lucky, he fell off a chair and he landed on the thing and the building looked like this, so it was a lucky accident. He tears up paper and makes it.'¹

Iconic architecture itself cannot be sought after by being completely unresponsive to the context in which it is created nor can it be meaningless in its function. Without function there is nothing. Iconic architecture is given that status after the piers and public deem it to be successfully responding to the context and function of its use.

(1)Yoshio Futagawa, Studio Talk, Interview with 15 Architects 2002

Conclusion

Antoni Gaudí was called a genius by some and insane by others but what is very clear is that he was just a man but his creativity and genius cannot be equelled to this day. It is all-subjective but looking at his drawings models and than the finished product of his buildings and gardens it is unquestionable that this feet of Architectural distinctiveness is worthy of the stamp of iconic and brilliant. Even if you don't like the buildings you cannot argue with the fact that this man has altered the city of Barcelona in a colossal way for the better. From the intricate detailing in his sculpted lampposts to the sheer scale of the sangrada Falilia the image of the city is one of love and admiration for this architect and his contribution. I think that certain architects have been given the immortal role of pioneers of their time such as Corbusier, and Wright. Gaudí would be in that category but not in the same way. People don't set out to cling onto some of his design ideas, but instead they strive to copy his thought process in his detail of the buildings.

Gaudí's Life and Works

V. Gaudí's Life and Works

- 1852 Born in Reus, Province of Barcelona to parents, Francesc Gaudí i Serra and Antonia Cornet i Bertran.
- 1869 Moved to Barcelona with brother Francesc a medical student where he attended preparatory course at the Faculty of Science. Father sold property in Reus to fund education
- 1873 Began studying Architecture at provincial school of architecture in Barcelona
- 1875 Did military service
- 1876-78 Worked as draughtsman to pay for studies with Josep Fontseré. His mother and brother (doctor) died.
- 1878 Graduated on 15th March. Designed a showcase for Esteve Comella, a glove manufacturer. Undertook his first commissions for Count Eusebi Güell including; public street lamps, a cast iron kiosk, a housing and factory units for workers. His sister died leaving her daughter with maternal grandfather and uncle.
- 1880 Designed an altar for a college in Tarragona and a kiosk in Comillas.
- 1882 Worked for old professor, architect Joan Martorell i Montells. Designed a hunting lodge for Count Eusebi Güell which was never built.
- 1883 Began constructing Casa Vicens. Appointed chief architect on the Sangrada Familia on the recommendation of Joan Martorell succeeding Francesc de Paula Villar i Lazano who started construction the year before. Began work on Pavellons de la Finca.
- 1885 Designed an Altar for the private chapel of publishers and bookseller Josep Maria Bocabella. Drew up first plans for Sangrada Familia
- 1886 Construction began on Güell Palace
- 1888 Contributed to building work for the Universal Exhibition in Barcelona
- 1889 Constructed the Episcopal Palace of Astorga and after the death of his friend the bishop of Astorga he abandoned the project. He planned the lecture space for the Teresian College Barcelona.
- 1891-94 Built the Casa Fernández y Andrés in León.
- 1892 Went to Malaga and Tangiers to study where the Marqués wanted to build a complex for the Franciscan missions in Africa.

- 1893 Completed the crypt and walls for the apse of the Sangrada Família.
- 1898-1900 Built Casa Calvet in Barcelona. (Won Builder of year) Drew up plans for church of the Colònia Güell.
- 1900 Began Park Güell.
- 1900-5 Built Villa Bellesguard Barcelona.
- 1902 Built the Finca Miralles Gate, Barcelona.
- 1904 Work started remodelling Casa Batlló. Finished 1906.
- 1906 Moves into show house in Park Güell with father and niece Rosita. Father dies age 93.
- 1906-10 Built La Pederea in Barcelona.
- 1907 Commission for hotel in New York.
- 1909 Built the classroom of the Sangrada Família.
- 1911 Contracted Malta Fever and moved to Puigcerdà with a doctor friend where he drew up his will.
- 1912 Niece Rosita dies.
- 1914 Abandoned all his other works and concentrates on Sangrada Família.
- 1918 His friend Eusebi Güell dies.
- 1925 Moves into accommodation in Sangrada Família.
- 1926 After being knocked down by a tram he died three days later on the 10th June of his injuries.

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Apartment Plan Casa Mila



Terrace Plan Casa Mila

Planta Nivel
Planta azotea

Density Inside the Wall

Shane Carroll
2009

It has been widely discussed in Ireland in recent years that the sprawl of new developments around urban centers is becoming a problem of increasing significance. In Limerick in particular, this has developed the city in a way contradictory to any sense of good planning. The rarefication of the urban centers is the result of many influences, processes and events. This dissertation is less interested with the causes of the growth than the effects of it on daily life and the resulting architecture. In Limerick there have been very distinct singular influences on the city's development (Murray O'Laoire architects, a large lower middle class, disorganised local governance). This portion of the essay will discuss Limerick in relation to a number of points,

A city with undefined boundaries, the reverse of Kowloon Walled City. The incentives to living outside the city proper. The effects of the low population density on the city centre. A short study of cinemas and theatres in Limerick.

Kowloon Walled City in Hong Kong developed an unprecedented density as a result of the unbreakable and defined boundary which internalised all development inside the walls. In the absence of space to grow into, the city with an eight acre footprint rapidly densified. The rapid growth in population was caused by the desire of so many people to live in a massive vice den. It



caused programmatic chaos, entropic growth patterns behind the walls, intense social interaction and a 24 hour agenda. KWC is almost like the antithesis of Limerick city. On all of the above points Limerick is almost the polar opposite. Programmatic mundanity, 9 - 6 agenda, sparse and sporadic social interaction and stagnant growth. It is interesting to juxtapose Limerick city and Kowloon Walled City, keeping in mind at all times the respective boundaries. The comparison is really the comparison between a porous edge and a fixed one. In Limerick there isn't even an imagined edge, not even an attempt at ending the city. It simply bleeds out in every direction. Within the context of Ireland, Limerick is not unique. Dublin is also without a defined boundary, as in fact are nearly all the towns in Ireland.

Limerick is programmatically very predictable. 6 p.m. heralds a short burst of traffic, swiftly followed by silence. The city dies. For two hours the public spaces are lonely, abandoned. The city's soul departs and filters out to the suburbs, a stark contrast to a 24

hour agenda. The city's edge is peppered with parking land and strip malls, open for evening shopping. This is advertised via the medium of neon. Without a Kowloon type wall, the programme of the city is manifested in a banal series of chain stores to satisfy the consumer classes. These anti-boutiques pedal goods to satisfy the middle class fetish for keeping up with the jones', short cuts to happiness. As a direct result of this consumption model, the relationship between the consumer and retail is greatly diminished. The scale of the anti-boutique makes interaction between consumers negligible. The restricted timescale of activities in Limerick has stymied growth at both the centre and edge of the city. The desire to live outside the city, to be a suburbanite, is not beyond understanding.

On the surface, it would appear Limerick's suburb offer a greater sense of security than the city centre. The suburban attitude is that of the family. It desires safety. The less dense fabric of the suburbs is comforting to the family, neighbours are never too close. It is

always possible to retreat in the suburbs, to avoid direct conflict. The resulting lack of social interaction (particularly in more affluent suburbs) is the root of the sense of safety in the suburbs. Safety via isolation. A bit like jail cell conditions. Perhaps the proximity to the dislocated shopping districts has an appeal to suburbanites. It is interesting to note that interspersed

amongst these safe-houses are very often programmatic anomalies. The safety of the suburbs provide perfect cover for criminality. The blissful life in the suburbs is stalked by crime just as it is in the city. The suburbs of Limerick are beginning to sound a lot more city like. Cars can be heard at night, followed closely by police sirens.



Lyric Cinema

The most peculiar symptom of the rarefaction of Limerick city is its cinema. A European city with roughly 70,000 inhabitants could realistically expect to have a film house of a good standard. Today, Limerick has no cinema inside the city border. Not so long ago Limerick had multiple cinemas, (the Savoy, the Carlton, the Central, the Royal, the Lyric and the Astor).

Where have they gone and why? The desertification by the cinemas mimics that of the city's inhabitants. Today the cinemas live on the city's edge, alongside the strip malls in middle suburbia, detached from the city. The relocation of the cinemas away from the city is a pure expression of the economic forces at play, a part of the datascape. The 6 p.m. abandonment of the city is very much correlated with the disappearance of the cinema. There seems to be very little to attract people into the city after dark, with the exception of alcohol. The cinema is a visible barometer of the lack of an incentive to create a non-alcoholic entertainment business in the city. The populous don't demand it, and business doesn't drive it.

That there isn't a typical cinema in Limerick is true, but there is a place for the public to watch movies. It is in the back of the sex shop adjacent to the milk market. There are several private film 'booths' and four rooms with large screens and seating. Strange. The only place in Limerick that shows movies regularly is in a sex shop. The owner takes offense to the shop being called a 'sex shop', principally because he doesn't sell sex. Either way conclusions can be drawn from this. The sex shop caters for a niche market, not a wide audience. It is a taboo subject with most people still. It is symptomatic of a broken city that its centre attracts those seeking vice. Would a different, more wholesome business succeed in this area? Survive maybe but not flourish. The shop selling vice can flourish, despite competing against the internet because of the tiny footfall in the city's centre, especially with the disorientating programme of the city. After 6 p.m., it would be entirely possible to enter the shop and not be seen by anyone. That's not the way a city should be. Maybe Limerick is dying. Maybe it's already dead and we

can't see it. Or, maybe that's just the way that the population of Limerick want their city to be?

In an effort to further understand Limerick this chapter seeks to compile factual data on the city and surrounding county. These facts will form the basis for future conclusions and might perhaps give rise to some questions. Data about the country as a

whole will also be included where appropriate to the context. Where appropriate certain data will be given also as an approximate percentage of the national total for the purpose of clarity. It is not the intention of this work to perform a regression analysis on this data but where appropriate less obvious (and probably controversial) questions will be asked of it. Some facts are included for humorous purposes.



The sex shop with its cinemas

Population of Munster : 1,173,340 = Population of Limerick City : 52,539 = Population of Limerick County : 131,516 = Limerick City Private Households : 19,550 = Persons Living in Private Households in Limerick City : 50,419 = Limerick County Private Households : 44,675 = Persons Living in Private Households in Limerick County : 128,074 = Persons per Household in Limerick City : 2.6 = Persons per Household in Limerick County : 2.9 = National Average Size of Household : 2.9 = Marriages : 5.1 per 1000 annually = Births : 64,237 in 2006 = Deaths : 27,479 in 2006 or 6.5 per thousand annually = Life Expectancy in Male : 75.1 years = Life Expectancy in Females : 80.3 years = Most Common Cause of Death : Heart Disease = Average Age of Mother within Marriage : 32.9 = Average Age of Mother Outside of Marriage : 27.1 = Old Age Pensioners : 311,170+ = Persons in First Level Education : 455,782 = Persons in Second Level Education : 339,128 = Persons in Full-Time Third Level Education : 143,546 = Number of Students Progressing from Second to Third Level Education : 2 in 5 = Recorded Murders : 60 = Robberies : 2,668 = Drug Offences : 14,380 = Current Level of Unemployment in Limerick County : 14% = Total Area of Country : 7,020,867 hectares = Total Heineken Cups Won by Irish Provinces : 3 = Total Heineken Cups Won by Munster : 2 (to date) = mm of Rainfall in Limerick Region : 968 mm = Total Vehicles Nationally : 2,296,393 = Vehicles per 1000 of Population : 541 = Tonnes of CO2 from Road Emmissions : 13,093,000 (over thirteen million) = Percentage of Fuel from Renewable Sources : 2.7% = Percentage of Energy Consumption from Residential Use : 24% = Total Tonnes of Residential Waste Produced : 3,100,310 = Cows : 6,710,000 = Pigs : 1,467,000 = Sheep: 5,094,000

Before attempting to extract any conclusions of note from the data, there are some very interesting nuggets floating on the surface. There are more Irish cows than Irish people. Men tend not to live as long as women. It rains often. We are wasteful. These are facts which can't be disputed but certainly do not bring about any great depth of understanding. In order to be able to see the truth in the data sometimes it is useful to follow its patterns. Take for example the numbers attending full-time education. As the students get older the numbers remaining in education drops about 60 percent. It is indeed interesting to wonder whether this is symptomatic of Ireland or a wider symptom of our societal systems.

The first and most important conclusion I would like to draw from this data is that there is a direct correlation between the number of people staying in education and the rate of unemployment. That 2 from 5 people are progressing to third level education in Limerick is significant because it is the highest rate in the country. This correlation is founded on either one of two forces. The first is that unemployed

people, who wish to work, will actively seek to better themselves, to up-skill, to productively fill the day. So in a city where there is 14 percent unemployment, the third level institutions are full with people 'up-skilling'. This conclusion sits quite comfortably with most people, it is tangible and could make sense in many other place.

The second possible reason is that there is a certain inertia in the city, a culture of unemployment in areas, disproportionately affecting the overall employment rate. The result of this inertia is that the city has become scarred with areas so socially deprived that they are beyond repair. With an unemployment rate above 50% in the areas of social disadvantage, the overall average for the city is heavily skewed. Moyross has 70% of its residents unemployed. It may not be possible to discover the exact figure but it would be interesting to know exactly what the rate of unemployment is outside of these areas, in the more prosperous areas. It is likely to be close to the national average. With such a divide in the rates of unemployment across the city, perhaps it is a fear of social demotion that produces such a high level of

third level progression in the city.

It may be a little controversial to suggest that 2 of 5 second level graduates progress to third level because they don't want to find themselves in a position of unemployment, social depression or economic isolation. This conclusion would lead to the suggestion that there is a division of sorts in the city, between the have's and the have nots. As to how this manifests itself in the architecture of the city is less clear. It would be a quick explanation of the rejection of the city by so many of her inhabitants. It might explain why some people prefer to live, shop and eat almost exclusively in the suburbs. Do the outlooks, prejudices and attitudes of a city's citizens count as valid context which influences how we build? So when studying the context of a given project, should we try and include the attitudes of those who reject the city for the suburbs? Should we try better to understand the level of social housing in Limerick's centre and the attitudes and outlooks of those residents?

A view which is readily accepted and believed in the School

of Architecture in the University of Limerick, is that the location of the university is negatively affecting the city. This is probably true. It is difficult to disagree that several thousand people pottering around the city would positively affect the city. Would the city benefit the university? More specifically, would Limerick city benefit the university which has taken its name? The long answer is yes. The short is no. U.L. Has succeeded without its city in tow. It has done quite well considering its age. It is without old foundations like U.C.C. or Trinity college, is without the traditions or history or city centre location its rivals has. So for it to have grown and prospered without such things, then it must have an intrinsic quality fueling its growth.

U.L. has succeeded because it doesn't have the weight of history bearing down on it. It doesn't employ any systems handed down to it over the years, rather it employs its own. U.L. runs itself as an American university would. Wide open spaces. Individually set buildings, separate and distinct from one another. Acres of space to expand allows for new faculties to spring up. The system

is set up to encourage growth. System theory is all well and good, but the results are highly visible. There has for the last number of years been considerable building work in U.L. which has not been replicated in Limerick city. There is the space there for the university to double in size, to increase to over 30,000 students. There will not be pressure from lack of space until the university nears 50,000 full time students. That would be an incredible size for an Irish university and Limerick is the only university in Ireland with the available space and intrinsic growth system to achieve it.

argument in favour of moving the university into the city. How could anybody seriously propose abandoning the university to move into a city not built around 10,000 students? Serious arguments must be more pragmatic than that.

Within the context of Limerick there are many problems to first be overcome before the university could grow to such a size. One solution I have heard is to move the university into the city. A wonderful idea no doubt. A wonderful idea often put forward in SAUL. It does however leave certain pragmatic questions unanswered. What to do with the university as built at the moment? Its great flaw is, of course, that it is not in the city? The question as to what to do with the university buildings in the absence of a university using them sullies the ar-

A Proposal for Increasing the Density of Limerick City

As a response to the problems faced by the city of Limerick, the following is a proposal to reverse the negative effects of:

- Social exclusion
- Large lower middle class
- High unemployment
- Urban / suburban sprawl
- Disconnected university
- Car dependance
- Crime
- Quality of built environment

To create a boundary around what is now the city. A boundary that is both visible and defined. A boundary that will at once stop the sprawl, focus the attention of the population to wards the centre and enhance what we now have after the sprawl has finished sprawling. In short, the proposal is to re-build the walls of Limerick around the city as it is today. The proposal is to include everything which today is part of

the city. It also pays absolutely no respect in any way to what is now classified as 'Limerick City'. The city boundary is a useless relic of past which is incapable of change without great political struggle. What follows here is a critique of the proposal as a means of describing it in detail.

What is the purpose of the proposed wall?

The purpose of the wall is to define the city in the way it once was. Limerick traditionally was a walled city. Parts of the wall are still visible today. The walls historically provided defense and safety. They also densified the city as it was. The wall hemmed in the city and forced growth to happen inside it. This is the purpose of the new walls. To protect the city against reckless growth. To hem future growth to happen within the walls. The sprawl happening around the city centre in every direction is the route cause (although not exclusively so) of the appalling lack of density in Limerick city.

Why build a wall when the city could simply forbid anymore building beyond a given line?

The city has had a boundary for years. The boundary of the city as defined on a map is not visible on the ground. There are few markers to define it and there is never a clear sense of what is city and what is suburb. The programme of the city has confused itself deep into the suburbs. There is a need to

make the new boundary much more definite and visible. By confining the city within a wall there is a refocusing onto the city centre. When all development is directed towards the centre of the city there is the potential for a rapid increase in density in the city. Within the new city boundary there is huge potential to redefine what is public space, what is housing and what is commercial.



Piece of historical wall

Why include the suburbs if the goal is to increase the density of the city?

To not include the suburbs would be a major error. The suburbs contain the vast majority of the population. The suburbs already provide huge employment, most notably Dell, who set up beside the university, 3 miles from the city centre. Pushing the city boundary so far outside what is accepted as the city today would put the newly defined city on a very low density. The immediate end to sprawl however would begin the process of making the city more dense. Opportunities would arise through out the newly bound city for 'infill' type development. An initial consequence might be the re-evaluation of the georgian quarter. At present it is woefully undervalued by the city. Much of it is unused or under-used. There are derelict apartments littered through out the quarter. There are planning restrictions on the apartments at present, restriction on how they can be renovated (and thus how they can be used) but were the centre of the city to be properly defined as the centre, the

georgian quarter would benefit hugely. Demand from businesses to move towards the centre, attraction to consumers to go to the centre and the realignment of routes would increase the value of the historic georgian quarter.

How is the wall to be built and from what?

An important feature of the wall would be that it be built all at once, not in multiple stages or over long periods of time. It must instantly come into existence to bring about the change that it can. But to answer the question of how it should be built. The wall should work harder in some places than in others. Around the mass blanket suburbs near the university, Raheen in the west of the city and the sprawl into Clare on the northern side of the city, the wall must work extremely hard to halt more sprawl. Therefore it must be thicker, taller and more permanent. It must resist the outward pushing forces for years. So in these areas the wall should be similar in its makeup to the historical walls. Defensive almost. Defensive and per-

manent. Made from stone and rubble, bound with lime mortar and infilled with blood, sweat and tears. Maybe the wall will have to be built through houses, roads, factories or trees. And if it does have to go through a house, then let it be built for the heaped rubble of the house. Let it be obvious that the wall was built through a house and also let the will and resolve the drove the wall through a house be visible. The wall should be made from old kitchens and toilet seats, bits of old house still with wall paper stuck on. Concrete with red brick aggregate, or mortar binding pvc window frames to unearthed sewerage pipes. But in all, a wall made distinctly from its context.

When the wall need not work as hard, where it is bounding a natural boundary (the river for example) it need not be a thick, tall medieval wall. It could be a blank canvas, or even made from canvas. Before it fell, the Berlin wall had miles of graffiti on it. The wall's function could double (or treble or quadruple etc....) as a vent. A space for the city to post up its problems via the medium of a spray can

or a paint brush. An evolving and changing representation of the city's mood. The thinner parts of the wall will need to be porous and loose, fixed to point (a specific latitude and longitude) but not prohibitor of movement of people, goods or ideas. Rather its purpose is to contain and concentrate people goods and ideas, to bring each closer together than might currently happen. The porous parts of the wall will encourage the flow if such things. The more concentrated the pores, the more noticeable an increase or decrease the flow will be. That the wall will have pores would imply that these pores will be a specific points, separated by stretches of sealed wall. This is not to be the case. The wall will be porous from all sides, never a foreboding barrier. The wall is first an foremost a barrier to sprawl, not to any other thing (save perhaps for the wind and rain).

Sprawl is caused by people who wish to live outside the city, how will a wall change this?

Without question, this is the core of the problem. This is the cause of sprawl. A long and deeply held desire to own one's own property. Property, it would seem, means land in the Irish psyche. Rent is dead money. Dead. Or so you would be lead to believe in Ireland. Why pay rent when you could be paying a mortgage with the same money. This is the greatest challenge the wall will face. To overcome the desire to own land rather than to rent. The wall must represent more than a boundary, it must represent a new way of thinking. The idea that a second, third or twentieth floor of a building could be in anyway as valuable as a piece of land, is not common in Ireland, or Limerick. To overcome this problem, the ban on development outside the wall must be both resolute and unyielding. Compromise cannot be tolerated. The rise in land values within the wall arising from the wall could well be the trigger for the change the mindset needed.

What other functions can the wall perform?

There are a multitude of functions the wall could perform. It could satisfy the need the a cinema in the city. If a patch of it were painted white, a projector is all that is necessary for a night time cinema (save perhaps for acceptable weather). There is a noticeable lack of spontaneous gathering around Limerick, especially at a community level. Perhaps its tied to the decline of oratory, but there are few great speeches made around the city. The wall could facilitate the rebirth of public speaking, at least at a neighborhood level. There needs to be a focal point for communities. Limerick doesn't respond well to elitist art galleries (with free admission or otherwise). Nor to art-house film theatres or to cultural centres. The city is far too working class to buy into such things. The wall can cheat this attitude, by slipping the art and cultural into areas via a blank canvas. A free canvas to encourage spontaneity within the community.

As cities grow, the pressure on graveyards increases.

London for example designated huge areas as graveyards at the end of the 19th century but these were never intended to serve the city endlessly. It is possible to envisage that the graveyard space in the city would soon begin to run out, the graveyards are filling up as it is. So there is scope for the walls to house the dead, in the fashion of catacombs, perhaps in the thickest parts. It would be interesting to imagine that the walls around Limerick were literally made from blood, sweat and tears. Can mortar be made from blood, cement and aggregate?

How might the wall affect the mindset of those living inside it?

There is often a siege mentality around Limerick. The city is often derided and ridiculed in local and national media. The term often used to describe the city will not be mentioned here. The city often adopts a hard nosed attitude to these comments. It is not in the city's DNA to suffer fools or critics lightly. Some areas of the city have been so utterly passed over by the celtic tiger that there is little relation between those areas

and the rest of Ireland. The wall may very well separate the city from other parts of the country but would that be any different from the way things already are? The wall would simply define more clearly the socio-economic separation which already exists.

Conclusion

Limerick is a city on the verge of breaking. When the surface is peeled back a little it is evident that the foundations are cracked. The city is showing signs that it is no longer able to cope and is dying. The need to change what is wrong is clear. To propose the realignment of the city boundary is an old suggestion, one which has been put forward many times, by faculty members in U.L., by elected officials at all levels and by the cities citizens. As why the boundary is set where it is is another issue which will not be resolved by an essay. Maybe a war or a riot or a few deaths will change it. To propose building a wall around the city to end sprawl is radical, probably too radical for the population to accept. The wall, however, is the scale at which a statement needs to be made. The city will not survive with another boom's worth of development out into the countryside. It simply will not survive. A radical approach to shock the city might work better than a softly softly approach. The

city is more important than any one individual's desire to develop another small green plot. All new development needs to be re-directed towards the city's centre and contained within the wall.

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From

Grass Roots

To

Croke Park



Shane Fenton
0631566

Introduction

On Saturday 1st November 1884, a small group of men the number between seven and fourteen, met in Thurles, Co. Tipperary, and the Gaelic Athletic Association for the Preservation and Cultivation of National Pastimes was born. Within weeks of the meeting the GAAPCNP was abbreviated to the GAA. Michael Davin took the chair and led the meeting and Michael Cusack spoke on the importance of revitalizing our national games and make the games accessible to the normal man in the street. Later Cusack confessed his admiration for the English amateur athletics association and stated that the GAA

“..could not do better than to adopt similar rules”

In January 1885, at the third meeting of the GAA, rules for football and hurling were drawn up. After this meeting the GAA had an immediate revival. In 1887 the first all Ireland championships were organized on a county by county basis, the finals were played in April of 1888.

On the 21st of December 1920 came the darkest day in the GAA's history. Dublin were due to play Tipperary in the All Ireland football final. The night before the game 14 British intelligence officers were assassinated under the orders of Michael Collins. In retaliation the British auxiliaries tossed a coin on whether to go on a killing spree in Croke Park or on O Connell Street. Shortly after the 2.45pm throw-in, a plane flew over Croke Park and a red flare was shot from the cockpit. It was on this signal that the black and tans emerged from the crowd and opened fire. One player and twelve spectators were killed in the massacre. Bloody Sunday was the name given to the darkest day in the history of the GAA.

In Ireland today there are over 2,500 clubs. There are thousands more the world over. The GAA culture is rich in cities such as New York and London., both cities have teams in the All Ireland Championship. The foundation of the GAA is the local club, whose members are based on a specific geographical area, usually a parish. Each of the 32 coun-

ties have their own club competitions, which result in county champions who progress on to represent their county in the All Ireland Club Championship. Each club will field teams at different levels in different competitions. The success of club teams often stems from the juvenile structures that are in place in the club or parish for the development of young people, both socially and physically.

In 1925, the GAA decided that ten per cent of all gate receipts would go towards grounds development. This meant that Gaelic grounds were set up all over the country; these grounds were funded and controlled by the GAA. This policy meant that small parish clubs all over Ireland were able to purchase their own premises; this policy is still in place to the present day. Small parishes and villages particularly in rural parts of Ireland were able to have their own meeting and social space.

These social spaces often acted as the focal points for towns and villages. Village patterns have grown around the GAA grounds, and have often been the basis on the location for shops and community based services. The spaces generally consisted of a playing area and a clubhouse. These facilities have grown and expanded over the years to keep with the change in modern society, and particularly to cope with the clubs growing membership base and to keep with societies modern expectations

GAA facilities are generally laid out to maximize the amount of space that is available at a given time; more often than not land is acquired over time in stages. Clubs can't afford to buy large areas of a land at a time so the planning of a GAA facility is of utmost importance. Development plans are put together with the view to expand and to foresee the future purchases, or to facilitate a growing membership base. That is why a visionary in a club is a prized asset. Pitches, halls, changing rooms and meeting spaces make up GAA facilities. It is very interesting to look at how a club has developed over time, sometimes over the course of 50 years, in other cases over the course of 10 years.

The starting point of any club has always been the pitch. A pitch can be either a field or a marked spaces. The pitch has always been the first meeting point within a parish, where children and adults would go to meet and play football or hurling. All of the other elements are an extension of the pitch; all the elements need to relate back to the pitch which is the focal point, without the pitch the club could not exist. The clubhouse is there to facilitate what happens on the pitch, as

are the terraces and stands. The GAA ground is a unit, is a community space, it gives parishes a sense of pride.

The clubhouse has always been about creating meeting spaces. Clubhouses accommodate meeting spaces, changing areas, dancing areas and the relationship between this building and the playing area is one of the most important within a the ground. Clubhouses create spaces for people to meet and share their interest in different aspects of Irish culture. It acts as a community focal point and serves as a link between all the elements in a the ground. The location of the clubhouse is carefully considered in the planning process. The clubhouse is both an entry space and a space of transition, from outside, to pitch side. It is the way in which they are laid out in a quasi vernacular way that makes such unique spaces within the ground.

Stands and terraces within the ground are often the result of existing behaviour. Spectators form gathering patterns around the field. They gather in groups. It is as a result of peoples tendency to collate in one area that stands and terraces are developed. Terraces are to facilitate people who stand around the pitch, and who choose the view the playing area from a standing position. These spaces are often spaces of shelter and that are wind protected. These spaces are used as socialising spaces.

The aim of the dissertation is to give an example of what is achieved in a GAA ground, both on local and national level, and to show what is created is something very unique and found only within the GAA.

For me, the GAA ground is architecture on the most local and personal level. These social and meeting spaces have been developed over time by club members who give their time voluntarily for the greater good of the club, for no recognition or reward, only to be able to say that

“I was there.”

Case Study: Croke Park

Croke Park is the greatest the venue within the GAA, it is a Celtic coliseum of dreams. Croke Park is on a much larger scale relative to the local grounds and venues around the country but it has evolved and developed on the through principles as every other ground around the country has.

It wasn't until 1913 that the GAA became owners of the ground, they bought the ground from Frank Dineen for the sum of £3500, and the ground was immediately renamed after the GAA's first patron, Archbishop Croke. Over the next forty years Croke Park was evolved and grew from its humble beginnings. Stands were built when needed and when the GAA had the finances to do so.

Croke Park has a history that is not only sporting rich, but it has become a symbol of nationalism and Irishness. Hill 16 was the first of the original stands to be built. Hill 16 is at the northern end of the ground. The original hill 16 was constructed from the remaining rubble on O'Connell Street after the 1916 rising. It was followed by The Hogan Stand in 1924, The Cusack Stand in 1937, The Canal End stand in 1949 and the Nally stand in 1952. The Hogan stand was named after Tipperary football Michael Hogan who was one of the victims of Bloody Sunday in 1921. The Cusack stand is named after Michael Cusack, one of the original founders of the GAA.

These stands were built to provide new meeting spaces at a time when the GAA was starting to grow all over the country and at a time when the All Ireland finals were growing in stature. The architecture of these spaces was vital to create a community atmosphere. These spaces provided spaces for rival supporters to mix and socialise, something that has grown over the years and become unique to the GAA.

The modern day Croke Park has been in development since the 80's. It was an incident at the end of the 1983 football final that sparked cause for concern after crowd movement caused an injury to a gate man.



Interior View Of ReDeveloped Croke Park



View Of Croke Park Before ReDevelopment



Old Cusack Stand

The master plan for the redevelopment of the stadium was completed in 1991. This was the second major development of Croke Park following its original construction between 1913 and 1953.

The new stadium is a prime example as to how architecture is used to link all the different elements in a GAA ground. The challenge was to create the same community atmosphere that there is in a local GAA ground, on this large city scale development. The challenge was to redevelop the stadium without losing its sense of community, but using architecture to magnify and recreate this sense of community.

Des McMahon of Gilroy McMahon won a competition in 1989 to design the new stadium. It was a dream come true for McMahon who had played at minor, junior, and senior levels for Tyrone. McMahon's father had played a significant role in establishing the GAA in Tyrone in the 1930s. McMahon's study into crowd movement, crowd behaviour, and safety was intense. The two most important relationships in a GAA ground are the interaction between the players and the crowd, and the interaction within the crowd. It was an immense challenge for him, to create these spaces, and make the new Croke Park a landmark in Irish society.

The proximity of the spectators to the pitch was the driving point of the project. As a GAA man McMahon knew and could relate to all the aspects that were important in a GAA ground, to the spectators and to the players. The sense of community was vital; often the supporters and players are from the same club, the same neighbourhood. The spectators couldn't be too far away from the pitch, that would provide separation, too close and would smother the pitch and the players. This was where the architecture would be vital. Architecture could bring all the elements together.

The design team travelled the world studying the world's leading stadiums. They inspected World Cup venues in Italy. They travelled to North America to visit leading NFL stadiums. There was a distinct difference between the two types. The European stadiums are made for a better visual impact; their form is generated by crowd capacity and architectural engineering. The American model is more crowds friendly. The spectators have to spend a much longer time in the ground, spectators are segregated horizontally, each supported with its own level of social activities.



Old Nally Stand And Hill 16



Interior View Of Newly Developed Stands



View At The Back Canal End Stand

Croke Park is one of the next generation stadiums. It is modern in its approach and execution, but maintains the historical values that are what makes the GAA. The new Croke Park is built around the concept that people gather hours before a GAA match to socialize and to reminisce – to feel a sense of and be part of a community.

The form of Croke Park emerged from its cross section. Market research defined the mix of spectators and the volume of people to be accommodated in each section. The lobbies and concourses on each level link the three stands and form a horseshoe around the stadium. These areas stretch for up to half a kilometre and it feels like one big room. These areas provide meeting spaces for people to meet before, during and after the game. They also serve to link the different parts of the stadium together, allowing for further interaction between spectators. The architecture of this space links this part-outside meeting space, with the stands that face the pitch.

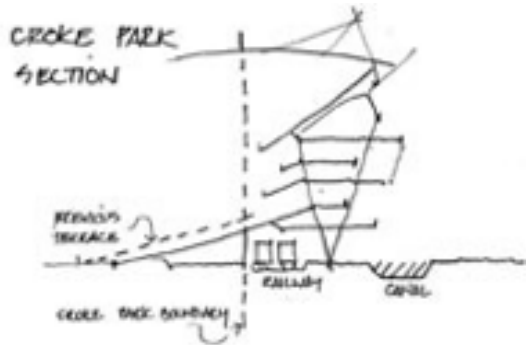
In the GAA the relationship between the spectators and the players is a unique one, so the relationship that the new stands had with the pitch was vital. With these considerations resulted in the development of a leaning structural frame unique to Croke Park. With this structural frame the tiers pitch out towards the field of play. This means that all the spectators on the different tiers have the same focal proximity to the play as each other, providing a rare communal intimacy.

The horizontal layers also serve as an organisational tool. The bottom layer is used for services and for the players and the three upper layers are for spectators.

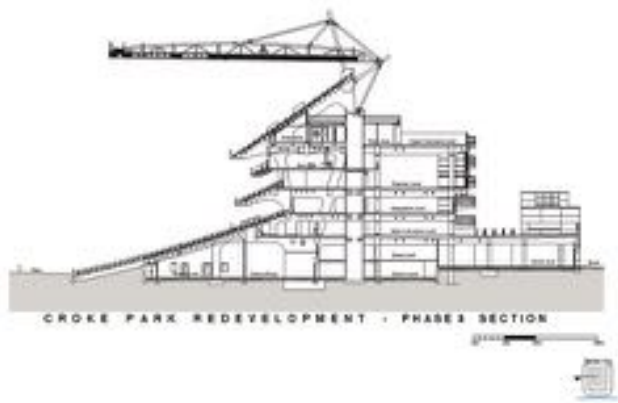
Croke Park is considered one of the greatest new age stadiums of the modern era because of the way in which the architecture links the different elements together. The spaces created in the stadium create and promote a sense of community, a sense of belonging, something the GAA has done since its founding in 1884. The transition spaces from the outside to the inside stands are not waste spaces, not spaces just pass through, but important meeting and socialising spaces, that are an integral part of the stadium.



Public Plazas Behind The Viewing Stands



Early Concept Sketch Of Cross Section



Technical Section, Shows Horizontal Layering Of Stands

Comparison: Croke Park Vs Old Trafford

In the design of Croke Park the architect has achieved something that is very unique to the GAA. He has succeeded in creating a communal intimacy within a large scale stadium. I think this is very unique, and for me it is not achieved anywhere else in Europe because of the design methods that are used, Croke Park is based on the American model of stadium design. In the design used in Croke Park the architect is aware of what exists within the GAA community and what can potentially exist in this stadium. The stadium caters for and magnifies the sense of community.

Old Trafford is one of the most famous and celebrated stadiums in the world. It has hosted European finals, European championship games and is a regular host of high profile concerts. In this chapter I aim to show the significance and uniqueness of what the GAA have achieved in Croke Park by comparing it to this great and famous stadium.

Old Trafford has been Manchester United's permanent residence since 1910, aside from an 8 year period (1941-1949) while the stadium was being repaired having been bombed in World War 2. The stadium went through various developments and expansions through the nineties and into the noughties.

Old Trafford is built on the European model of stadium of design. It is built for visual impact and to allow for maximum crowd capacity. The significant difference between Croke Park and Old Trafford is the way in which they segregate supporters. In Croke park they are segregated horizontally, whereas the segregation in Old Trafford is vertical. The social spaces in Old Trafford are also much smaller and do not promote social interaction.

Soccer in general has a much more hostile atmosphere versus the community feeling within the GAA circles. The way in which Old Trafford is designed is a reaction to this. It is a reaction to the already existing atmosphere and culture that exists, but the result is that it

serves to enhance the feeling of hostility and tension.

Supporters are segregated into home and away fans. With the away supporters occupying between 500 and 1000 depending on the competition. The away supporters occupy the north west end of the stand. This results in the home supporters somewhat ganging up on the away fans adding to the sense of hostility. In comparison supporters in Croke park are divided 50-50 and supporters are interspersed together resulting in a friendlier and more social atmosphere.

The social spaces in both stadiums are in direct comparison to one another. While Croke Park has large open plazas behind all the stands allowing for the crowd to interact and mingle before, during and after the game, Old Trafford does not. The social spaces in Old Trafford are much smaller and segregated. The different areas of the stands are separated and one can only interact with the other supporters in that particular area of the stand. The social spaces are not about interacting and socialising but are only used for the bathrooms and for purchasing beverages and snacks. Even the access to the ground is strictly for access. The areas for access are cramped somewhat funnelling supporters in and out. Again in comparison, Croke Park's wide and gradual ramps for access allow for people to interact when entering and exiting the ground.

At the end of the game the away fans leave the stadium first. Home fans are prevented from leaving the grounds by security while the away supporters leave. Once the away supporters have safely left then the home supporters are allowed to leave the ground. This is common place in the soccer world, but is unheard of in GAA circles. All of these constraints and constrictions add to hostile and tension filled atmospheres that are created in the ground.

The architecture and design of both these stadiums contribute to the atmosphere and interaction that are created in the grounds. The design of the stadium regulates the movement of the supporters and the tendencies of movement; long narrow spaces mean people tend to move along quickly, whereas open plazas people tend to stay and socialise. The architecture is a response to the already existing culture and feeling within the community, and without.

Old Trafford takes into account the hostile nature that can be present within soccer circles, the tension that is created when home and away

supporters interact with one another, so the spaces do not allow for the mixing of supporters. The architecture does not allow for the situations to arise. The architects involved in Croke Park took into account that the GAA could have something unique, something completely new and away from the European model of stadium design; that rival supporters, families, friends would gather together to support their team and community. That all would socialise together before during and after the game. The design in Croke Park is a response to this feeling of community in the GAA, that the community is not just local, but the community is everyone, rival players and supporters alike gathering together. The large open plazas form a horseshoe shape behind the stands, allowing for large area to interact. The large spaces promote meeting and socialising, not like the more cramped spaces like that of Old Trafford.

The non-segregation in Croke Park is not just confined to the plaza and social spaces, but also in the viewing area. What Croke Park does is something unique not seen anywhere else in sport. Croke Park is a stadium in which supporters are not segregated at any time, and this is an atmosphere without tension or hostility. It is a community friendly atmosphere that even on All Ireland final day, the crowning glory of the GAA calendar that rival supporters would mix and interact while passionately supporting their own team.

Case Study: Cumann Spa, Cill Airne

*“They lit a fire within the land
That long was ashes cold
With the splendid dreams they made it glow
Threw in their hearts of gold*

*They lit a beacon in their land
Built of the hands of men
To make thee warm once more Kathleen
To bid thee live again”*

The winter of 1947 was one of the worst in living memory and the Kerry hills were covered in snow for many months of the year. The tragic stories of World War 2 were fading into distant memory but the reality was that the youth of the community were leaving for greener pastures because of the harsh economic climate. Many left for New York, Boston and London.

As the winter passed the Lissivigeen¹ football club had come defunct. The numbers of the club had dwindled over the winter period due to many people emigrating and the older members retiring. In 1948 a group of footballers and football enthusiasts assembled in Casey's farmhouse, it was here in these rural surroundings that the Spa club was formed, this unit of the GAA would grow and thrive, and carve itself a special place in Kerry's GAA history. Casey's farmhouse where it all began still exists today.

Football was always a popular pastime in the area. It was played in the empty fields around the area before the foundation of the club. Even before the club had its home, records state that it produced many outstanding players, who represented Killarney and Kerry. There were never a shortage of fields for games and training sessions to be held. The local community made their land available for the players to train on. It is because of the input of the local community that the club survived in the early days.

Notes: 1. Lissivigeen - Area outside Killarney

When the club formed in 1948 they played their home fixtures in Denny O Leary's field at the Park. The club rented the present field from Denis O Keefe in 1950. Spa became temporarily defunct in 1956 and many of the players amalgamated with other local clubs. The club did not have a place to call its home until 1975.

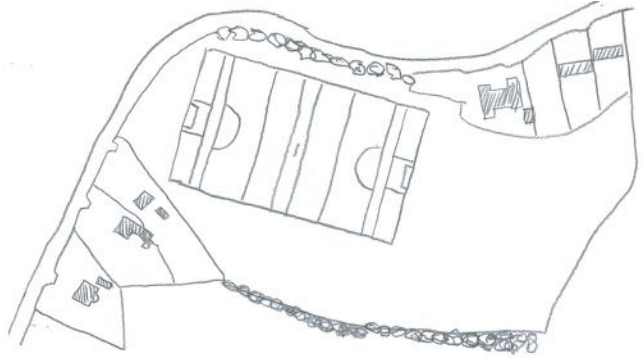
In 1974 the club entered negotiations with local O Keefe family for the purchase of a playing field. The cost of the field was 20000. The clubs USA tour in 1973 provided a proportion of the funds required for the initial purchase. The rest of the money was raised by club members giving the club £100 interest free loans. Without these loans the club would never have had a home of its own. To these supporters the club is forever indebted. This was the first stage in the clubs development, the first step, was the purchase of the playing area.

For four years the club operated without a clubhouse. The second phase of the clubs development started in 1978 when work commenced on the new clubhouse and dressing rooms. With the help of a dedicated band of volunteers work was completed in time for the official opening on may 27th, 1979, when Kerry played cork in a senior football game to mark the occasion.

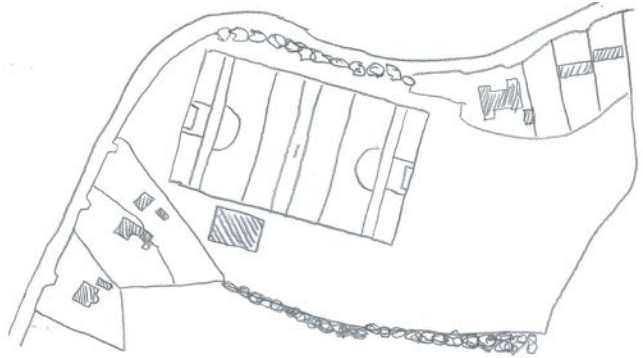
The clubhouse was built in what is a pivotal area of the ground. It is centrally located in the grounds on the southern touchline of the pitch. The clubhouse is in a focal area of the ground. It is situated in such a way that players and supporters convene in the one area before a match or training session. It also acts as a filter for players and officials going onto the pitch, when they access the ground they are met first by the clubhouse.

The clubhouse that was built in 1979 was built not only for the players and officials, but for the community. The clubhouse contained, two dressing rooms equipped with toilets and showers, a referees room equipment storage and a community hall. The community hall proved to be a focal point not just for the club but the community as a whole. The hall held club meetings and medal presentations, but also was an area for the elderly of the community to meet and play cards. The hall was also used to teach Irish figure dancing, set dancing and Irish music to the youth of the community.

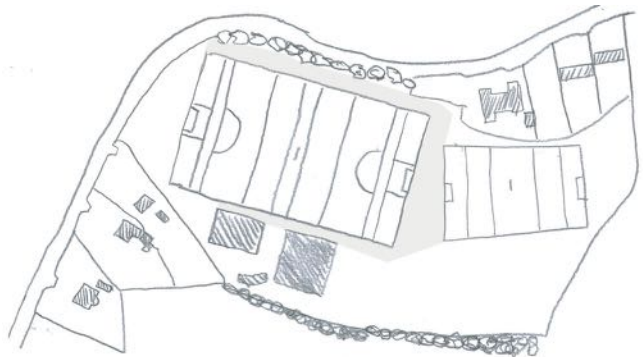
In plan the community hall and viewing area face the pitch, and the dressing rooms are to the back of the building. The dressing rooms were situated in such a way that it was the first port of call for the



Area With Just Pitch



Area After Addition Of Clubhouse



Area Following Addition Of Juvenile Pitch and Basketball Surface
Shaded Area Shows Transition Space

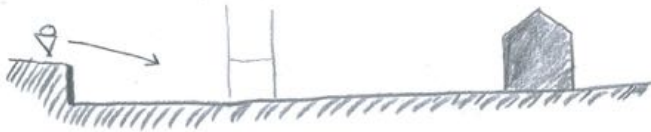
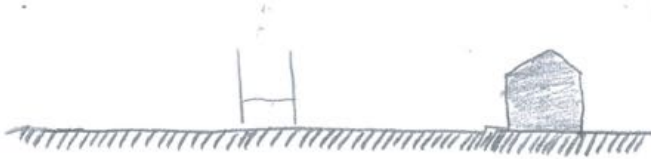
players. When the players were going onto the pitch they had to pass by the supporters, many of whom were family and friends. The sensation of running onto a pitch through a crowd of supporters is something very unique and special. It is made even more special when the supporters are your family and friends.

The clubhouse was built at a time when the club was growing gaining more and more members. The range of activities that the club was involved in was also growing, not only field sports but activities synonymous with Irish culture such as Irish dancing, singing and traditional Irish music. The community needed a space for these activities to be taught and shared in. For these reasons the clubhouse was built.

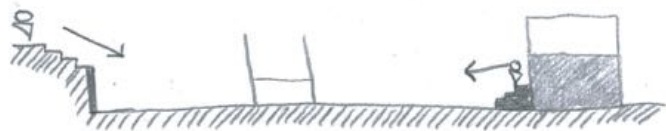
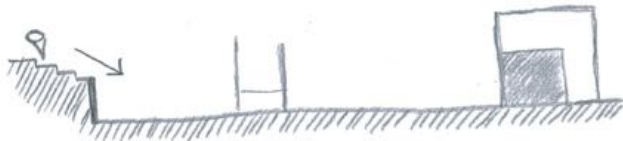
While the clubhouse was being built, a viewing area on the northern touchline was erected. The stand was built compliment the already existing facilities and the new facilities being built. A masonry wall was built 3 metres from the edge of the playing field and in-filled creating a ground plane higher than the playing area. Dugouts were built into this new wall for players and management, again enforcing the relationship between players and supporters. As time went by this area was developed more, and now there is a concrete seating are on the raised plane.

As the club grew and prospered the number of juvenile players using the facilities also increased. The club was now vital element within the community for young and old. With the growing number of underage members and the increasing strain being put on the current playing area it was decided to build a juvenile size pitch, and also to provide an outdoor basketball court for the younger community in the area. The new juvenile field was located to the north of the senior field, 70 yards from the clubhouse, keeping a visual link with the other elements of the ground, the juvenile field can also be seen from the entrance.

In 24 years the club had gone from strength to strength. It consisted of a full size senior field, a juvenile field, a basketball court, meeting rooms, a community hall and dressing rooms. The clubhouse acted as an anchor point of the ground. The clubhouse was the first space that was entered into when in the ground. Not just the inside spaces but also the exterior spaces, the spaces between the other elements, such as the pitch and basketball area. These spaces were utilised for players and supporters to socialise. Even on week nights when underage teams would train, parents would interact in the outside spaces.



Early Nineties: Raising Of Ground Plain For Spectators



2009: Raising Of Viewing Areas In Relation To Each Other

The viewing areas were constructed where most people tended to gather to watch the games and congregate. The first is the area in front of the clubhouse which was covered to provide shelter for spectators. The other was on the opposite side of the pitch. People tended to gather on the opposite side as it was slightly raised and provided a more aerial view of the playing area than the other did.

A decision was taken to build a stand on the northern end of the ground to accommodate the spectators. A concrete seating area was constructed to facilitate the spectators. The location seating area has created a unique atmosphere between supporters, management and players. Many players' families sit in this stand and the close proximity of the pitch dugouts and stand creates a unique interaction during game times, sometimes hostile with rival players and supporters but often not. This is an example of elements working together to create an atmosphere between players and supporters.

In 2000 the time had come for new development. The club's membership base had grown and was continuing to grow and new more advanced facilities were needed for the club's members and the wider community. A development committee was put in place by the club to plan and oversee the development process. The first phase involved the building of a multipurpose hall. Phase one of the development would involve the construction of a multipurpose hall and a new clubhouse. The club relied heavily on the local community for funding. Members took on the duties of selling tickets that would raise half the money for the development, the other half came in the form of GAA and Lotto grants.

A new development such as a multipurpose hall should and needed to be at a focal point in the ground, it would be a hub of activity and would draw more people to the ground than the club would ever have seen. The decision was taken to locate it next to the existing clubhouse. The new clubhouse would be rebuilt and would meet the proposed multipurpose hall and make a physical link between both developments. The new developments would be the focal point of the ground where the community could interact and socialise together, without interfering with the pitch which was not used the winter time.

The multipurpose hall was completed and the surface is the only one of its kind in the country, it is a poured rubber surface. It is designed



1998:View Of Senior Pitch And Clubhouse



1998:View Of Pitch And Raised Viewing Area

specifically with sports in mind as the rubber absorbs the impact, rather than ones bones and limbs. Most of the cosmetic work on the new building was completed voluntarily by club members.

The next phase of development saw the demolition of the existing clubhouse and work started on its reconstruction. The new clubhouse is in the same focal location as its predecessor. The new clubhouse contains four full size dressing rooms, a large meeting hall, reception area, gymnasium and a kitchen. The developments have been a huge success and were officially opened in 2006. The sports hall has made back a considerable amount of money for the club and is helping to fund the clubs expenses and new developments. It is booked out most of the week for 12 months of the year.

In 2008 the decision was taken to purchase a further 5.4 acres of land. The new plan consists of rotating the current juvenile pitch and expanding it to a second full size senior pitch, it also involves building a new juvenile pitch on the newly purchased land. This is the final stage of the development that started over a decade ago. The vision of the development committee is finally nearing completion after a decade of construction and fund raising. Over this time the ground has developed into an vital cog in the communities wheel.

The spaces created within and between the elements are quite unique. The transition spaces that are created between the elements act as social spaces where parents and members meet. The clubhouse itself is a hub of activity for the local community, with local council meetings as well as members meeting to play cards. More recently church groups have started using the clubs facilities for their Sunday services. The club boasts a membership base of over 500 hundred and has teams competing in 12 different grades.

The club has come a long way from its humble beginning in 1948 and is now one of the most vital elements in the community. The club is continuing to prosper in this harsh economic climate, but the relationships made through the activities held are most certainly recession proof.



2008: Plan Of Existing Facilities



2009: Proposed New Development



2008: ReDeveloped Clubhouse And Hall

Comparison: Croke Park Vs Cumann Spa

These two grounds can be seen as different in every way. One is set in an urban scale, the other in a rural setting. Croke park is an 80,000 plus capacity stadium, Spa is a local community club that may hold up to 1,000 people at a given time. Croke Park is seldom in use during the week, whereas a local club is thriving, and a hive of activity seven days a week. These are some of the differences between these two grounds. I choose not to focus on these differences but on the similarities and the message that both these grounds have.

Both these grounds are full of history and both were formed to enhance what was growing within the community, Croke Park at a national level and Spa at a rural and local level. The development of both these grounds are very similar. Both began with only a playing field, and both were developed as needed and when funds became available, and when the time came for redevelopment, both embraced change. Because they have embraced change they are among the most modern on their community.

What Croke Park and local clubs all over the country have done is used all the elements in a GAA ground to magnify the community spirit on both a local and national level. What they do is use all the elements in what makes a GAA ground and use them to create social and transitional spaces. By combining all these elements with the playing area they achieve something very unique.

What both grounds have succeeded in doing is creating quality meeting and socialising spaces. What my local club have achieved is that they have turned viewing spaces into areas that can be used to interact and not solely be used for watching a game. People stay after the games to discuss the game or just to socialise. The open plazas in Croke Park on each level are fantastic socialising spaces. When there is more than one game on in Croke Park people stay out in these plaza areas to socialise. People who at home may be from the same town but never meet, they meet in this space and have a space to socialise in.

The sense of community has never been lost in either ground. The sense of community has been the driving force behind both projects, and that is why both projects have been so successful. Another vital driving point in both projects has been the relationship between the spectators and the players.

In the design of Croke Park the relationship with the crowd and the players was vital. The architect as a former player was aware of this and was able to draw on his own personal first hand experience when he was developing this idea. The spectators are quite close to the pitch but this creates a unique relationship because the players can almost feel part of the crowd. The crowd is full of their family, friends and club mates who they have grown up with and to be within such close proximity is unique. The cross section is what achieves this in Croke Park. The horizontal tiering means that all supporters have an unobstructed view of the playing area, it also means that there are no unwanted elements, or anything that adds a layer of separation between the supporters and players.

In the development of the cross section it was vital that as the horizontal layers got higher that they would not be too far away from the pitch as this would mean the stadium would be too open and this would take away from the atmosphere in the stadium.

As all the elements in Spa developed, so did the relationship between the players and the supporters; the relationship between the pitch and the viewing areas were strengthened. The first viewing area was raised, this meant that supporters were raised above the playing area, and also kept close to the pitch. When the first stand was built on this raised area, they kept it close to the pitch so this close relationship would not be lost.

The most recent viewing area is currently under construction. It is located on the southern touchline and is being built onto the multi-purpose hall. After the success of the terrace on the northern touchline, the new terrace is also being raised and is kept close to the pitch. By raising the terrace it gives spectators a better view and also adds to the "stadium feel."

It is clear that both Croke Park and Spa have been developed on the same model. The sense of community and relationship between players

and supporters have been the driving points behind them. The success of these grounds depends on the facilitating and execution of both these ideas. Local clubs across the country are developing and improving their grounds around these two concepts.

It is by looking at both these concepts that one can see the relationship the both Croke Park and Cumann Spa share with one another.

Conclusion

What do most people think of when they think of GAA grounds across the country? They may think of times gone past when most clubhouses were closer to resembling shacks and sheds rather than the social spaces they created or the spaces that they now create. Many think of the water logged pitch that games were played on and standing on the sideline hail, rain or snow to support their team, and what the team represented; the local community.

What I see when I look at a GAA ground, particular my home club, is a development that has spanned over 50 years. I see the spaces that I spent a large majority of my youth with my friends playing and socialising. GAA grounds are more than a pitch stand and a clubhouse. They are where the community come to meet and interact, and to exist as a community.

Every GAA ground around the country goes through the same phases of development, just on different scales. They all have humble beginnings, many often stretch to even afford the land. The first element is the pitch, as a club grows a clubhouse is added. The clubhouse is more often than not the most vital element to link the club to the community. The clubhouse is the place where Irish culture is promoted and passed on from generation to generation.

The viewing spaces in GAA grounds are treated differently than in any other sport. From my experience other sports tend to use viewing areas simply as viewing spaces. What I think is far more effective is the way on which GAA viewing areas are developed as social spaces. The spaces are made for people to socialise and interact not just to sit and watch a game.

The transition spaces within GAA grounds are also unique spaces. The transition spaces between the viewing areas and the pitch are a hive of activity.

Even though Croke Park is the largest GAA ground in the country, it has also grown from humble beginnings and is draped in history, from the naming of the stands, to the tragic story of bloody Sunday. Croke Park has developed from a pitch with one stand to one of the greatest stadiums not only in Europe but in the world. The type of design used is what makes Croke park the unique stadium that it is, and the unique atmosphere that it creates.

What GAA grounds do is something unique and in my eyes quite special. They are a cog in the wheel of a community without which the community would be a shadow of what it could be. They provide a facility for the community to function and prosper as an entity.

What the GAAPCNP did all those years ago in Thurles was start an organisation that would see our cultural pastimes preserved, promoted and enjoyed. In the year of the GAA's 125th anniversary every town and village in the country now has a place to enjoy our national and cultural pastimes.

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The Bauhaus
and its
Influence on
Architectural Education

The Bauhaus

and its influence on Architectural Education



Entrance to Bauhaus after the last restoration in 2005 with doors painted to the original shade of red

Introduction

Upon commencing my architecture degree at the University of Limerick, a discussion arose amongst students and lecturers regarding the subjects which would be undertaken, their relevance to architecture studies and the means by which they were to be carried out. A member of the architecture faculty stated that "Architecture is a whole new way of thinking", and, subsequently, a different approach to study must be taken.

Many questions regarding the nature of architecture studies were raised in my mind. What pedagogical principles and methodologies are implemented? Why does this field of study require these activities and a different approach? Where do they originate? This remark is one which stayed with me through the first three years of my architectural education and is a topic which I thought would be interesting to research and investigate, as a dissertation.

As architectural education is a vast topic with many historical examples to consider, I chose to focus my attention on the Bauhaus. Asking where I felt many of the current pedagogical principles carried out in schools of design originate, I found the Bauhaus was closely linked and is reflected in the curricula of schools today. Bauhaus inspired methods are implemented, developed and deployed in the study of architecture today. No other school so clearly exemplifies the principles

and methods which we recognise as common practice in architecture schools. The curriculum and manifesto written for the Bauhaus highlight the fundamental elements and integral parts of architecture which shaped the way in which architecture was taught. As these crucial, core elements are constant, the activities and methodologies of the Bauhaus are as alive in the 21st century as the 20th and influential to architecture education today.

The History of the Bauhaus

The Bauhaus occupies a place of importance within 20th century culture, architecture, design and art. It was one of the first schools of design which brought together a number of contemporary architects and artists and was not only a creative training centre but also a place of both production and the focus of attention in the 20th century. At a time when industrial society was in crisis, the Bauhaus asked how the modernisation process could be mastered by means of design.

After Van de Velde, the former master of the Grand-Ducal Saxon School of Arts, stepped down in 1915 he recommended the German, Walter Gropius, to succeed him leading eventually to Gropius' appointment as master of the school in 1919. It was this academy which Gropius transformed into the world famous Bauhaus. Founded in 1919 in Weimar, Germany, by Gropius, the objective of the school was a radical concept whereby the material world could be re-imagined to reflect the unity of all the arts. The Bauhaus brought together masters and students who strived to reverse the split between art and production. Their efforts involved returning to the crafts as the foundation of all artistic activity and, in doing so, developing designs for objects and spaces that were to form part of the envisioned society of the future.

Photographic portrait of
Walter Gropius 1920



Gropius outlined this vision for a union of art and design in his manifesto; Proclamation of the Bauhaus (1919), which describes the utopian craft guild encompassing architecture, sculpture and art into a single creative expression. Gropius developed a craft-based curriculum that would cultivate architects and designers capable of producing designs appropriate to this new system of living. In 1923, under Gropius, the Bauhaus turned its attention to industry which caused much internal debate. A major exhibition, which opened in 1923, showcasing the revised principle of art and technology as a new unity, displayed the entire work of the Bauhaus.

In 1924 funding for the Bauhaus was cut drastically. The school, in seeking a new home, moved to Dessau and became the municipally funded School of Design. Almost all masters moved with the school and former students became junior masters and were in charge of the workshops. Famous works of art and architecture along with some influential designs were produced in Dessau between the years 1926 and 1932.

Walter Gropius resigned as director on 1st April 1928 due, mostly, to the pressure of constant struggling for the Bauhaus survival. He was succeeded by the Swiss architect Hannes Meyer. Despite its title, 'Bauhaus', meaning 'House of Building', the school did not establish its architecture department until Gropius appointed Hannes Meyer as head of the Bauhaus architecture department when it was finally established. In spite of the success achieved by Hannes-Meyer, his Marxist convictions became a problem for the city council amidst the political turbulence of Germany in 1929, and the following year he was removed from his post.

The School was under Ludwig Mies van der Rohe from 1930 when it developed into a technical school of architecture with art and workshop

departments. After the Nazis became the biggest party in Dessau at the elections, the Bauhaus was forced to move in September 1932. It moved to Berlin but only lasted for a short time after. The Bauhaus dissolved itself under pressure from the Nazis in 1933.

Today, the Bauhaus remains a remarkable cultural and historical phenomenon, although it only existed for fourteen years and boasts fewer than 1,300 students. Its influence throughout the world can be traced through many years in numerous buildings, designs and curricula. Some elements of the Bauhaus have been lost and were not successful in transcending through the decades while other elements have not been forgotten. In 1996 the Bauhaus building in Dessau and the Master's house along with the Bauhaus site in Weimar were added to the UNESCO list of cultural heritage sites, signifying the universal importance and recognition of the Bauhaus achievements in architecture and design in the twentieth century.

Gropius' Manifesto

Gropius' manifesto outlines his intentions for the Bauhaus after his observations of what was the conditions facing after the violent eruption of the First World War. It was after this violent eruption that the immensity of the mission of the architect of that era became clear to Gropius. He saw that a new scope of architecture had to be outlined which he believed could only be achievable through the training of a new generation of architects in close contact with modern means of production in a pilot school. Also evident to Gropius was the fact that the pilot school would only succeed through the co-ordinated teamwork of a band of active collaborators. Though not to follow to command of one leader but rather to individually contribute to a common cause. Emphasis



Walter Gropius; The Bauhaus Manifest, 1919

was put on integration and co-ordination, inclusiveness and not exclusiveness. The Bauhaus was inaugurated with the specific object of realizing a modern architectonic art. One which, like human nature, was intended to be all embracing in its scope. The Bauhaus aimed at realizing standards of excellence and not transient novelties through. Gropius was of the strong belief that architects, painters, and sculptors must recognize anew and learn to grasp the composite character of a building both as an entity and in its separate parts. Only then will their work be saturated with the architectonic spirit which it has lost. He believed that old schools of art were unable to produce this unity. Strong faith was placed in the workshop. The mere drawing and painting world of the pattern designer and the applied artist was, to Gropius, to become a world that was to build again. Young artistic individuals were to preserve their skill for the crafts in which excellence was achievable. Within the teachings of the Bauhaus experiment was to become the centre of architecture. Architects, sculptors and painters were to return to the crafts. Gropius' manifesto states that art is not a

'profession.' There is no essential difference between the artist and the craftsman, rather, the artist is an exalted craftsman and proficiency in a craft is essential to every artist. It was Gropius' belief that this was the prime source of creative imagination. A new guild of craftsmen was to be created. Such craftsmen were to be without the class distinctions that raise the "arrogant barrier between craftsman and artist". Gropius envisioned a new structure of the future, which would embrace architecture and sculpture and painting in one unity.

If Gropius was to achieve this successfully a revised curriculum must be implemented the Bauhaus.

Bauhaus Curriculum

Gropius saw flaws in the previous education of artists and architects, believing that too much emphasis was put on the history of design and historical achievements and less on the student's own ideas.

'I believe that every healthy human being is

capable of conceiving form. The problem seems to me not at all one of existence of creativity but more one of finding the key to release it.....I think we have been exceedingly successful so far in working out ways of acquainting our children with the achievements of the past, but I do not think we are as successful in stimulating them to come forth with their own ideas.' (1)

The new generation envisaged by Gropius was to create through their own work an original, constructive expression of the spiritual and material needs of human spirit. The new architect was to act as a co-ordinator organizing with broad experience bringing purpose and form to harmony.

'The teaching of a method of approach is more important than the teaching of skills. It should be a continuing process which must grow concentrically like the annual rings of a tree. In all its stages the scope should be all-embracing instead of sectional, increasing slowly in intensity and detail in all fields of discipline simultaneously. The integration of the whole range of knowledge and experience is of the greatest importance right from the start; only then will the totality of aspect make sense in the student's mind. He will easily absorb all further details and place them where they belong if he progresses from the whole to the details, and not vice versa.'

It was out of this vision of the new craftsman that Gropius developed his new curriculum. The conclusions presented by Gropius for the transitional approach in education were as follows;

- The architect is to be a co-ordinator.
- Method is more important than training.
- The approach toward design should be essentially identical not only in relationship to space but to socially aspects also.
- Three-dimensional conception is the basic architectural discipline.

•Knowledge will come to life only from individual experience.

•Three-dimensional experiments should be carried out in first year to provide lessons on construction and tools.

•In second and third year the design and construction studio will be supplemented by field trips to correlate further experience with the broadening knowledge.

•Construction and design should be taught together with equal emphasis on both subjects.

•Students should be trained to work in teams.

•History studies should be started in third year to avoid intimidation and imitation.

•Teachers should only be appointed after sufficient practical experience in design and building.

•Smaller enrolment numbers are more efficient.

•Architecture training calls for individual coaching in order to help the student adapt to his own personal talent.

The aim of such a curriculum was to widen the personality in addition to providing professional skill. Such training was to give confidence and independence to the student through the act of trial and error in the workshop. The methodologies implemented within this curriculum were to aid a student in integrating simultaneously design, construction and economy in any given task. (2) Methodologies implemented also served a language of vision. Gropius believed that the creative instinct could be fed with richer knowl-

(2) 'The Scope of Total Architecture', Gropius, Walter; Harper and Brothers Publishers, New York, 1943.

edge of visual facts, such as the phenomena of optical illusion, of the relation of solids and voids in space, of light and shade, of colour and of scale, of objective facts and not arbitrary, subjective interpretations and formulae. Gropius saw the architect of the future as someone who should create, through his work, an original, constructive expression of the needs of human beings. Through the implementation of this the renewal of the human spirit could be achieved, instead of rehearsing thought and action of former times. The new architect was, according to Gropius, to act as a co-ordinating organizer of broad experience who, starting from social ideas of life, could be successful in integrating thought and feeling, bringing purpose and form to harmony.

The Directors and Masters

The Bauhaus owes its achievements and its reputation to the people who invested their talents and efforts in the school. The biggest influence and major force was, of course, Gropius. He displayed the talent for recognizing and hiring other innovative thinkers, artists and pedagogues and for holding these ambitious personalities together over the course of the Bauhaus lifetime. Already mentioned are Hannes Meyer who was director of the school from spring 1928 until summer 1930, followed by Ludwig Mies Van Der Rohe who was director thereafter until the schools dissolution. All three directors served, in some part, during the school's Dessau period. Despite the changing of directorship and the school's changing of orientation as it developed, the Bauhaus structure remained constant as did its curriculum and the intentions, outlined by Gropius, which drove its educational programme.

All three directors were architects by profession. However they differed in their backgrounds, leadership qualities and personalities. The simi-

larity amongst these men was anchored in their faith in a homogenous pedagogical core present in the school. Altogether nine artists were appointed to teach at the Bauhaus during its period in Weimar. The sculptor Gerhard Marcks, and painters Lyonel Feininger, Johannes Itten, Georg Muche, Oskar Schlemmer, Paul Klee, Lothar Schreyer, Wassily Kandinsky and Laszlo Moholy-Nagy. Each of the appointed members of faculty contributed to the pedagogical core established in the school and their spheres of influence took on many forms.

Itten and Muche worked towards teaching students of fulfilling the ideal of the 'new man'. Both men were followers of a religious health movement based on Christian ideals and focusing on breathing exercises. Many students followed in their ways, studying esoteric models of working and living. Gropius began to favour modern technology in the early 1920's and sought to reconcile man with technology through the use of art. This was rejected by Marcks, Itten and Muche who favoured crafts and judged it to be of higher value to human development. Moholy-Nagy's artistic approach combined natural and biological with technological thought believing that man could liberate himself through artistic achievements over technology. He paid particular attention to sight, touch and special orientation and carried out many studies of transparency, structure and material. Moholy-Nagy was the most versatile of Bauhaus members of faculty as he was not limited to any one medium. He displayed talents in photography, collage, montage and layout. For Moholy-Nagy, art was a mental process and not one of craftsmanship. This opinion was one which caused dissension between his belief and that of Feininger, Kandinsky, Schlemmer and Klee.

As was the case with the Bauhaus directors, the members of faculty also differed in beliefs, per-

sonality, backgrounds and qualities and, similarly, the common elements amongst them was their faith in the pedagogical core of the Bauhaus. A shared belief united these artists as members of the same faculty. Each believed that collectively they had found truths that would enable them to teach students how to create. (3) Many developed theories for courses which students attended and which contributed to the homogenous pedagogical core. Klee, Kandinsky and Schlemmer focused their theories on cohesive context with emphasis on the process of analysis and synthesis. During the lifetime of the Bauhaus members of faculty developed and modified theories to address the changing orientation of the Bauhaus.

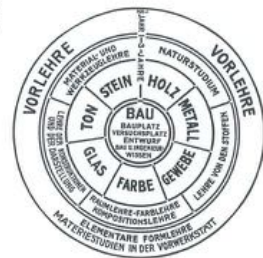
(3) 'Bauhaus',
Droste,
Magdalena;
Taschen.
pg. 26

The School of Design

The Bauhaus pedagogical approach was primarily concerned with the development of all of a student's skills and talents so that a holistic development could be achieved. This approach allowed for the improvement of the body and mind, together, instead of the trained individual's one specific speciality. The pedagogical concepts outlined in Gropius' curriculum and Manifesto and those implemented at the Bauhaus were built on the models of schools which were already in existence in Germany and which had already broken away from the structure of traditional schools. These schools included the Technische Hochschulen (technical colleges) and the Kunstgewerbeschulen (schools of art and crafts).

The programme plan implemented at the Bauhaus is shown in diagram here. Presented in 1922, this diagram displays, in a circular schematic form, the three phase course of studies at the Bauhaus. The first is the preliminary course, which students were to participate in for the duration of one semester. This was a probationary semester. In this time frame students received

Diagram of the subjects taught at the Bauhaus, 1922



basic introduction and lessons in theory of form and materials in preliminary workshops. The following phase was comprised of three years training in one of the workshops. These workshops were called after the respective material which was the core focus of study for a particular workshop; wood, metal, fabric, paint, glass, clay and stone. The three years of study came to a close with an examination at the chamber of commerce. This was accompanied by a Bauhaus certificate (in 1929 this became the Bauhaus Diploma). The following phase was a sort of post-graduate course for the most gifted students. This was the 'Building' phase. Three terms describe the practical character of this phase; Building Site (representing the work as a supervisor at the construction site, Experimental Site (representing a Bauhaus workshop in which new materials, designs and methods were explored) and finally Design (for the architect's office in which students implemented the principles of learning by doing). The schematic diagram displays the duration of study for particular types of students. Designers studied for three and a half years while architects studied for five years.(4)

The Swiss Architect and art teacher, Johanne Itten, was the founder of the Bauhaus Preliminary course. This probation period was intended to fulfil numerous purposes. These purposes included; testing the student's suitability for study and a career in the field of art and design; to assist the student in identifying his own talents and, in doing so, assist the student in his choice of workshop; to allow for a period of time within which students could get to know each other and to observe their ability to participate in teamwork; to allow for a period of time within which differences in levels of prior education may be compensated; to introduce students to the 'language of design'; to teach all students the fundamentals of design, craftsmanship, through the use of experiments in the workshops. (5)

Traditional academic forms of tuition, such as

lectures and seminars, were not employed at the Bauhaus. All training and tuition was carried out in the workshops. Instruction on science, technology, design, maths and engineering took place within the workshop environment. As a direct result of this the workshops became the heart of the Bauhaus and contributed to shaping the profile of the Bauhaus. Students were to 'learn through doing'. Johanne Itten's preliminary course was designed in such a way that students began their education at the Bauhaus with simple exercises and gradually moved to more complex, greater exercises and designs.

The early exercises undertaken by students at the Bauhaus were focused on developing sensitivity toward hand and eye co-ordination and of a basic visual knowledge of forms rather than recognizing characteristics of styles. The latter became known as the 'theory of contrast' where by students learned to recognize and differentiate among optical and material properties, such as long-short; thick-thin; light-dark; hard-soft etc. Another exercise undertaken by the students of the Bauhaus were studies of matter. In these exercises students worked with and studied any 'raw' materials that came to hand. Students were to test these materials and in doing so make the material work as hard as possible to achieve a visually appealing object or one of haptic interest. Students also undertook exercises in analysis of masterpieces in order to explore the elements of design, composition and expression. By doing so the student's sensitivity to these aspects of design would be heightened. These exercises were implemented in the workshops of the Bauhaus so that students may discover and 'learn by doing' the fundamentals of design. These pedagogical practices became the cornerstone of the Bauhaus activities. They offered students the opportunity to explore and learn through creative means. Workshops often held between four to six students allowing for close contact between students and teacher on a daily basis. This was of further signifi-



Photo of students studying the Preliminary course at the Bauhaus, 1928-1929

(4), (5)
and (6)
Bauhaus
Weimar:
Designs
for the
Future',
Sieden
Brodt,
Micheal,
2000.

cance in benefiting to the development of any student.(6)

Within the three years of training in a particular workshop, such as cabinet-making, weaving, pottery, mural painting, stained glass, book-binding or graphic printing, students were under the direction of an artist, responsible for formal innovations and creative thinking. However the master craftsman of a particular craft acted as technical director and in doing so was responsible for practical training and instruction on construction design, technology and economy. This structure gave rise to a constant level of friction between the traditional aspects of arts and crafts and the contemporary ideas of design. In attempting to achieve a balance between both elements, highly productive work resulted.

A unique feature of education at the Bauhaus was the 'stage school' or 'stage workshop'. This was directed by Lothar Schreyer between 1921 and 1923 and following this, from 1923 to 1929, it was directed by Oskar Schlemmer. The stage workshop is a great example of the pedagogical activities of the Bauhaus aimed towards the holistic development of the individual. It was an integrative workshop which was committed to developing the visual and performing arts in its entirety. The purpose of the stage workshop was to enable students and arts to work together and, in doing so, experiment and explore space, light and sound, expressive media such as dance, pantomime and traditional forms of theatre and, in addition to this, architectural experiments in forms of stage-crafting. These tasks were the defining features of the stage workshop and proved successful in terms of introducing and promoting teamwork as stage sets, costumes, lighting, sound and stage engineering combined made up a and of individuals who worked together for one desired outcome. For the students this workshop

allowed for a constant penetration of boundaries of specific disciplines into another and in some cases the fusion of a variety of disciplines.

At the Bauhaus, the architecture curriculum concerned itself with fundamental issues such as property ownership, proposing solutions to housing problems, addressing the transient times in which students found themselves by focusing on the changing way of life in the industrial society, new traffic systems, infrastructure and consideration of domestic situations and role of family. Also at this time, students had begun to consider environmental aspects of design. Particular attention was paid to green areas in cities and energy conservation. In addition to this, students recognized the need to focus on residential architecture at this time. Low-cost, social housing was a central concern within the Bauhaus architecture pedagogical practices. During the design process of given tasks, students were encouraged to experiment with new materials and to test new structural designs and technologies. Various models of apartments furnished by the students and teachers of the Bauhaus workshops provided a subject for discussion amongst the broad public with regard to modern living. "To build is to design living processes" was the term employed by Bauhaus architects and directors.

Influences of the Bauhaus

Convulsive forces resulted in the expulsion of the Bauhaus from Weimar, Dessau and, finally, Berlin resulting in the schools closure on August 10th 1933, under its master at the time, Mies van der Rohe. Any hope that the Bauhaus may be further developed in terms of its intellectual tradition within Germany proved to be in vain due to the Third Reich's political and cultural direction. However, the Bauhaus had always been more than an institution that would accept its closure.

(7)'The Bauhaus and America', Kentgens-Craig, Margaret; The Mit press, Cambridge, Massachusetts, 2001.

It was an idea, a way of thinking which could survive the termination of its activities. It is this fact which gives great significance to the historical influence which the Bauhaus had on art and architecture internationally.

The Bauhaus as a single and homogenous system simply did not exist.(7) Instead, it incorporated many strong personalities which played a principle role in contributing to the school's character. Such personalities include Laszlo Moholy-Nagy, Josef Albers, Herbert Bayer, Marcel Breuer and Ludwig Hilberseimer, to name a few, in addition to the previously mentioned protagonists. However, each individual differed from the other in terms of style and ideas. Intellectual and professional divergences among faculty members resulted in equally different beliefs regarding what should be taught and in what manner. It is acceptable to say that the Bauhaus as a whole can be described as a multi-faceted entity whose pedagogical core was none the less homogenous, and therefore may also be said of the individual disciplines. It was this homogenous pedagogical core which was to endure the school's termination and continue to influence art and architecture further a field.

Having witnessed the Bauhaus dissolve under political duress many member of the faculty chose to relocate in the United States. Gropius, Mies, Feininger, Breuer, Albers, Moholy-Nagy, Hannes Meyer, and Bayer, along with a considerable number of Bauhaus students were among those who relocated in America. The United States was not unfamiliar with the work of the Bauhaus. Recognition of the Bauhaus in America was the result of a consistent flow of information, through architectural periodicals and forums of discussion, from the time the Bauhaus was established to its closure and dissipation of faculty and students. With the emigration of its protagonists, Bauhaus

Americanization began. This process involved the institutional development of Bauhaus-inspired pedagogical activities and programs on new soil and the integration of its artists and architects into American culture.

The most significant year in the United States' recognition of the Bauhaus was in 1937 with the establishment of the 'New Bauhaus' in Chicago at the Illinois Institute of Technology (then the Armour Institute until 1940 when it merged with the Lewis Institute) founded by Moholy Nagy. This was the immediate successor of the former German Bauhaus and it was only here that the complete curriculum, as developed under Gropius in Germany, was adopted and further developed. Moholy-Nagy also headed the consecutive 'School of Design', from 1938 until his death in 1946, where he aimed at liberating the creative potential of his students through experiments with form, technique and material. This corresponded to the preliminary course at the German Bauhaus. No program that was to be set up in America by any protagonist of the German Bauhaus would so conspicuously emulate the curriculum implemented, prior to the closure of the school, to the extent as that deployed by Moholy-Nagy at the 'New Bauhaus'. In addition to Moholy-Nagy, it was initially other immigrants from the German Bauhaus that came to teach in Chicago. The Methods which came from the German Bauhaus and which were subsequently transferred and developed have been adopted in modified form by other American schools.(8) The Bauhaus is responsible for the gradual reduction of the Beaux-Arts tradition which was predominant in the United States until that time.

In 1938, America saw another significant year in acceptance of the Bauhaus when the IIT (then the Armour Institute of Technology) engaged Mies van der Rohe as the director of the Department

of Architecture. The school was then striving to transform its traditional architecture program to one of international stature. After relocating to Chicago in 1938, Mies successfully reshaped the architectural education of the Armour Institute. He developed a disciplined curriculum which was to be implemented. Interaction, between students of the institution, was encouraged and the institution could boast a faculty comprised of professionals from a wide range of creative and design disciplines. The curriculum encompassed dynamic, Bauhaus inspired courses. By inviting Walter Peterhans and Ludwig Hilberseimer, two former Bauhaus faculty members, Mies ensured a strong and prominent Bauhaus presence at his school. This was furthermore enforced by the addition of four young Americans to the faculty, all of whom had briefly studied in the German Bauhaus under Mies (Bertram Goldberg, Howard Dearstyne, John B. Rodgers and William Priestley.)

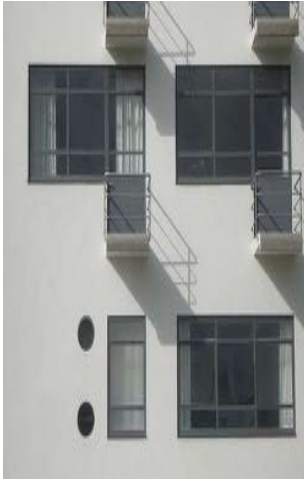
As might be expected, Gropius played a major role in the 'americanization' of the Bauhaus. (9) Initially relocating in England after leaving Germany in 1934, Gropius inevitably settled in America in 1937 where he headed the architecture department of the Graduate School of Design at Harvard University. It was here that Gropius trained many of America's best recognized architects leaving no doubt that his pedagogical activities must have influenced them greatly. At the time of his arrival, Harvard teaching method adopted the conventional formal concerns of the Beaux-Arts, as many colleges in America had at this time. Gropius gradually changed Harvard's traditional design program, reorienting it away from its prior direction, similar to the way in which Mies had successfully done at the IIT. It was with this radical shift in architectural training that the Bauhaus left its most tenacious

imprint on American architectural training and education. It was to follow, eventually, that all architecture schools in America would adopt a similar program as that introduced and implemented by Gropius at Harvard.

The Bauhaus concepts appealed to America. However it is to be noted that the America in which the Bauhaus flourished was very different from the Europe within which it was born.⁽¹⁰⁾ Europe was, at the end of World War I, a place of opposing ideologies. America did not experience the competing beliefs in the same way and so the Bauhaus was to be stripped of its ideological guise in order to be comprehensible to America. The endeavours of the protagonists of the German Bauhaus on American soil lead to the eventual evolution towards the establishment of a genuine American image of the Bauhaus. It is justifiable to say that the Bauhaus protagonists were active in transforming the American theory, pedagogy and practice of art, design and architecture and the results of this process remain influential today.

America was not the only country experiencing a desire to develop and deploy the activities of the German Bauhaus, nor was the desire confined to the years closely following the closure of the Bauhaus proper. The Ulm School of Design (Hochschule für Gestaltung Ulm), often known informally as the Ulm Bauhaus, existed for 15 years in Germany from 1953 to 1968. One of its founders was Max Bill, a former Bauhaus student. Max Bill took up studies at the Bauhaus in Dessau from 1927 to 1929, after which he moved to Zurich. HfG Ulm is considered to be the one of the most influential design school after the Bauhaus. Although the school closed in 1968, the Ulm Model concept, a conscious off-shoot of the Bauhaus concept continues to influence international design education.

(8), (9) and
(10) 'The
Bauhaus
and
America',
Kentgens-
Craig, Mar-
garet; The
Mit press,
Cam-
bridge,
Massa-
chusetts,
2001.



Student Accommodation at the Bauhaus in Dessau

Limitations of the Bauhaus

Despite the numerous influences which the Bauhaus had on art, design and architectural education, it is fair to say that the Bauhaus, as a whole, had several limitations at the time of its existence. Between 1925 and 1928 Gropius executed three projects in Dessau; the school building (including student accommodation), the master's houses and the Törten Housing Estate. Today these buildings are recognized as world heritage sites, however their existence during the Bauhaus lifetime may be rebuked for creating, or intensifying, a closed network within the school. Architectural periodicals and discussion forums were a means of correspondence which made people aware of the activities of the Bauhaus at this time. However all students, masters and directors lived and worked in close proximity. The disadvantage of this living and working arrangement was the creation of a concentrated and condensed pilot school whose network was confined to the activities and influences of the school within its periphery.

The existence of this introspective situation was brought to light in the outcome of the Bauhaus Exhibition and again at presentations made at trade fairs in the same year. The purpose of the Bauhaus Exhibition was to present the broad spectrum of work, which we recognize today as classics of international design, created by students and staff at the Bauhaus, to the general public. However many items created with intention for industrial production were devastating commercial failures. In spite of the exposure offered, sales were meagre. The items, intended for the public consumption, were not well received. The 'modern' products developed and created by avant-garde students did not communicate with the public and a lack of success resulted. What followed was an immediate self-critical response

amongst masters and students. A return to more familiar forms occurred evoking a sense of simplicity within new designs, yet the most important insights remained unwavering and were not abandoned in the aftermath. The cause of such a lack of success can only be attributed to the introspective nature that existed within the Bauhaus. An institution bound by its periphery, limited by its close network and negligent of the needs and wants of the general public for which its products were intended could never have predicted or prevented such an outcome.

Such an event served to prompt analysis of failure and immediate creative reaction, however industrial production continued to be a major point of focus within the school. The decision made by Gropius to follow this path of creation was, in itself, paradoxical. In his manifesto Gropius outlined his desire to return to the crafts and create a utopian craft guild within his pilot school. His reason for this was a strong belief in the strength of craft and the notion that the individual could be a co-ordinator of all aspects of design. His endeavours were to create a new approach which would promote and develop a creative state of mind in Bauhaus students.

“The difference between industry and handicraft is due far less to the different nature of the tools employed in each, than to subdivision of labour in the one and undivided control by a single workman in the other.”(11)

It is fair to say that the choice made by Gropius, turning his focus towards industrialization, is a contradiction to his intentions for the Bauhaus, outlined in his manifesto of 1919.

Relevance of the Bauhaus Today

The methodological principles of design de-

(11) ‘The Scope of Total Architecture’, Gropius, Walter; Harper and Brothers Publishers, New York, 1943.

veloped at the Bauhaus have lost none of their significance today. Bauhaus inspired pedagogical activities and programmes have been implemented in schools on an international level through the decades since its dissolution and are alive in architecture schools today, strengthening the belief that the Bauhaus is still of great relevance and significance to 21st century art, design and architecture. Gropius' intentions outlined in his manifesto and the realization of these intentions in the activities of the Bauhaus is comparable with current schools and recognizable to any student of design. As students of architecture we can draw a direct correlation between some of the activities of the Bauhaus and the activities we accept as features of architectural education. Emphasis on the workshop or studio and the important, central role it takes in our design is one aspect of our studies which can be traced to the Bauhaus pedagogical activities. Today we accept that we are encouraged, within the studio, to experiment with and explore materials and structure and to test and develop living situations. In participating in these pedagogical activities we 'learn by doing'. We consider sight, touch and spatial orientation and in doing so we explore the haptic qualities of architecture. Gropius' idea of exploring and developing all disciplines within the workshop or studio environment is one which we can relate to also. Traditional academic situations are secondary as we study the fundamentals of design and learn to co-ordinate all of these in the studio environment. The preliminary course implemented at the Bauhaus is comparable to the first year of current architecture schools in placing emphasis on gaining, through exploring, the fundamentals of architecture and design. It is a transitory period within which a student must discover and gain understanding of form and spatial quality, construction and design and to think in the

three-dimension.

Perhaps Gropius' greatest success lies in his understanding of the fundamentals of design. He successfully pared a complex entity down to its basic integral components and, in identifying what they were, sought to develop a means of successfully communicating them to others. To simply 'teach' these fundamentals to students would not make for better architects. For one to discover for one's self and in doing so gain understanding was the purpose behind Gropius' curriculum.

'The emphasis in all my arguments is on the creative factor. That is, that a program of search rather than research makes the creative architect. Such a program, I believe, will lend our potential architects from observation to discovery to invention and finally to an intuitive shaping of our contemporary scene.' (12)

(12) 'The Scope of Total Architecture', Gropius, Walter; Harper and Brothers Publishers, New York, 1943.

Conclusion

The Bauhaus is a cultural and historical phenomenon whose activities, principles and methodologies survived the decades since its dissolution and are emulated in schools of design to this day. In my mind the task undertaken by Gropius was not an effort to re-invent architectural education, rather to re-work it by identifying the essence of the discipline of architecture and design and, through his endeavours, making individuals aware of these by means of a carefully structured curriculum. The success of such an endeavour and the presence of its relevance in current schools of design on an international level are inspirational. Gropius sought, not to teach the core fundamentals of design but to encourage individuals to discover, explore and understand through engaging in experiments and gaining experience. The Bauhaus exists in history as a period in time when architectural education was closely exam-

ined and re-worked for the benefit of all students of design ,right through to today. It is an on-going legacy. It has as much relevance and as much to offer architectural education today as it did in the 20th century as its core activities were built upon the fundamentals of a discipline which remain constant. For me the Bauhaus is not recognizable for its classic international designs but for its influence and importance to our education today and for shaping the course of study and activities we recognise in schools of design. The Bauhaus successfully exemplifies, in particular for a student seeking to understand, the process that is architectural education and the principles employed and developed, the significance, the origin and the relevance of these today.

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Architecture
After the
Architect

Danny Holland

Change.

We live in an age of experimentation: environmentally, technologically, economically and socially. Our lifestyles are changing rapidly with each new development.

Society as we know it is about to undergo changes like it have never experienced before. The human race has stretched the boundaries for normal planet inhabitation to near breaking point making it impossible to predict how our society will be in even just ten years time.

We have left the Machine Age and entered an Information Age. We are at an age when machines are intelligent: they learn information and store it. They communicate with one another. A time is approaching when people will have instant access to whatever information they want, right at their fingertips - be it for entertainment, for research or for communication - and it will all be completely independent of location. Naturally, these changes have and will continue to affect the way we live our lives on the most basic levels. They affect how we communicate with each other, how we socialise, how we work and how we learn.

We are in a time when the news media undergoes huge changes. Several major newspapers have already ceased printing and now broadcast exclusively over the internet. The much anticipated arrival of e-books and e-readers is here, with thus far unknown consequences for bookshops, libraries and books themselves.

We have increasing access to films, television shows and music with the somewhat recent advent of digital entertainment media and with the approaching digitisation of the printed world, literature and re-

search will become almost universally accessible.

On the social front, the domestic unit is changing. The majority of what in the past would have been considered functions of the family are now assumed by the state. Tasks such as the teaching of children, nursing of the elderly and caring for the ill are now done by the State, leaving the traditional family unit with less and less relevance in modern society.

'Broken' families are becoming more common as the relevance of marriage decreases in society. The domestic unit now frequently includes single adults, couples, single parents and whole families.

In his book, 'Scope of Total Architecture', Walter Gropius refers to four major legal eras of human society, established by the German sociologist Muller-Lyer, as the successive phases of gradual social refinement:¹

1. The era of kinship and tribal law.
2. The era of the family and family law.
3. The era of the individual and individual law.
4. The future era of co-operatives and communal law.

Currently, the focus is on the individual rather than on the family or community. This, however, as Muller-Lyer observed, is changing. Society is moving towards a more communal structure whereby domestic and social functions are economically centralised and shared among a community rather than family unit. For precisely this reason, families have been known to move into hotels where there is no shortage of domestic help.

1. 'Sociological Premises for the Minimum Dwelling of Urban Industrial Populations,' *Scope of Total Architecture*, Walter Gropius, Harper, 1943

People are losing their connection with their 'roots' - we are becoming more free to travel and less inclined to settle down, resulting in the popularisation of rental accommodation over permanent housing. The tradition of homestead is being traded for a more nomadic life.

We are in the midst of an environmental crisis. The depletion of fossil fuels, the advancement of global warming and the rapid growth of landfill sites among other issues have spurred many debates about our stewardship of the Earth. A growing consciousness of our need to change how we tackle environmental issues is coming to the fore.

In the present, we experiment with new methods and sources. New building techniques, new materials and standards are invented and tested but no definitive solutions currently exist, making the nature of this industry extremely fluid and unpredictable.

In designing for the future, the architect must allow for these changes to take place while considering the constants in our society. We will always need a place to eat, to sleep, to wash, to relax, to socialise etc. but the way we do these is influenced by the changes in our technology, our infrastructure, our environment and our economy.

Flexibility.

With some projects, it is necessary to design for specialisation. Buildings including hospitals, airports, schools and universities may require very specific layouts and programmes, but at the same time, tend to need regular revision and renovation. This can be a difficult and expensive process if allowances haven't been made early in the design of the original structure. Such buildings above all, require an architecture that is flexible and adaptable. An Architecture that can change with society rather than one that ages badly and fades into obsolescence.

STANSTED AIRPORT

An example of this type of 'flexible architecture' is Stansted Airport designed by Norman Foster Architects. The building is essentially a large, rectangular, robust shell which provides for complete adaptability inside - an essential feature given the sometimes fluid nature of an airport's plan.

When designing Stansted Airport, Foster challenged the conventional rules of airport terminal design. Instead of building a regular, multi-storey building with service installations in the roof, he looked at alternative methods - effectively reinventing the modern airport terminal.

According to the book "*Norman Foster: Works 3*"², Foster took inspiration from some of the earliest airport buildings, admiring them for their simplicity. In that time,

Stansted has significant advantages regarding energy usage in terms of

2. Norman Foster: Works 3, David Jenkins, Prestel, 2008

light and heat, effectively halving the running costs in comparison to other British airports.

All services are accommodated within the building's modular supports. These supports, like "*structural 'trees' that rise up from the undercroft through the concourse floor*"³, carry the canopy of the roof granting it the freedom to allow daylight to enter as necessary.

The roof is free from service installations usually found at that level. Instead, these are housed underneath the terminal concourse, in an under-croft below. The lower level is also home to the baggage handling area and accommodates a mainline railway station.

"Stansted challenged the accepted rules of airport design and in doing so became a model for airport planners worldwide. We began by going back to the roots of air travel. Early airfields were very simple. On one side there was a road and on the other a field. Departing, you walked through the terminal towards the aircraft; returning, you walked from the plane towards your car - there were no orientation problems. Stansted attempts to recapture that clarity. Passengers proceed from the set-down point, to the check-in area, passport control and on to the departure lounges, where they can see the planes - all on a single level. Services installations - usually found at roof level - are banished to an undercroft, freeing the roof to let in daylight. Natural lighting brings significant energy and economic advantages, but it also adds a poetic dimension - part of a celebration of the act of flying. Ideas pioneered at Stansted would provide the springboard for our later terminal

3. Norman Foster, Pg 60, Catalogue: Foster and Partners, Prestel, 2008

4. Pg 29, Norman Foster: Works 3, David Jenkins, Prestel, 2008

buildings in Hong Kong and Beijing, albeit at a far larger scale.”⁴

In a case like this, where maximum flexibility has been achieved, focus can then be placed on the durability of the structure. The Architect can aim for a building with a long life-span with the reassurance that it will not become obsolete. Instead, if need be it will be remodelled to suit the needs of the time as our requirements change. Economically, this is a much more viable approach, saving money and valuable resources otherwise squandered on demolition and re-building. A process that is wasteful, expensive and unsustainable.



5

5. The Terminal's roof extends over one structural bay to form a canopy over the set-down point. Pg. 63, Catalogue: Foster and Partners, Prestel, 2008

Permanence.

A building's longevity is a beneficial product of its flexibility, or at least, the building's flexibility allows for a greater life-span in our changing society.

In his book, *The Architecture of the City*⁶, Aldo Rossi speaks about 'Permanence'. A concept which "*affects collective and individual artifacts in the city in different ways. The two main permanences in the city are housing and monuments. With respect to the first, Rossi distinguishes between housing and individual houses. Housing is a permanence in the city while individual houses are not; thus, a residential district in the city may persist as such over many centuries, while individual houses within a district will tend to change. With respect to monuments, the relationship is opposite, for here it is the individual artifact that persists in the city. Monuments are defined by Rossi as primary elements in the city which are persistent and characteristic urban artifacts. They are distinguished from housing, the other primary element in the city, by their nature as a place of symbolic function, and thus a function related to time, as opposed to a place of conventional function, which is only related to use.*"⁷

Rossi discusses the importance of urban monuments in the city: "*Monuments, signs of the collective will as expressed through the principles of architecture, offer themselves as primary elements, fixed points in the urban dynamic.*"⁸ These 'fixed points' offer a sense of place and culture to the people. Pg. 22, *The Architecture of the city*...

6. *The Architecture of the City*, Aldo Rossi, MIT, 1982

7. *Ibid.* Pg. 6, Editor's introduction by Peter Eisenmann

8. *Ibid.* Pg. 22

GEORGIAN HOUSES

A building well designed from the point of view of flexibility would avoid redundancy and demolition in the future, out-lasting buildings designed for a very specific function and era. It is for this reason that Georgian row houses have stayed popular for so long and continue to be used even today. The large rooms and high ceilings make the houses highly adaptable to modern requirements, allowing sub-divisions into smaller apartments and offices. It does this remarkably well considering the stark differences between the domestic unit at that time and that of today.

TEMPORARY/DISPOSABLE

Alternatively, when versatility is not an option, the building loses the requirement for a long life-span, instead calling for an architecture of a more temporary and disposable nature.

Non-Flexibility.

But what happens when a building is not flexible? As specialist buildings age, they often become less relevant, getting closer and closer to obsolescence as we change the way we live. If they lose relevance entirely, demolition often follows and we build again. Occasionally, if the standard of Architecture is high enough, the building is instead modified or altered in some way, allowing for a new use but often betraying the original concept. A prime example of this phenomenon is the former TWA Terminal in John F. Kennedy Airport in New York.

Built in 1962, “...[The Trans World Airlines Terminal] is still one of the best-known and most beloved airport buildings in the world, even though it is (temporarily) out of service. The building did for TWA what the Saint Louis Arch, which was still a dream on paper at the time, would eventually do for Saint Louis- give it a powerful symbol. But it was one thing to create a memorable monument with no other purpose than commemoration and quite another to design a complicated new type of public building as a powerful expression of the activity it was built to house. Yet that is what Saarinen managed to do while making a workable terminal that was “all one thing” as he thought all buildings should be”⁹ - Pg 205 Eero Saarinen, Phaidon Press, Jayne Merkel

“The terminal incorporated many new ideas that became standard practice. At check-in, passengers were separated from their baggage, which was taken to the planes on the ground level while the people took moving sidewalks to distant boarding rooms in ‘fingers.’ Those arriving retrieved luggage from moving carousels, another new idea. Incoming passengers arrived in

9. Pg. 205, Eero Saarinen, Jayne Merkel, Phaidon, 2005

10. Ibid. Pg. 209

one wing, outgoing passengers left through the other; and everyone gathered in the exuberant, vaulted, two-story lobby.”¹⁰

At the time of commission, commercial airports were a relatively novel building type, understandably leading to a number of teething problems. Saarinen’s office spent considerable time developing a programme. They *“began looking for the form and the plan of the terminal in February 1956, by collecting data on planes and passengers, touring existing terminals with notebooks and stopwatches in hand, arranging plane positions on a plan of the tight wedge-shaped site [though the jet age was only beginning, TWA needed fourteen jet-sized docks] and conferring with planners from TWA and people at the Port of New York Authority who would operate Idlewild.’ They also studied activities that ranged from the way planes taxied to the gate to the manners in which passenger parking areas worked - everything that would affect the experience of travelers and the management of the terminal. In the end, they produced a terminal with a “smooth and luxurious switch from ground transportation to planes.”¹¹*

However, due to the rapidly changing nature of the commercial aviation industry, revisions had to be made to the building before long. With increasing regulations and security protocols, the open, simple layout became encumbered with machinery and gates. In 2001, with the sale of Trans World Airlines to American Airlines, the terminal building became disused. In 2008 a new, much larger terminal building was built for JetBlue Airways to the rear of the Saarinen building, connected by two tunnels. The Saarinen building, no longer adequate to serve the needs of a modern airport terminal, will act simply as an entrance lobby to the new JetBlue terminal behind.

In a similar way, the O’Flaherty House by Robin Walker in Kinsale, Co. Cork may suffer a alteration in the near future. The current owners, finding the house too small to meet the needs of their young family,

11. Ibid. Pg. 206

wish to extend that which is a protected structure and have hired Simon Walker, son of the original architect to assist them.

Conclusion.

The argument exists of course that these examples of 'great' Architecture should be preserved in their original state and open to the public as museums in order to allow everyone to see the Architect's full intent. Too often, though, this involves limited access to the building and frequent notices to keep off the furniture - hardly a good way to experience the Architecture as it was originally intended!

Indeed, the only way to properly experience Architecture is to use it for the purpose it was intended - to analyse the record of life at the time it was designed. When speaking about Architecture, Frank Lloyd Wright said "*I know that Architecture is life; or at least it is life itself taking form and therefore it is the truest record of life as it was lived in the world yesterday, as it is lived today or ever will be lived. So architecture I know to be a Great Spirit.*"

Following this idea, non-flexible, permanent architecture acquires a new purpose in its old age: A record of life in the past. We can learn so much more about the architect and their intentions from a physical building than from an archive of drawings alone. In this case then, it would seem wrong to alter a remarkable building simply because it fails to meet the requirements of today.

In the design process, architects need to consider carefully the in-

tended life-span of their buildings. The decision of whether it be temporary or permanent architecture is a fundamental one, affecting all areas of the project. While temporary structures may be faster to erect, cheaper to build and address the requirements of the brief in a more specialised way, they fall obsolete relatively quickly, becoming a less economical and sustainable solution in the long run.

Walter Gropius also looks at the idea of occupation, use, inhabitation and function as seen in the mind of the Architect and the general public in his book '*Scope of Total Architecture*':

*"The architect should conceive buildings not as monuments but as receptacles for the flow of life which they have to serve, and that his conception must be flexible enough to create a background fit to absorb the dynamic features of our modern life."*¹²

The architect must consider future uses for the building and how it may need to change to adapt to the new requirements. They must give thought to the many aspects of our society that are subject to change: technology, infrastructure, environmental issues, our economy and the domestic unit. Allowing for these factors will increase the life-span of the building, providing a more sustainable solution to the problem of obsolescence and reducing the need for demolition.

12. Architect-Servant or Leader?, *Scope of Total Architecture*, Walter Gropius, Harper, 1943

Architecture After the Architect

AN ISLAND CONCEPT

A dissertation exploring
tourism, economy and landscape in
Inis Meain, Aran Islands.



Aislilng Joyce,

PROLOGUE

This dissertation traces the evolution of Inis Meain's once, self-sustained society to a tourist-dependent economy.

It examines how a small population, separated from the mainland of Galway by a 15km body of water, led a life of self-reliance. Attracted by its unique landscape and strong culture, tourists traversed Galway Bay to the islands, all eager to experience this renowned island culture for themselves. But this influx of tourists over the last decade or more is imposing increasing pressure on the landscape and the island community. Furthermore, today's economy is falling into recession and relying on an unstable tourist trade is not a viable means of supporting the island's few inhabitants. "In order to curtail the problems brought about by these developments the islanders are reverting to their traditional habits and adapting a more sustainable approach to support their economy. A more sustainable environment leads to a more cultured society which would inevitably enhance the distinctly rural methodologies and once again attract the tourist trade." (From Chapter 1, present day economy.)

This dissertation spans the history of island life up to the present in terms of architecture and economy. To deal with such diversity as the islands and their culture represent is no easy task so I have decided to condense my dissertation to three examples of sustainability and examine two architectural gems on the island both of which rely on the island environment for subsistence but on tourism for sustenance.

Firstly, I will take a critical look at the overall approach being undertaken by the wider community to instigate sustainability such as the installation of 3 windmills, the construction of the new harbor and harvesting the landscape to generate income.

The second part of the dissertation examines in-depth two specific structures on the island which display qualities of a changing function and adaptability - the oldest, Dun Chonchuir, and secondly, the newest, DeBlacam's Suites. These two architectural features are examined for both their excellence and failures in creating and maintaining suitable and sustainable island environment.





The Aran Islands comprise a cluster of three small islands, Inis Mór (Big Island), Inis Meáin (Middle Island) and Inis Oírr (East Island) situated in a north-westerly to south-easterly direction strewn across Galway Bay, West Irl.

ONE: An island (Inis Meain) off the coast of another island (Ireland) is essentially *“Ireland raised to the power of two.”*

Tim Robinson

The Physical Landscape and Geography

These islands display unique geographical and archaeological features. Geologically, they are satellites of the Burren landscape where much of the rock skeleton has been stripped of its superficial covering and is now bare carboniferous limestone rock exposed. The islands were marooned by marine erosion and encroachment of the sea in the past. To the South-east side of the islands awe-inspiring cliffs stand tall against the vast open Atlantic. The calmer North-eastern side display different characteristics; the topography inclines gently into Galway Bay creating clean calm inlets, beaches and a less harsh environment.

The Island Culture and Past Economy

Gaelic (Irish) language is the first language of its inhabitants. It is considered the foothold of Irish culture and a strong basis in the creation of a unique closely-knit community. Fishing (lobster, mackerel and pollack) and small-sale farming (cultivation of potatoes, cabbage, carrots) was the main occupation of the islanders in the early 1800s. The women of the island’s main pre-occupation was knitting, weaving, and sewing pampooties; the traditional leather footwear of the islanders, made from cattle hide. Peadar Ua Concheannainn an islander described the people of this time (in his native Gaelic language) as *“sclabhuighthe agus fatalagaihthe (hunters and laborers) who, every day of the year, early and late, wet and dry, were seeking out a living from their patches of land, or out on the sea fishing.”* They were obviously very hard workers, evidenced strikingly in the stone walls which hatch the island landscape. This lifestyle became a source of inspiration for



Right: Putting canvas on a currach 1940. Currachs today are made from a laths structure, canvas and tar.



Left: A young woman carrying seaweed for kelp

famous artists, writers and social scientists. The island lashed by Atlantic storms and sustaining a culture that would have appeared close to barbaric, became commonly subject matter in poems and even plays. The turn of the twentieth century saw Inis Meain, one of the most favored destinations of tourists, eager to experience “a brave and hardy race, industrious, and enterprising... strangers to bigotry and intolerance.”

Present Day Economy

Tourism is undoubtedly the most important factor of the present day island economy of Inis Meain. Although it is seasonal (only the local pub remaining open for a few hours and the shop open for 1 hour at lunch time daily in the winter months) a busy summer brings substantial wealth to the island, making it economically viable to close tourist-driven business for the winter. Tourist industries include historic monuments (Dun Chonchuir), knitting factories, bike rental, horse and cart tours of the island, fine restaurants and the spectacular natural beauty of the landscape.

However, tourism, as the poet Robert Graves pointed out, ‘is a two-edged sword’. Although it provides an economic boost to a community, it also, unless consciously controlled, runs the risk of destroying the very things that attract visitors in the first place. Consider a comparison between the well known landscape of Connemara and Inis Meain. It is clear that every corner of Connemara, mainland Galway, seems to be freighted down with cultural significance of one sort or another; a well famous fishing village, annual festivals, adventure holidays, famous rural health spa resort. These rural villages have all experienced the onslaught of developers trying (in a failing attempt) to enhance the rural villages’ visual environment for tourists. Villages consisting solely of clusters of one-off housing such as holiday homes lie vacant in the winter months, while supermarkets and car parks devour and desecrate the rural landscape and subsequently turn the rest of Connemara into a big contiguous suburb.

The islands however have been spared this building blitz. Fortunately, they still possess that rarity of which Connemara is now dispossessed; the rapidly vanishing and hidden Ireland, of “botharins” or tiny roads often passable only on foot; of fishermen who go to sea in canvas and lathe “cur-rachs”; and farmers whose fields often seem no bigger than a living room but produce potatoes from soil made from sand and seaweed. Inis Meain has not yet been subjected that gross over-development of tourist driven manifestations.

Today’s economy is falling into recession and relying on an unstable tourist trade is not a viable means of supporting the island’s few inhabitants. In an effort to curtail the issue of over-reliance on tourism, the small community of Inis Meain is reverting to their habits and adapting more sustainable measures to support their economy. A more sustainable environment leads

to a more cultured society which would inevitably enhance the distinctly rural methodologies and attract the tourist trade.

TWO: Renewable energy sources.

The three turbines are *“like feathers in the hats of ladies at the Galway races.”*

Dara Beag O Flatharta

It was a typically unpredictable Irish summer in 1997. Short-lived moments of sunshine were interspersed by bursts of rain driven by strong Atlantic winds which saturated the bare limestone pavements of Inis Meain. Atlantic rainwater formed torrents of streams that flowed over the flat rock, draining through the thin layer of sandy soil or disappearing into grikes and crevasses in the cracked surface and gushed into underground caverns only to drain through the pervious rock and be re-released to the Atlantic. However, the only population that seemed to be benefiting from the continuous downpours was the rare flora and a handful of livestock, whose limestone troughs never ran dry. It is ironic that it was during this summer on an island surrounded by vast ocean and ceaseless rain showers experienced a shortage of freshwater for the community.

A strict system was implemented to ration the rapidly depleting water tanks. There was water for two hours on Tuesday and two hours on Thursday only. When the dwindling population of 150 doubled during the summer to over 300, getting fresh water for drinking and washing was a real problem. It was this event that drove the people of Inis Meáin to look for alternative methods of generating energy for the filtration and supply of water.

Pol Ó Foighil, then manager of the local coop, decided that being surrounded by water the islanders should find a way to take the salt from the sea and use the desalinated water for domestic purposes. The difficulty was however that the process, involving the heating of sea water to 70 degrees centigrade, was very expensive in terms of energy. Hence the decision to introduce wind power to the island via three giant turbines located to the South-Western coast on the exposed cliff top, where the strong prevailing winds from the Atlantic provide ideal conditions. The energy production from these



windmills exceeded any of their initial expectations. The energy generated would not only power the desalination plant but would also generate extra energy which could be sold via the national grid, thus generating income to repay the capital costs of the system and to cover its maintenance.

While there were those who objected to the installation of the three windmills, on the grounds that they would destroy the natural beauty of the island, others, including local poet Dara Beag ó Flatharta, see it differently. Dara likens the giant turbines, standing on the south-western side of the island, to 'feathers in the hats of ladies at the Galway races.' Seáinín Ó Fatharta, who supervises the operation and maintenance of the windmills and the desalination system, recalls the noise of the electricity generators of the past and the dirty smoke they emitted and finds the turbines to be quiet and clean by comparison. However, all opinions considered, the overall result of this project is an obvious success. This initiative greatly enhanced the island's self-sustainable ethos making it an almost carbon-neutral island.

THREE: Creating a sustainable infrastructure.

“I was particularly pleased to see that the project received a special commendation for sustainability”

Minister for Community, Rural, and Gaeltacht Affairs, Éamon Ó Cuív

Accessibility and infrastructure effects one’s enjoyment of a destination and their desire to return. After all, if getting to their destination is a difficult and treacherous experience a return journey is not likely. Ultimately, the journey to Inis Meain begins where the Galway coastline meets the Atlantic Ocean in the small port of Ros A’Mhil (Rossaveal). This is where the journey to Aran adorns a unique quality distinct to any of its mainland rural tourist-orientated rivals in Connemara. Regular ferry departures guarantee a steady flow of tourists throughout the day to the Aran Islands. Ticket prices are subsidized substantially by the government in an attempt to encourage the unpredictable tourist industry. In fact its threatens mainland villages substantially by equating the time to get to Connemara by bus to the same time (1hr 30minutes from Galway city) and cheaper costs (€8 return, student rate) to get to Inis Meain. A fleet of modern ferries guarantee a comfortable journey and provide year round employment for islanders. After all it’s not just the tourists who require these services but the Inis Meain natives also.

However, how beneficial is a fast regular ferry service if the infrastructure just isn’t there to support it. Strong Ocean currents between Inis Meain and Inis Oirr make docking at Inis Meain Pier difficult and in stormy conditions, dangerous. The only solution to this was the construction of a new harbour to the more sheltered North-Western side of the island. The construction of this pier was not to conform to normal pier construction; firstly, it is on an island so the transportation of materials is limited. Furthermore Inis Meain is striving to maintain an environmentally friendly status so alternative methods of construction were going to have to be employed.

A renowned company with the perseverance to withstand island development and employ innovative sustainable construction methods and careful planning and management was essentially what was required to undertake the task. SIAC Construction Ltd possessed those capabilities. The new sheltered harbour, Cé an Chalaídh Mhóir, was officially opened on November 3, 2008. The works consisted of the dredging of a new berthing pool, the construction of a new pier, on-shore and off-shore break water,

access road and parking facilities and the development of the harbor itself. The cost of the development came to almost €14 million, a reduced cost resulting from the re-usable nature of the materials involved. One of the innovative aspects of this development was that limestone from the dredging process was crushed and recycled on the island to make the structural concrete used in the construction of the breakwater and the harbor. Given the logistical challenges of such major works on an offshore island, SIAC's creative approach is proof that with ingenuity, major infrastructural projects can be sustainable and efficient, and at the same time, complement the surrounding environment.

This project did not go unrecognised and in April 2009 the €14 million Caladh Mór sheltered harbour project on Inis Meáin received one of the most prestigious awards in the industry. Minister for Community, Rural, and Gaeltacht Affairs, Éamon Ó Cuív congratulated SIAC Construction Ltd on winning the Irish Concrete Society's 2008 Infrastructural and Overall Award for Excellence. Minister Ó Cuív said that this well-deserved award was a credit to SIAC, RPS, Galway County Council, his own departmental staff, and the island community. "I am delighted that this landmark project has been recognised with such a prestigious award," he said. "The new harbour will help strengthen economic opportunities for the island's community and its completion was a significant milestone in the development of Inis Meáin. I



Above: Draiocht ne bhFarráige (magic of the sea) is a modern passenger ferry operating to The Aran Islands 3times daily.

Right: An extract from The Galway Advertiser, April 9th, 2009.

Inis Meáin
harbour project
leads the way
Ó Cuív congratulates SIAC on top award

was particularly pleased to see that the project received a special commendation for sustainability.”

FOUR: *“I want to contest the obsessions that I believe imperil American landscapes – the view that they are principally sources of material wealth or scenic backdrops for a more important*



human drama.

Barry Lopez, *Caring for the Woods.*

In creating renewable energy sources and implementing sustainable infrastructure Inis Meain’s community were investigating alternative and innovative methods of a developing sustainable culture. However, the island possessed an obvious and vital resource that is pivotal in the process of supporting a sustainable island economy. That is its unique physical landscape. For as long as the island has been inhabited, its landscape has been a vital component in supporting life on Inis Meain. It provided vegetables, shelter from the island’s exposed and harsh weather conditions, nutrition for livestock and its hay was required in the fabrication of thatch roofs (a traditional roofing method on Inis Meain, even to this day.) The landscape has existed for eternity, long before Aran was discovered. It has been there as an important natural resource for animal, human and plant life.

However, in the last decade, over-use of the soil is nearly exhausting the soil’s capacity to support further cultivation. The geological situation means that a bed of flat limestone rock struggles to support a thin layer of dry sandy soil on the surface. Vast bare rock exposed in The Burren, Co. Clare clearly displays in poignant and difficult terrain the result of over-grazing on a karst landscape. The consequences are evident and, unless alternative methods are adapted to combat this problem, almost inevitable. The issue to be addressed was how long will this seemingly infinite resource be available?

But the islanders are resourceful. Topography can be exploited and vegetation manipulated to find and create microclimates in which to create a place more energy efficient, more comfortable and delightful. Ancient traditions still practiced to this day guarantee the existence of a sustainable

economy for future generations. These traditions increase the dynamism and integration of the local economy out of landscape friendly undertakings such as local organic production for local consumption and even exportation. Old traditions still practiced to this day involve fertilizing the soil by scattering seaweed, rich in nutrients over the potato crop. Unpeeled rods, grown to the North of the island are woven into baskets and used for carrying goods. Cured fish (salted and stored in a barrel for up to three weeks) caught by local fishermen laid out on stone walls and thatch roofs to dry before being sold to the buyers from Galway. Potatoes and fish were important exports. The money from the sale went towards buying provisions that the island could not grow for itself such as turf, tea, flour and sugar.

'Old traditions were based not on abstract theories but on practiced faith... Based on this cultural self-assurance, practices readapted, changed or replaced earlier traditions with full confidence in the improvement they were making.' Stefano Bianca

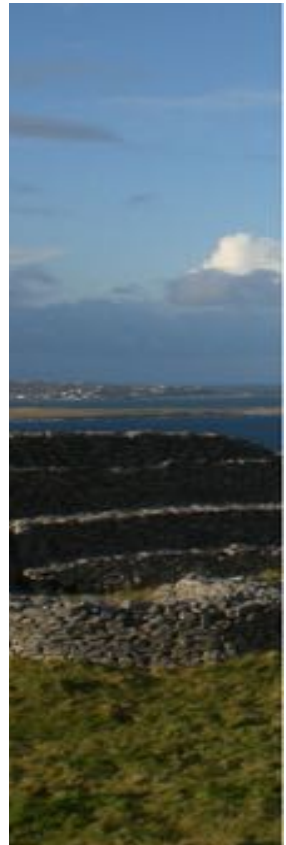
Practices such as these demonstrate how a small community maintains a sympathetic approach to their environment. A conscious decision was made not to introduce new technologies or equipment for fear that it would interrupt with the natural landscape of the island and consequently detract from the traditional heritage that still exists. Our approach to landscape in the past was largely token, tokenism in architectural design, in landscape, in regard to wildlife, our heritage of archaeological remains etc. Yet this was not a conscious decision, it was simply the way we allowed matters to evolve. The island community have adopted a proactive approach to an obvious and yet delicate resource. In doing so landscape they can, not alone preserve (at best a standstill position) but also conserve, enhance, create and develop a stronger community and more attractive landscape. This demonstrates the

potential of a unified, proactive approach and the benefits that might accrue from the same.

FIVE:

Dun Chonchuir, a prehistoric stone fort is situated the highest point in the centre of the island in a decidedly favorable position. It is a multival-late structure i.e.; it consists a number of enclosing walls. An area of 1acre is surrounded by two concentric oval enclosures, about 70m North-South and 35m East-West internally. A low cliff on its Western side provides some natural defense. Architecturally, it is built up of multiple limestone boulders and rocks to heights varying from 2 to 4.5metres. These walls are terraced to this inside to allow access to the parapet where the views are breathtaking. A band of jagged upstanding rocks called Chevaux de Frises (horses from hell) surround the walls, placed outside the fort to hinder the approach of invaders. Other features include mural steps and a number of souterrains, hidden underground passage ways. It is suggested that these passageways were used as a means of escape in the case of an invasion of the fort. Its tall rounded enclosing walls provided shelter from the strong prevailing south-westerly winds granting Dun Chonchuir favorable social and environmental conditions to support a small community of hunter-gatherers about 1,500 years ago. The foundations remain of small bee-hive stone huts, which provided accommodation for the settlers.

Today the remains of stone walls and the ruins of huts on the site act as a reminder of the unrelentless ability of the island's inhabitants to maintain a self-sustained society. The fort serves as a tourist attraction, granting an insight into how ancient Celtic Ireland lived, hunted, dwelled and existed. It is now property of the OPW, (the Office of Public Works) and guided tours of the fort are



Above: A view across Dun Chonchuir, showing terraced internal walls. Photograph facing West across Galway Bay to Inis Mor

Below: The fort from an aerial perspective showing butressing and its multiple enclosing walls



available during the summer season.

De Blacam Suites

800m to the East, further down-hill and closer to the shore, lays a significantly smaller and newer tourist attraction. In this peaceful barren landscape of terraced limestone flags, low dry stone walls and awe-inspiring views Ruairí DeBlacam, a native of the island and his wife Marie-Thérèse decided to build their home. This home however, was to incorporate a business. On a barren site, settled into a stepped terraced limestone landscape, they set about creating a business project on the island. The project consists of three suites, a small restaurant and a studio-like home for the couple. So what makes this so different to any other restaurant or guesthouse on the Inis Meain? Simple, this one was set up with the aim of enhancing visitors' appreciation of the island by providing a style of accommodation and dining that is complimentary to its unique location.

The long low-cut stone building was designed by DeBlacam & Meagher architects and is inspired by its surrounding landscape. It consists simply of a restaurant to the Eastern side, three adjoining suites, an office and a one-bed apartment, all laid out in a straight line with a North-South orientation to take advantage of panoramic views of the island and bay. The restaurant's curved exterior wall to the East is the first part of the building you see on arrival at Inis Meain Suites. It is a strong architectural feature and its source inspiration is obvious. The curved wall, long blocks of limestone and the absence of mortar in its construction clearly imitates the infamous Dun Chonchuir in the background.

The underlying concept of the DeBlacam Suites and Restaurant remains constant throughout. That is to create an environment that is sympathetic to the island's environment and sustained by the island's resources. Ruairi and Marie-Therese have reverted back to the traditional methods of island cul-



ture. They grow their own vegetables; spinach, broad beans, peas, scallions and onions, carrots, parsnips and radishes, fennel bulbs, rocket, lollo rosso, masses of herbs, rhubarb, pears and soft fruits like raspberries, strawberries, gooseberries and blackberries all fertilized by seaweed from the shore. An absence of foxes on the island ensures the safety of their flock hens. Even in the construction process sustainability was a pivotal, materials were re-used on-site by employing methods of construction similar to those of the harbor such as crushing limestone excavated on-site which was subsequently re-used in foundations. Bedclothes and fabrics are made in the local knitting factory Inis Meáin Knitting whose products are sold in Paris, Florence and Tokyo. Stone cladding is from the duilinn (rocks eroded from the cliff face to the South of the island). Lobster and crab are caught by local fishermen from currachs (the traditional island fishing boats). Fishing rods, bicycles and books of interest are provided instead of TV to help guests discover the peace and quiet of the island. In this way it refers back to the underlying theme of this dissertation- an island economy that is driven by tourism but sustained by the island. I had the opportunity to visit the DeBlacam suites on a number of occasions and view its progress in its construction stages. Transportation of goods, wet unfavorable weather conditions, a tight budget and wrong deliveries all contributed to a 5month delay in construction.

When creating a website, Ruairi was asked three important questions- the answers to these questions have since provided a basis for their underlying concept and what the project represents for them. These were: Who are we? What do we do? And why do we want to do it? He made a conscious decision not to introduce foreign and unusual meals to the menus (“lasagna belongs in Italy!”) and instead chose to remain true to the environment and respect the island culture by a menu consisting of lobster, crab, fish, crème brûlée..

Personally, I admire this building enormously. This simple and elegant design restores my faith in the islanders’ response to an environmentally-sensitive architectural approach to building on Inis Meain. In terms of island architecture, environmentally insensitive buildings do exist. Being the least visited of the Aran Islands, Inis Meáin is regarded “the most peaceful and genuine experience of this unique landscape and culture”. This tranquility, seclusion and simple way of living are what make Inis Meáin special. If this trend of shabby conglomerations increases anymore it will, like a creeping fungus, scar and irrevocably damage the traditional rural island image that has attracted so many visitors in the first place. However, an architectural response such as Inis Meain Suites demonstrates that good design can en-

sure development is successfully integrated into the natural environment.

Conclusion

To conclude, I would not suggest that Aran should become a quaint time capsule. The islands are, and should remain, living, changing, and developing places. The landscape is constantly changing and thus any idea of conservation must be frustrated. We know that the activities of man shape landscape, thus if these activities change, landscape changes. So if we are to conserve landscape we must conserve the activities. This is just impractical. As discussed in the introduction, Connemara's recent over-development is understood by some as a step forward in improving the tourist economy and an inevitable evolution of the landscape. Personally these conglomerates of detached holiday homes strike me not as evolution, but as a drastic change and a kind of squandering the natural beauty of the landscape. An approach to landscape must not be one of neglect but clearly active and embrace sympathy and future consideration. It should not have submissive sympathy with existing conditions, but creative empathy with natural existing systems.

Consider Inis Meán Suites, how simple yet obvious approaches were adopted. The use of traditional styles and sensitive choice of materials can help new developments blend more sympathetically into their environments. Tourists are notoriously fickle, sustainable tourism will require very careful planning and management and it is not sufficient to have segments of attractive landscape interspersed by large sections of bland "world landscape". Tourists, pick up signals about the quality of our visual environment and this will tell them much more about the quality of our culture. These are difficult and thorny issues which must be addressed at an early date before damage becomes irreversible.



However, no one would wish to see the island become a cultural theme park either. Issues need to be addressed with regard to the capacity of our landscapes to tolerate a high level of public access and infrastructure for a small island. The construction of the new pier is set to enable easier accessibility for tourists to Inis Meain. But surely an influx of tourists will subsequently result in pressures on the existing landscape. Consider this, the preservation of the island's "natural" landscape as, say, a national park means it is then open to the public as an amenity. Surely this will then involve a self-defeating exercise over time and result in the destruction of that "natural" landscape. Evidence of such problems as this is already clearly evident in other parts of the developed world with regards large scale tourism.

Terry O'Regan spoke in the Aran Islands a few years ago on the issue of architecture, culture and the environment. He discussed a concept with them whereby there could be a planning handbook for the Aran Islands developed by the planners in conjunction with the islanders. This would provide a range of design options, combinations and permutations and provided one stayed within that framework one was almost guaranteed planning permission. To prepare this book, islanders would have to study the old designs, not to repeat them exactly but to identify the distinct features- the rounded walls and thatched roofs – rounded instinctively for aerodynamic purposes, the scale and proportions of the buildings.

Personally, I think that while this may seem like a logical decision, copying the traditional and vernacular features of other buildings on the island, I do not agree that it is the correct approach. From my own family experience of being denied planning permission for the construction of a bungalow home on Inis Mór I think the planning authorities are blind to the real needs of the island in terms of architecture. I agree that the old buildings enhance the "traditional feel" of the island. However in terms of energy consumption, construction methods and making the most of the site, they are completely impractical. We are living in a more advanced architectural age. Thick un-insulated random rubble stone walls, small windows that give insufficient light and high maintenance thatch roofs incur unnecessary costs. The planning handbook should be renewed to a set of guidelines and principles regarding means of incorporating sensible architecture into an island environment.

I have read about an island in the Caribbean called Bonaire that claims to be the first island with a 100% self-sustained energy supply. In 2007 the local government of Bonaire, who prides on its island's beauty and natural preservation, agreed to this ambitious project of trashing its fossil fuel en-

ergy dependence and developing an energy system comprised of a wind farm, biodiesel plant and a 3.5MW backup battery. It supports a much larger population (15,000 residents; about 100 times more than Inis Meain) so its energy requirements are considerably larger. However, just like it Inis Meain, Bonaire's economy is heavily reliant on tourism. Bonaire has strategically developed its land span of 170km and the surrounding coral reef for tourism and eco-tourism, making it a top ranked Caribbean destination for scuba diving and witnessing wildlife. The island's north side is also home to an array of flamingos, a donkey sanctuary and an ecological preserve. With beautiful beaches, great snorkeling, and 100% sustainable energy supply this island in the Caribbean has proven that Inis Meain's aspirations are certainly achievable.

Let's remember the fundamental issue being addressed in this dissertation. That is tourism and economy. Essentially, they exist symbiotically. The island culture attracts tourism, which generates an economy. But over-reliance on tourism would desecrate the culture. Why do people visit the Aran Islands? It's obvious that they are attracted by the culture, enhanced by special qualities of the place and its people. They come seeking to touch the past (which is clear from the success of Dun Chonchuir), they come for peace and solitude of a landscape that has (for now) so far escaped the ravages of the twentieth century spoliation of the environment, they come for qualities almost too intangible to pin down with words- warmth and hospitality, reverence for old and still vital traditions and craftsmanship. But isn't it time we recognised the achievements of those people who are trying to preserve this culture? Businesses like the DeBlacam's are realising that tourism is a finite resource and so are taking actions to develop a sustainable future environment. Decisions taken now may well shape the future of the island in a fundamental and irreversible way. Above all, this is the last sanctuary from the modern world that is becoming increasingly reliant on what finite resources.



A thatch cottage, typical architecture of the Aran Islands. In the background, limestone pavements, stone walls and the harbor, Cé an Chalaigh Mhóir . In the distant background, The mountains of Connemara, mainland Galway

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WORLD DESIGN

PETROL STATION DESIGN

H&T 5/6 By Ronan Farrell

Introduction

Petrol retailing began in the United States around the turn of the 19th century. By 1910 the principals of modern underground storage with pump and hose dispensing had been developed and curb pumps began to appear on the streets of every city and town in the US. (Minale, p.20) This paper looks at some of the design implications of the petrol station and tries to apply them to imagined situations of world design. It looks at viewing the world in different situations, referring to ideas of branding and design of large networks. The process involves researching the petrol stations and discovering aspects of its design, then imagining if that design feature could be applied to a world design situation. Using this concept the discovery of possible new world design strategies and what that world might look like could be applied. People are always excited by change, constant repetition becomes boring. The idea of a network is of interest to me, a network of stations or a network of people and how multiple elements are connected. The idea of world design is not about one single solution, it is more about multiple solutions that combine to form a network of solutions.

Since an important consideration for many petrol retailers is the size of their networks (Shell 50,000, BP 15,000, AGIP 15,000, and Total 10,000), cost is clearly a key factor and designs need to be practical. For this reason, an individual architecture gesture is very difficult to achieve across a whole network. Pre-stressed concrete stations once littered Europe. In the end these stations proved too difficult to build, too expensive to apply the company image to and then too expensive to knock down. (Minale, p.13) The Americans developed the concept of the modern petrol station comprising four simple steel supports and a canopy. All evolution that has happened since has been based on this formula. When we look at recent developments in forecourt design we cannot ignore the important part that the material Alucobond has played. It is this that has facilitated the production of straight lines on a large scale. It is here that the success of the BP retrofit system lies. For the first time it was possible to apply a curved fascia in a straight line, to project an image of quality and modernity.

Marcello Minale is a partner in the multi disciplinary

design company 'Minale Tattersfield' and coauthor of the book 'how to design a successful petrol station'. In Minale's opinion architects are not the best people to design petrol stations since they lean towards grandiose statements not suited to large-scale role out. There are few consultants who have developed the skill that combines brand identity, graphics, industrial design, landscape design, retail design, signage and most recently, multimedia design. (Minale, p.18)

In the world today, each city is designed as a number of separate parts that combine to make the whole. As Trystan Edwards calls it, the term 'inflection'. Inflection in architecture is the way in which the whole is implied by exploiting the nature of the individual parts rather than their position or number. (Venturi p.91) Many of Venturi's examples in his book 'Complexity and Contradiction in Architecture' are taken at the scale of a single building or detail, but what I find interesting is the reference by Venturi to 'God's Own Junkyard' by Peter Blake. Illustrations in 'God's Own Junkyard' of Times Square and Roadtown are compared with illustrations of New England villages and Arcadian countryside. But Venturi says the pictures in this book that are supposed to be bad, he thinks are often good. The seemingly chaotic juxtapositions of honky-tonk elements express an intriguing kind of vitality and validity, and they produce an unexpected approach to unity as well. (Venturi p.102)

A city can be compared to a petrol station network in that it is the collection of individual stations that form the identity of the petrol company and it is the collection of buildings, signs, roads, etc, that form the identity of the city. If we take this concept to the scale of world design it is the combination of the character of the countries and their interrelated cities that form the identity of the world. The example Venturi gives in 'Complexity and Contradiction in Architecture' that Frank Lyod Wrights famous house Fallingwater is incomplete without its context - it is a fragment of its natural setting which forms the greater whole. This can also be expanded to the scale of the city and one could say that New York is incomplete without the Hudson River. Another example we can take from 911, the twin towers were an iconic part of the New York skyline but without

them it is still New York. When compared to the petrol station network, the petrol station is part of a network of 10,000 to 50,000 stations so it makes no difference if 1 is removed it won't even be noticed by the majority of people. At that scale 5000 stations of a single brand could be removed before you might notice any difference, and as stations are spread over a few different countries, on a world scale thousands of stations of one brand could be removed from one country and the same brand could still exist in numbers in another. Petrol stations can grow and shrink as required, they are part of an organic network that can move to where they can profit most and retreat if necessary. World design requires organic movement of infrastructure and population connected to resources where necessary and the mobility to relocate when resources are low or need to regenerate. The city could be designed as a network of connected nodes rather than a single high density core. World trade is an inflection of world design and the brand is an inflection of world trade.

Taking 'Shell' as an example of a single petrol station brand. The new Shell RVI (Retail Visual Identity) stations were designed to meet the same modern retail standards which people have come to expect from the high street. The design follows a generic industrial format in terms of materials, shapes and the practical presentation of the environment. Simple shapes and forms, together with a clear application of colour, succinctly communicate Shell's message and help to counterbalance the scale of sites and the busy, noisy environment. Great emphasis was laid on Shell's core strengths so that whilst modernizing the sites, the inherent warmth of the Shell brand has not been lost. The organic curve of the pecten is echoed in the curves of the monolith, with key signs and in particular on the canopy edge. These curves minimise the masculine preconceptions of the petrol station forecourt. (Minale, p.46)

The prime sign is the principle element of brand display and is designed to be an efficient means of communicating important site information. It is a very effective, functional yet minimal design. It is available in a wide range of variants, all of which use common elements. This achieves consistency in appearance as well as minimizing manufacturing costs. (Minale, p.49)

Signs

From the dawn of mankind, humans have used symbols to communicate. These symbols were used to create signs to convey messages of identification, direction, history, myth, warning and even commercial messages. Many symbols used in signs became universally known, signs for churches for example, such as the Christian cross. (yescozette oct. 2008 signs)

The sign is an inflection of the petrol station. It stands separate and represents the whole, the road sign is designed to relate to people travelling by car. Its scale and orientation are related to the road. In the book 'Learning from Las Vegas' the sign is analyzed in terms of its relation to the city. 'The Middle Eastern bazaar contains no signs; the Strip in Las Vegas is virtually all signs. In the bazaar, communication works through proximity. Along its narrow aisles, buyers feel and smell the merchandise, and the merchant applies explicit oral persuasion. In the narrow streets of the medieval town, although signs occur, persuasion is mainly through the sight and smell of the real cakes through the doors and windows of the bakery. On any main street, shop-window displays for pedestrians along the sidewalks and exterior signs, perpendicular to the street for motorists, dominate the scene almost equally. (Venturi et al, p.9) Signs are also an inflection of the city for example Time square in New York is a collection of signs that form part of the brand of the city. In Las Vegas the sign for Motel Monticello, a silhouette of an enormous Chippendale highboy, is visible on the highway before the motel itself. This architecture of styles and signs is anti-spatial; it is an architecture of communication over space; communication dominates space as an element in the architecture and in the landscape. (Venturi et al, p.4) As in petrol stations the sign that represents the brand is more important than the building it relates to. People today recognise the brand name of a hotel more than the building, for example they would know the quality and price range connected to the brand of Hotel more so than the spaces designed in a particular Hotel. How does the sign relate to world design? The sign represents a brand and is recognized across different countries and continents, the sign is a connector that connects cultures, by introducing a

common element that is an inflection of both. A branded petrol station sign is an inflection in one country but as an identical sign exists as an inflection of another country the two countries become connected through a common brand connector. The branded sign is also a cultural saturator, it serves to water down the identity of a culture, as all cultures gradually become watered down, world design becomes more apparent.

The 'No Sign' world, Imagine a world with one single brand, all countries look the same, the single brand serves as a connector and unifier of all countries. Culture is diluted, the French would no longer feel obliged to buy Citroen cars, there would be no brand conscious teenagers checking the labels and logos on their clothes, there would be no longer economic competitiveness between companies, and no overproduction to saturate markets. The single brand no longer requires a logo or sign it does not need advertisement or persuasion to increase sales, as sales are inevitable because of the necessity for each individual product.

A stylistic analysis of Las Vegas signs would trace the influence of the greats (the designers in YESCO) through to the minor architecture of wedding chapels and sauna baths. Compare the national and general sign imagery of the gasoline stations with the unique and specific symbolic imagery of the casinos, and follow the influence patterns back and forth between artists and sign makers. It would trace parallels with historical architecture that emphasizes association and symbolism, such as Romanticism, Eclecticism, Manerism, and the iconographic aspects of Gothic architecture, and tie these into the sign styles of Las Vegas. (Venturi et al, p.52) This shows the complex interrelation of signs in Las Vegas and how signs can be categorized into different categories in relation to their style and function. I find it interesting that the gasoline stations are categorized as general. I think this is because they are part of a network of thousands of stations and that through repetition the sign becomes increasingly familiar therefore is described as general. If all casinos were under a single brand they would also become increasingly familiar and would be described as general. The casinos are all competing on the strip for economic advantage and the signs serve as an inflection to each casino. Petrol stations are also branded to compete

for economic advantage, By design, they are to appeal to a wider proportion of consumers. For example, 'Shell's' use of the curve to soften the appearance of the fore court, give it more of a high street feel. Imagine a strip where all the different brands of petrol stations were laid out next to each other, the signs generally would be of a similar shape and size but would change in colour to each individual colour combination that relates to its associated brand of petrol. They all sell the same product 'petrol' which is the same in each station the only difference is the colour coding and name of the seller.

The importance of the sign design is outlined in the Renovation of Restaurant in West Philadelphia by Venturi and Short, 1962 (Venturi p.111) This is an interesting project where the architect designs the style and feel of the restaurant in order to attract a targeted customer. The branding and logo are as important as the spatial layout, the brand name is also used internally to establish a desired feel in the dining area. It is the description of the external sign that I find fascinating, the porcelain-enameled sign at the level of the second floor that boldly concludes the simultaneous play of duality and unity, derived from the existing composition of the building. In its extension across the whole front the sign encourages unity; yet in its division of colors - blue on the right and yellow on the left-it points up the duality of the original building. In the continuity of the punched letters on white plastic, continuity across is reestablished. (Venturi p.112) The cup similarly attracts the eye by being unifying and disrupting at once. With it the sign evolves from two dimensions to three, so that it can be seen by pedestrians as they approach parallel to the facade, in contrast to the flat part of the sign which can be seen at a distance. The cup's sides, are alternately blue and yellow and change visually as you move past them. At night the letters become translucent white light, and the cup was to have been outlined in neon. The bold scale of the letters is appropriate to their advertising function. And the division of the word plays up the duality and catches the eye reluctant to read advertisements. (Venturi p.113)

The sign is more than a group of letters to be read and understood, for example a road sign points you to where you need to go but the sign by default will always become

an inflection of its location. It may be a result of a lot of thought and consideration by the designer, or it may be a result of what can be cheaply manufactured. Either way, it will become connected and form part of the character and feel of its surroundings. A distinguishable smell can also be a sign, for example intentional or not you usually know when a McDonald's restaurant is near because of its unique smell from the cooking. The careful consideration of the colours used is also an important factor in the design of signs and their associated brands. In 1990 Shell was the world's largest retailer in any category with 38,000 branded outlets outside the US, compared with McDonald's 14,000 world wide. As such Shell had a considerable influence on the retail trade as a whole. Brand image is always important but particularly given the competitiveness of the market. In a market where the products are very similar, design can tip the balance. Shell needed a design which traveled well and was instantly recognizable. (Minale, p.49)

The ultimate power tool in design is colour. The psychological impact of colour transcends all media. Successful sign designers use colour to create desired responses and achieve specific objectives. Colour can boost a sign's legibility, grab attention and evoke emotional responses. In the sign industry, colour is always an issue. (yescozette oct. 2006 color) The redesign of Shell petrol stations in 1990 by Addison, London logo by Raymond Loewy International and visual identity manual designed by Sampson Tyrell demonstrates the importance of colour in the design. The primary colours of red and yellow are strong branding tools and in combination are unique to Shell in this sector. Red and yellow are very powerful, particularly together. However, the colours used in the old design (VM2) from 1970's were harsh and industrial. The new red and yellow are more warm and friendly. The extensive use of white enhances and offsets the red and yellow and helps to provide a clean, consumer friendly environment. The secondary colour grey, which harmonizes with the yellow, red and white, contributes to the colour balance and is very good for surfaces prone to wear and tear. The colours are also used to identify services on site. Red with yellow is used for shopping and

signage. Grey with yellow denotes car services and blue with yellow the car wash. (Minale, p.50)

The impact of colour on our cities and towns is a result of the retail outlets and companies that are located in them. World design could address this in that each location could have its own brand relating to the colours used in that particular location. The colours could become part of the character of the people and the place. This would give people more of a connection with the area in which they live. In this situation the unique brand of the city would influence the logos and signage of the companies and retail outlets that were to locate in that city. This would reintroduce culture variations and make the world a more diverse and interesting place. Colour is already a part of the character of certain cities such as the yellow taxis in New York (*see image 4*) or the red double decker buses in London. But the effect and continuity is lost in the signage. If the signage in the city had to be a combination of specific colours, the city streets would become more identifiable with the people rather than the streets being the forecourt of the multiple individual brands. People don't interact on the city streets because their attention is being diverted by the constant bombardment from advertising and brands competing for their attention. For the world design concept the care and detail which was put into the development of the Shell RVI station design, would be applied at a city level. Thus making the city a more attractive and social place for people to live in.

Architects have neglected colour as a design tool. Perhaps they have been too concerned with spatial planing and how to solve traffic congestion in cities. The signs and brands have taken over the public spaces in the cities and architects still fail to notice this, and they continue to look for a new design style. Of course, any new design style would be quickly lost by the advertising and branding that would be placed on and around it. Architectural books abstract single buildings from different areas and put them side by side, identify similarities and call it a style. The style does not exist in the same sense in reality because of the inflection of the objects that surround them. (*See image 1 & 2*)

Style

The style of petrol stations has been greatly overlooked

in terms of defining them as part of a particular design style or movement in architecture. This I find interesting because in terms of numbers they are probably more successful than any of the so called categorized styles such as Gothic, or Modern. They fall under the category that architects generally tend to ignore, as something they are not involved in. Perhaps this is because they are usually not involved and as Minale suggests they are not suitable because they tend to lean towards grandiose statements not suited to large-scale role out. (Minale, p.18) But architects such as Gropius and the Bauhaus had a idea of 'total design' or Corbusier's city for three million. With this they were trying to create a complete ideal that could be rolled out as a way of living as well as a style, a complete social system included as part of the design. This was in the 1920's almost a century ago and architects and architecture schools are still dwelling on the idea that this could be possible or that there could be a solution. Style in reality is organic, in the sense that it will always be a combination of previous designs and trends. This is because the previous style still exists along side the new and will always be an inflection of the new style. These styles build up in a random order more by chance than by a designed plan. It is a random order because the final built outcome for a site will depend on the architect at the time and his particular preference or source of inspiration, along with the acceptance of the design by the client. This can be compared to petrol station design evolution, because, as part of a new design or logo being implemented across the network the older stations will be retrofitted, to change to the new colour design. But the general style of the retrofitted station will still remain the same. Style evolves at its own pace and is out of the control of any one architect. Style is in a constant random evolution process. Take for example the 1985 proposal by Minale Tattersfield for BP. This was a proposal in the style of a Mondrian painting where the black steel columns protrude through the canopy, and the canopy is black lines on a white background with some sections coloured in red, yellow or blue as you would see in a Mondrian painting. As this design was rejected by the BP personnel it was never implemented and BP is now known as green with yellow text. This example can be compared to every building that has been built. A choice over the design

at some point will have been made.

The architectural evolution of the petrol station of styles through the ages, as outlined by Minale are as follows, 1920 Barn, 1920 Arches, 1925 Columns, 1930 Palladium, 1935 Deco, 1935 Constructivist, 1936 Twin, 1940 Tiled, 1960 Angled, 1962 Inverted V, 1963 Batwing, 1970 V wing (*See image 3*), 1970 Angled nosing, 1970 Mushrooms, 1989 Curved nosing, 2000 Umbrellas. Notably, very little has changed since the first gas station was built in the United States around 1925. Indeed, if we take as an example Mobil's station designed by Chermayeff & Geismar and built in the early 1970s, it is interesting to note the striking similarities between this and the latest station designed by Norman Foster for Repsol. The structure at Newark international airport is also very similar to the canopy design by Norman Foster. (Minale, p.12) Similarities between styles are always going to happen by default. A problem with the Foster design is that it can't be retrofitted by another brand. The structure and shape of the canopy is unique to Repsol so if the design was rolled out across the network, it would be difficult for them to sell some stations to another brand, it would be too expensive because the new brand would need to construct a new structure. Using the expressions in Learning from Las Vegas of sheds with signs compared with ducks. The Norman Foster design would be considered as a duck where most stations would be inexpensive sheds with signs.

Material

The material of petrol stations can be categorized under two headings. The first is when the material used in the town or area often referred to as 'vernacular material' is used in the construction of the petrol station. The second and the one which is more common today is where the material used to identify the brand of the petrol station is used. These two contrasting built forms also represent two ideas on culture and globalization. The vernacular idea is what the architect Alvar Alto believed architects had an ethical duty to create. The conflict between 'the little man' and technological civilizations is a recurring, indeed frequently the dominant, theme of most of his later articles and lectures. Alto wrote in 1947, 'American literature is radical, it is striving to show us the reign of terror of industrial production over the little

man'. (Weston, p.148)

The vernacular garage represents 'the little man' it is the product of the craftsman. In contrast to, the steel and alucobond that is rolled out across a large network and mass produced on the assembly line of the technological civilization.

Alto in his initial enthusiasm for Functionalism, accepted with apparent equanimity, that craftsmen would inevitably turn into an 'assembly brigade'. However, he later lamented that the building site will become a railroad yard. He clung on to the belief that it must be possible to humanize technology. For Alto, architecture was always a form of mediation: between man and nature, in the struggle for existence, and between 'the little man' and the bureaucratic institutions and technologies of a mass society. (Weston, p.148)

World design must allow for a variety of forms of construction. One form may be dominant at one particular time and the other suppressed but it is important for the development of an interesting society/societies to have a shifting between various forms and ideas. With Alto, the interest is in his 'search' for the idea, or in the 'struggle' for existence between one thing and another.

Future

As we approach the end of the oil age it is inevitable that we will see a change in the gas station. The way we fuel our transport is going to change, but what effect will the change of fuel have on the gas/petrol station. One possible solution is the electric car and the recharging station. A recent article in Newsweek magazine interviewed Shai Agassi about his new venture, Better Place, he plans to jump-start the fledgling electric auto industry by building an entire infrastructure- cars, recharge stations and more - from scratch. Governments in Israel, Denmark, northern California and elsewhere have signed on.

The approach of the company Better Place is interesting. As they look at the problem of transport from a different perspective than the automotive sector has in the past. In the past they looked at it from how to build a car. Better Place looked at it from the perspective of how to run an entire country without oil. The infrastructure is a combination of a massive amount of charge spots and the ability to

switch batteries in less time it takes to fill up with gasoline. They have coordinated with car manufactures so that their infrastructure will be in place when the cars hit the market. The second change is that the car and the battery, ownership wise, have to be separated. The third change is the business model. You buy the commute by miles, and commute miles include the battery, the electricity, access to the network and battery switching (Newsweek).

World design could be addressed by the reassigning of ownership of land and objects to develop a new system for living. Reforming the way communities and cultures interrelate in the future. The ownership of living accommodation and land could be separated, The citizen could own the house and the objects it contains and the state or development company could maintain the ownership of the land and the infrastructure. In a similar way to the electric cars and the company Better Place which provides the infrastructure. You could pay for the connection of your house to the network that provides electricity, water, waste management and internet connection. Imagine the petrol station becoming a network of infrastructure that allows you to plug in your house as well as your car. Also, the network that provides all the basic needs for citizens to feed off and manages the waste of the community. The 'station network' provides electricity, a battery exchange for your electric car, broadband to the surrounding area, mobile phone and TV signals, and organic food production and food market.

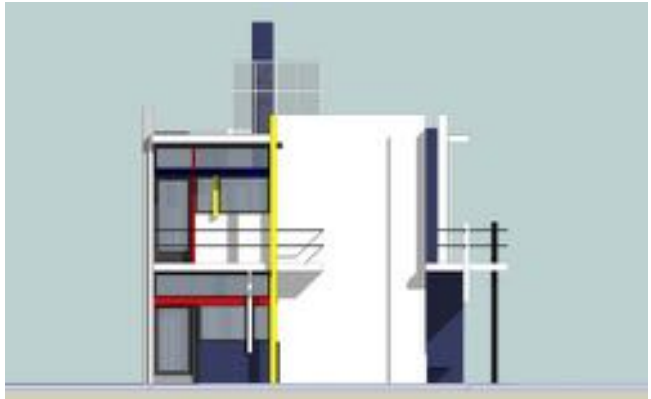
The architecture group Superstudio had a idea for a architectural led order in their project 'The Continious Monument'. Superstudio said 'For those who like ourselves, are convinced that architecture is one of the few was to realize cosmic order on earth, to put things to order and above all to affirm humanity's capacity for acting according to reason, it is a 'moderate utopia' to imagine a future in which all architecture will be created with a single act, from a single design capable of clarifying once and for all the motives which have induced man to build dolmens, menhirs, pyramids, and lastly to trace a white line in the desert. The 'continuous monument' : a form of architecture all equally emerging from a single continuous environment: the world rendered uniform by technology, culture and all the other inevitable forms of imperialism'. (Lang and Menking, p.122)

The future of petrol stations could be as a network for organizing the elements civilizations require must be capable of adopting multiple forms. A typology of organized disorder. A single system capable of taking on multiple forms in adapting to new technologies, climates, cultures and economies. In an adaptation of superstudio's concept of a 'continuous monument' to a 'continuous network'.

The world design 'continuous network': a form of architecture that appreciates the diversity of the world, its cultures and environments. The favorite colour is multi colour. Its flexible system of organization meets the requirements of work, rest and play in a multiple possible array of solutions each specific to the area it inhabits.

Conclusion

Petrol stations are a part of a continuously changing world and an interesting reference point in studying how we perceive it, and imagine ways we might shape it. The signs that are an overpowering element within our environment. Signs that display the worlds branding, constantly bombarding us with images that influence the consumer. They are the cancer that has taken over our public space. Architectural style is organic, styles build up in a random orders in different places. These styles are inflections, each is an individual part that serves to make up the whole. Material choice develops interest by the 'search' and 'struggle' for ideas and an ideal ,one represents technology and the other, as Alto describes ' the little man'. The future could see new ways of organization and ownership, establishing a system that has multiple solutions.



1- Schroder house by Gerrit Rietveld



2- Schroder house by Gerrit Rietveld



2- 1970's 'V' Wing



4- Stephen Wiltshire Drawing of NY



5- Ed Ruscha Painting



6- Roadside Station



7- Typical Station today



8- Station with Branding modified



9- Station by Mies van der Rohe

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THE ONLY
WAY IS
UP?

SARAH KEANE

INTRODUCTION

“All things good of this earth flow into the city”

Pericles of Athens, around 450 BC

- *‘Population increasing in wrong places, planners told’¹*
- *‘Why we must make it more attractive for people to live in apartments’²*
- *‘Take me higher...’³*
- *‘A village at a crossroads’⁴*
- *‘Vocation for regeneration’⁵*
- *‘High noon for urban high-rise: it’s 37-storeys or none at all’⁶*
- *‘Praise for new ‘landmark’ tower in Cork’⁷*
- *‘New thoughts on high-rises’⁸*
- *‘Top European planner ‘astonished’ by rural housing sprawl’⁹*
- *‘City council unveils plans for 22-storey tower’¹⁰*
- *‘Government proposal to encourage working from home’¹¹*
- *‘Plans for city subverted by height arguments’¹²*

Above are only tasters of some of the many headlines regarding our Irish ‘cities’ that have been making appearances in our national papers over the last two years. It is evident that the debate surrounding urban planning and land usage in Ireland is an ongoing one. At present Ireland is a country full of ‘doughnut cities’ i.e. cities where the most rapid growth (including high-rise apartments) is occurring around the fringes. The ideal image is the one present in most European cities today... ‘A cup-cake city’. That is; a city who’s skyline rises in the centre and falls away at the edges. Due to the shape our cities have taken over the last few decades, the population densities in Ireland’s ‘cores’ are extremely low; resulting in urban sprawl, long commutes, rising house prices, congestion, poor public transport and a poorer quality of life. Our cities are empty while our countryside is being eaten up at an alarming rate. Marc Coleman writes in ‘The Best is yet to Come’, *‘The reality is that poor urban and spatial planning has led to a situation where Ireland feels full, even though it is half empty.’*¹³

1

POPULATION = DESTINY

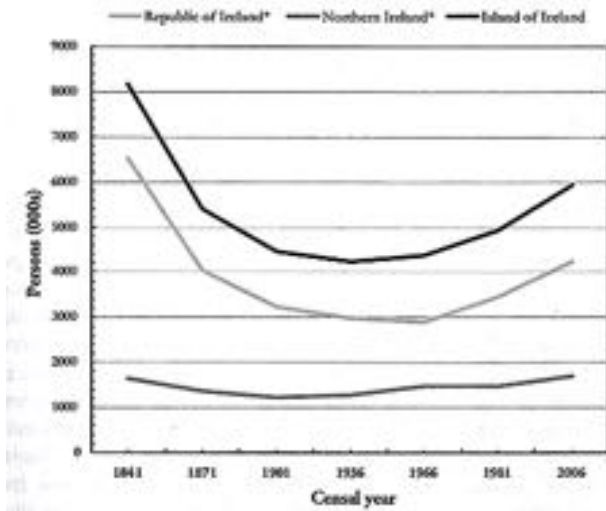
Population plays a huge part in the growth of a city and the formation of its aesthetic character. Ireland's population is thinly spread and regions lack critical mass. The formation of 'cities' in Ireland is failing. Instead, most Irish towns are closer to being described as loosely connected villages than urban centres. It is only Dublin that is shaping up to be a 'city' by European standards. It is hard to believe that before the Great Famine of 1941 Ireland's population was above 8 million, while now it stands at 6 million with 4.2 million living in the republic.¹ While the living conditions in the 1800's were of the most part below what we would consider quality standards, our country today seems unable to deal with, or accommodate the present population. A population that is just about two-thirds its previous size! The question, which stands, is: why hasn't Ireland's population recovered over the decades? Finland experienced a similar epidemic in 1886, however, it's population soon bounced back.² Ireland should be able to manage much more than 6 million and with the population predicted to rise to 9 million in the republic by 2050³, serious thought needs to be put into effective urban planning. Sean O'Laoire of the Irish firm 'MurrayO'Laoire Architects' wrote: "*Harnessing the power of population represents our greatest opportunity to remediate our environment and share the many benefits of scale.*"⁴

DO WE CALL THEM VILLAGES, TOWNS OR CITIES?

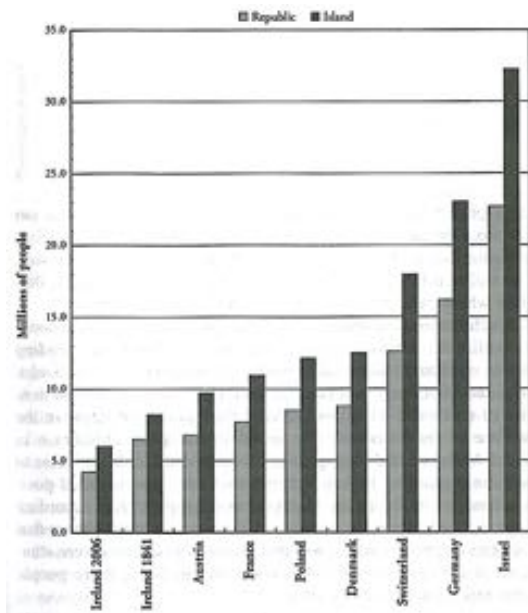
As the population of inner city areas, such as Dublin's Crumlin and Dun Laoighaire, falls, the populations in dormer towns far from Dublin City centre rise dramatically. Instead of being built densely in the centre of a city, apartments are springing up around its edges, beyond decent public transport and in areas devoid of any possibilities to socialize without using a car. That is just in Dublin. Instead of focused, clustered urban development around key cities like Dublin, Cork, Gal-

way, Limerick and Sligo, Ireland is suffering the population equivalent of the measles; a messy proliferation of hundreds of small blotches describes our population growth. As well as having the lowest population density in the EU outside Scandinavia, Ireland also has the third lowest share of population living in cities. (60%)⁵ Other countries spread their urban population evenly between several large cities while Ireland suffers from a severe urban population inequality. Dublin holds one-quarter of the state's population and a half of its urban population. What is left is spread between population centers that most Europeans would have difficulty recognizing as cities. At the time of the 2006 census Dublin city had 506,211 inhabitants but when its sprawling hinterland was added, it rose to 1.2 million! Cork is the second biggest 'city' in the Republic of Ireland even though it only has 120,000 occupants. This is just one-fifth the size of Dublin. Galway, Limerick and Waterford, the only other recognized 'cities' in the Census had populations of 72,414, 52,539 and 45,748 respectively.⁶ In other words, the metropolitan areas of Ireland's second, third, fourth, and fifth cities, when put together would still not exceed metropolitan Dublin! At present Ireland seems to have only one 'city'.

The larger the concentration of population; the richer the diversity of employment opportunities. This is not happening in Ireland. Our country is full of small 'villages.' The economy of a local village can sustain enough demand for a shopkeeper, a hairdresser, a pub owner, a local doctor and perhaps a mechanic but it cannot sustain jobs for computer programmers, engineers, architects, designers or legal consultants. Cities can! The mixture of people with diverse and complementary skills and perspectives is the key to economic growth. Economic clusters attract high quality workers. These areas become attractive business locations; areas that need to be located in well-defined areas, that is, in decently sized cities. The low population density in Ireland has led to problems such as rises in the average cost of public transport, lack of adequate hospitals, schools, postal services, proper broadband coverage etc... Over the last ten years or so as the Celtic Tiger roared, the government promoted increases in population in the smaller towns of Ireland. The vast majority of jobs were being created in Dublin, Limerick, Galway, Cork and Waterford. The housing prices rose in these urban cores to heights that were far too expensive for the average working Irishman. As a result the younger generations of Ireland were forced to live in these small towns that had not yet been properly connected to cities by road, rail or broadband making it impossible to live without a car. People have been banished from our cities by high prices and long commutes! Compared with almost any other prosperous and moderately populated European country, Ireland's cities and towns contain too few people. The needed focus on densification is absent. We need to realize the full potential of our land – especially in urban areas where it floats in the air above our heads.



Source: Central Statistics Office, Statistical Yearbook of Ireland



What if Ireland was as Densely Populated as....?

Source: Central Statistics Office, 2006 Census; UN Population Estimates 2002

2

BOSTON OR BERLIN?

Irish people need to decide how they want to live. It is becoming impractical to continue to live the way we do. Most citizens travel long distances to work for the sacrifice to live in affordable housing. More people travel to cities than the number living in them. Less than half of Dublin's inhabitants live in the area formally known as Dublin City. Instead of drawing people closer to our urban centers we are pushing them away. The truth is that many people don't want to live in cities. Land prices are too expensive, the property market is too competitive and it isn't the most ideal place to raise a family. The quiet, country life is more appealing. Nonetheless, sprawl is creating masses of concrete jungles in the suburbs, which do not offer the same services as our cities. These residential areas are too far from the city to enjoy what is to offer, and no longer small enough to be charming rural towns. Marc Coleman believes: *'Our present approach to urbanization is destroying country life.'*¹ Is it time to change our attitude to living?

BERLIN AND PRENZLAUER BERG

An ongoing national debate, 'Boston or Berlin'² has adapted another meaning over the last few years. The debate, which was begun by former Tanaiste of Ireland; Mary Harney in 2000, addresses the issue of how we want to live as individuals. The debate raged over whether Ireland's economy should emulate social democratic Germany or the robust capitalism of the United States. Mary Harney was keen to stress her commitment to tax cutting, pro-enterprise policies and to mirror the American model of individualism and the free market.³ The debate entitled 'Boston or Berlin' can be viewed as having a very different subject matter. It has the ability to raise the question of how we want our Irish cities to be shaped and how we want them to look.

Should we follow the great American cities such as New York, Boston or Chicago with their high-rise, high-density urban quarters? Or should we follow a more

Boston
SkylinePrenzlauer
Berg,
Berlin

subtle approach such as a European city like Prenzlauer Berg in Berlin with its spacious, well-designed living zones and not a skyscraper in sight?

Prenzlauer Berg is a district located a few kilometers north of Berlin's city center. It was developed during the second half of the 19th century. Its development was based on an urban planning design from 1862 by James Hobrecht, the so-called 'Hobrecht Plan' for Berlin. Envisioned as a working-class district, its tenement houses were mainly inhabited by intellectuals, artists, and students in the former German Democratic Republic. Since German reunification, its housing has, for the most part been renovated. This and rising property values led to more affluent residents moving into some areas of the borough. Today Prenzlauer Berg is one of the most popular districts in Berlin. Spacious and well designed with good facilities and plenty of green space and playgrounds, it is a district dominated by apartment blocks, homes that few Irish people would ever consider raising families in. Full of countless pubs, restaurants, cafes, trendy boutiques galleries and little shops Prenzlauer Berg is a focal point of Berlin's art scene. All retail and services occupy the ground floors of the spacious well designed 6-7 storey blocks, resulting in all inhabitants finding most of the things they need within a kilometre radius of their dwellings, allowing them to sustain a meaningful and high-quality existence. The majority of the residents are young due to the area's hip and vibrant characteristics. As a result, a 'baby boom' has occurred in Prenzlauer Berg in recent years. The well-designed, family friendly district with its excellent public transport and facilities has encouraged this growth in population.⁴

TRADITION V'S NEW

After Le Corbusier's first visit to America in the 1930's his wrote the book 'When the Cathedrals were White – a journey to the country of timid people.' In it

he describes the skyscrapers of New York as being “*too small*” and “*not rational*”. He believed that there were far too many skyscrapers in New York and that those, which didn’t fulfil certain functions were diseases within the city.⁵ The skyscraper was to fulfil a certain degree of capacity and was to have an appropriate amount of free ground space at its base. He felt New York was infected with many diseases. The skyscraper is a “*wonderful instrument of concentration, to be placed in the midst of vast open spaces. The density in the skyscraper and the free area at the foot of the skyscraper constitute an indissoluble function. The one without the other is a catastrophe. That is what New York has arrived at!*”⁶ The population of New York at the time was rising, along with the city’s traffic and the city was lacking open spaces, becoming over crowded with high-rise. The spacing of buildings was not in Corbusier’s eyes, sufficient. This has happened to many of the high-rise buildings in Ireland. The relationship with the ground, the street and the urban context has not been considered and their main reason for construction was not to solve urban density issues but to create gaudy ‘iconic’ images on the skyline. The Clarion in Limerick is a good example of this.

“*What are we in our flat cities? What is our response to the skyscrapers of Manhattan?*”⁷ Upon returning to his home city of Paris after his visit to America, Corbusier realised that the USA had grown up and he tried to come to terms with this progression in relation to the city of Paris. The French response at the time, to the American skyscrapers seemed to be present in places like Versailles with its palace, the commune district of Fontainebleau with its Chateau de Fontainebleau, and the former Parisian province of Touraine (known for its number of chateaux such as Chenonceaux and Chambord.)⁸ Even still, Europe was quickly being thrust aside as it remained ‘flat’ in comparison to the new and prodigious architectural events that were occurring ‘across the pond’. Paris was and still is a completely different city to that of New York or any of the other American cities. Le Corbusier felt however, that “*Paris is good, not because of its dimensions, which are rather small, or at least minimum, but through the harmony which exists in certain of its urban elements form the smallest detail to the ensemble against the sky.*”⁹ Could the skyscrapers of the new world have been too much, too extravagant, ignorant, perhaps? The building boom of the 1920’s in America could be viewed by some as an explosion of uncontrolled youth, of greed, of unchained power and glory. European cities did not grow vertically as fast as the US possibly due to an inner battle between the traditional and the new. America was the new world. Chicago, New York and Boston were the new cities that weren’t tied down from centuries of traditions of living and building methods. One of Europe’s feet was stuck in the thick ground of the past while the other foot was longing to be in the air looking for a place to set itself down. Perhaps good architecture lies not in the gigantic forms of the high-rise family but lies in the smaller things such as the finish details of the Parisian houses or the carefully designed narrow streets of Paris?

PARIS AND THE BUILDING BAN

An interesting thing has happened to Paris in recent years. In 1973 the infamous Tour Montparnasse was completed. Paris' first skyscraper stood at 210m (689ft, 59 floors) becoming the second tallest structure in the city after the Eiffel Tower.¹⁰ During its construction the tower was very popular as it symbolised a new and modern Paris. After its completion views on the new addition to the city changed very quickly when the public realised how much it intruded the skyline. Its simple architecture, gigantic proportions and monolithic appearance were criticised for being out of place in Paris's urban landscape and, as a result, two years after its completion, the construction of skyscrapers in the city centre was banned, putting a height limit of 37m on buildings.¹¹ As a result, a generation of towers began to grow in La Defence, a major business district outside Paris. Today it contains 72 glass-and-steel slick buildings including 14 high-rises above 150 metres (490 ft).¹² The Parisians on the other hand still remain steadily opposed to skyscrapers. In their eyes, high-rise towers are synonymous with New York or Shanghai and would be a blot on the unique urban landscape designed by the French civic planner; Baron Georges Eugene Haussmann in the 1860's. In July of 2008 the ban on high-rise in Paris was lifted as officials became eager to rejuvenate the city.¹³ What quickly followed was a list of designs for potential new and modern 'landmarks' for the city. One such design is 'Projet Triangle' by Herzog and De Meuron to be located in Porte de Versailles in southern Paris. The initial plan was for a 180m-high building, making it the third tallest in Paris, after the 325m Eiffel Tower and the 210m Montparnasse Tower. Mr Herzog, however, said that he wanted to add a few more floors to reach 211m "*just so we can beat Montparnasse*".¹⁴ The glass pyramid will become a 'vertical city' and will provide housing, office space, a hotel etc.... The Paris Council hope to overtake rivals such as London, Berlin and Barcelona as Europe's most vibrant metropolis through their decision to scrap the law of height limits in the city. We are beginning to witness the greed and competitiveness, which existed in America at the time of the high-rise boom. Will the character of our European cities be lost in the search for the world's tallest building? At present 63% of Parisians are opposed to the giant triangle comparing it to something only worthy of Vegas or Disneyland.



View of Paris skyline from Tour Montparnasse



View of *Tour Montparnasse* with Paris' high-rise districts in the background

Proposed *Projet Triangle* - Herzog and DeMeuron



The Dublin skyline may need to contain elements of both Prenzlauer Berg and Boston. It may also need the attention to detail, which Le Corbusier spoke of when describing Paris. The idea of skyscraper apartments spanning our cities is a bit too – farfetched and while urban designs such as Berlin’s districts may work in the smaller towns of Ireland, it is hard to imagine it working in a fast growing city such as Dublin. Achieving the density dividend (i.e., the larger the concentration of population, the richer the diversity of employment opportunities) doesn’t necessarily require ‘Boston skylines’. But, if Irish citizens are to be able to buy affordable property within reasonable distance of family, friends and work then we have to accept that we need to increase the density of our urban quarters and discover new ways of living, moving away from the traditional ‘house and back garden scenarios.’ It is ironic that our dislike of urban centers stems from a belief that rural living is a good thing and that urbanization threatens it. Rural living is a good thing; it is free from the stereotypical stresses and strains that are believed to come with city life. Far from threatening rural life, urbanization enhances it by ensuring that cities grow within their limits, through building up, rather than out, thus protecting rural areas from urban sprawl. At present, many living in the more rural areas are the ones undergoing severe stresses and strains due to long commutes and congestion. Could the ‘city’ be the answer to a more harmonious life? With many plans for high-rise in the pipeline, the idea of a denser city is not unimaginable, as long as the location of such structures and their context is taken into consideration. As the famous saying goes... ‘Location, location, location!’

3

A METROPOLIS FOR TOMORROW

Below are two very similar descriptions of first impressions of the new world of New York in the 1920's.

“A gigantic mass of heaven assailing architecture...one’s heart beats quicker such is the sensation of great power in the builders of those monstrous cliffs of concrete and steel that blaze in the evening light.... Here in New York does an actual architecture soar above the dreams imaginative artists have conceived of the Towers of Babel.”

Irish poet and liberal writer, George Russell; ‘An Impression of America.’¹

“

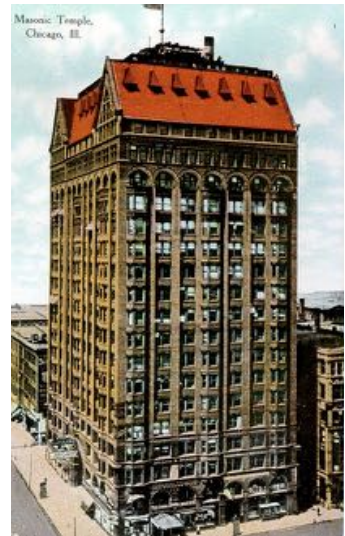
A thousand feet of height, in stone, steel and glass, standing up in the magnificently blue sky of New York, is a new event in human history which up to now had only a legend on that theme: That of the Towers of Babel”

Le Corbusier; ‘When the Cathedrals were White’²

A study of the birth of high-rise development should guide us in our search for the answers to Ireland’s planning problems. During the first half of the twentieth century New York and Chicago constituted the country’s only skyscraper metropolis. After Corbusier’s first visit to America he wrote about his impressions of the new ‘vertical city’ of New York; *“It is the first time that men have projected all their strength and labor into the sky – a whole city in the free air of the sky”*.³ High-rise developed in both cities due to several reasons: a rapid increase in population, increased demand for office space, high land prices, excellent exposure for businesses, good lighting conditions and more rentable property; similar demands and strains which exist in our country today.⁴

Many of the building techniques and designs used at the time had a profound effect on architecture in Ireland. The bold new structures with multi-storey steel frames caught the imaginations of architects all over Europe. During the early years of the 19th century the influence of America, especially Chicago, became apparent even in relatively modest buildings in Ireland. In 1885 one of the world's first skyscrapers was built in Chicago: the Home Insurance Building consisting of ten stories and measuring a height of 42m. The Irish journal, the *Irish Builder* showed that the Irish had a very early awareness of the development of commercial architecture in America when they published a full-page reproduction of a perspective drawing of the Insurance Building signed by the architect William Le Baron Jenney.⁵ It has been noted that between the years 1886 to 1900, the *Irish Builder* published more than twenty articles and illustrations of American buildings as well as many other pieces on American subjects. In 1896 the journal published an anonymous piece entitled 'A City of Steel', which described many of the pioneer commercial buildings now considered works of the Chicago School, including the Masonic Temple and the Rookery building by Burnham and Root, the Manhattan by Le Baron Jenney and the Tacoma by Holabird and Roche.⁶ It proved to be an excellent report on the new architecture of Chicago in the 1890s, discussing the 'skeleton' method of construction, the fireproofing of the structural steel, the solutions to the foundation problems and the use of elevators: all hallmarks of the early modern architecture of the Chicago School.⁷

Masonic Temple Burnam & Root 1891 -92

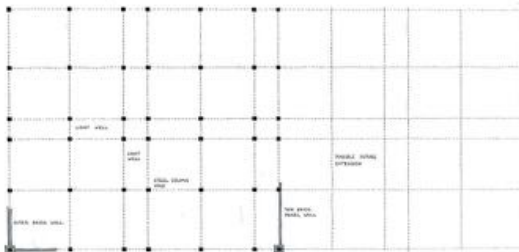


Perspective Drawing - Home Insurance Building, Chicago, 1885;
Signed by architect William Le Baron Jenney.
Reproduced in *Irish Builder*, vol. 28 (15 May 1886), pg 147.
Courtesy of *Irish Architectural Archive*

'The skyscraper is built of steel – a skeleton woven like a filigree in the sky, a spidery thing, marvelously clear and free.'

Le Corbusier – 'When the Cathedrals were White'⁸

Irish architects and developers were more concerned with the aesthetics and structural designs of the buildings of these cities rather than their overall urban plan. One of the first buildings to be clearly influenced by the Chicago School was the Large Buildings in Castle Place, Belfast, designed by the architect W.H. Lynn and completed in 1900. Lynn's design from the sketch designs of the 1880s to the finished building, reveal distinct and dramatic changes to the front elevation. The final design of the façade consisted of a large semi-circular arch rising from conventional columns. If these Classical columns were removed the building would bear a striking resemblance to several Chicago works of the mid – 1880s and early 1890s, particularly the Rookery as mentioned before.⁹ Another, the Market Store House in the Guinness Brewery in Dublin (1904 - Mc Laughlin and Harvey) is a close response to H.H Richardson's Marshall Field Store in Chicago, completed in 1885. Richardson's building was one, which set precedents for the many later (what has been called) 'Richardsonian Romanesque' works.¹⁰ The Store House in Dublin was the first steel-framed, multi-storey building in Ireland and the United Kingdom. It is a very large structure whose outer walls are made of brick. The structural framing is made of steel and is exposed in the interior, an interesting feature as it allows us to examine its structure in situ. The main structural grids are separated by narrow light wells, which stretch the entire height of the building (130 ft). This characteristic is very close to that of Richardson's design. It has also been said to have a strong affinity with other works such as Women's Temperance Temple and the Auditorium. Its form and the vertical arrangement of its windows also resemble the New York Life Insurance Building in Omaha. By comparing the Store House to the earlier Malt Store, Market St, Dublin (1885-6), the effect of the new American architecture can be seen. The exterior brick facing of the Store House, which encases the outer elements of the structural grid, does not carry outer loads of the building as in the Malt Store and other 19th century buildings. The Store House was the first to use a major thin outer skin, true to the 'Chicago manner'.¹¹



Structure plan of Market Store with narrow light well along the center



The Bank Buildings, Castle Place, Belfast, Ireland. 1900
Architect W.H Lynn



The Rookery, Chicago, 1888,
Architects Burham and Root

The first building to be clearly influenced by the Chicago School, at least on outward appearance, was the large Bank Buildings in Castle Place, Belfast, completed in 1900. It's facade bears a striking resemblance to the Rookery Building in Chicago, built in 1888.

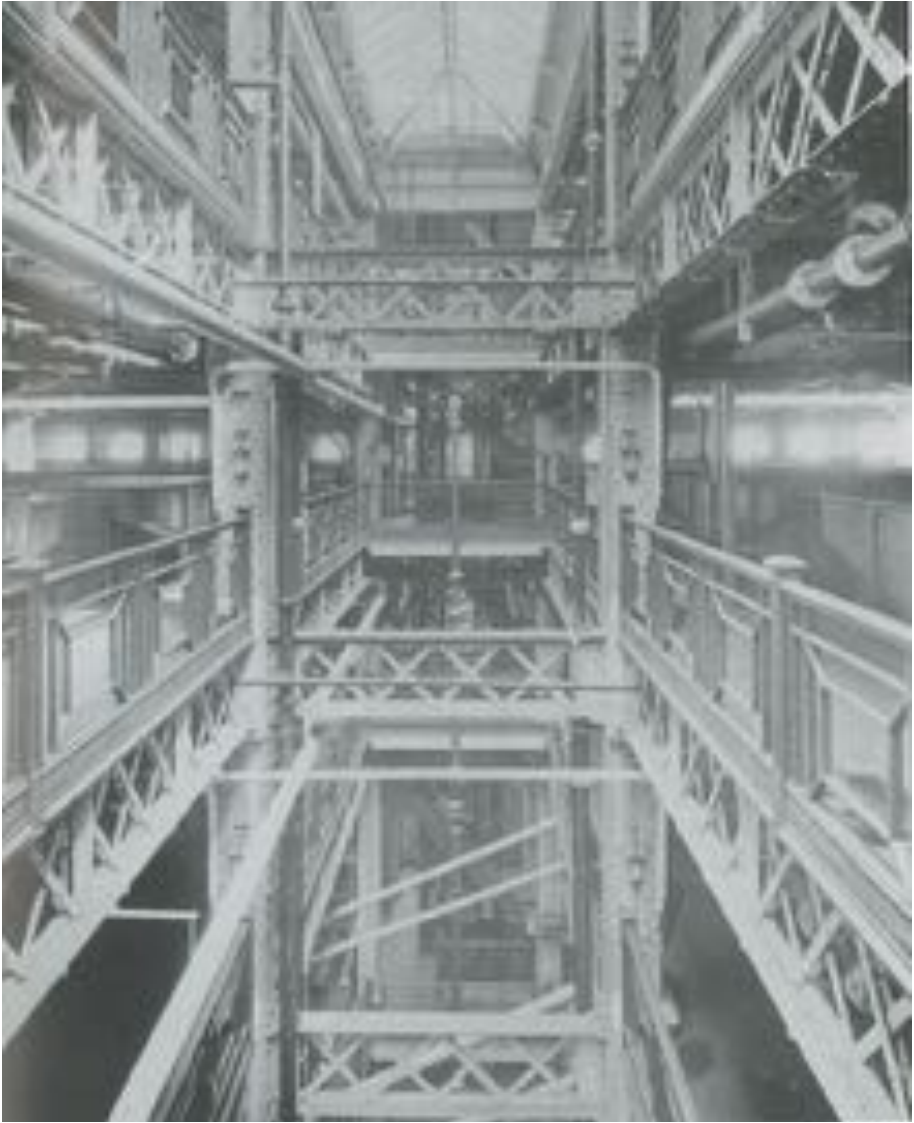
If a single building in Ireland could be said to epitomize the influence of H.H Richardson, and indeed also that of the Chicago School, it must be the Market Store House in the Guinness Brewery in Dublin. It's deep plan form, using light wells, is so close to that of Richardson's Marshall Field Store in Chicago.

Market St. Store exterior showing the corner 'bastions'
Image courtesy of Guinness archive, Dublin



Marshall Field Store, Chicago, 1887
Architect Henry Hobson Richardson





Market St. Store House, interior. Although the building appears to be completely in steel the main floors are concrete, laid on brick jack-arches. *Courtesy Guinness archive, Dublin.*

The structure has been erected on what is commonly known as the American principle of construction'

The Daily Express report after the completion of the Market St. Store House in 1904¹³

'The result shows that, given the opportunity, Irish firms are capable of emulating, and, in this case, excelling the achievements of contemporaries across the Channel and in America both as regards workmanship and rapidity of execution.'

The Irish Times on the building's comparisons with America, 1904¹²

The new giant skyscrapers of America provoked excitement and awe among Irish architects and developers. Through architects such as Joseph Vincent Downes and travelers such as George Russell, the Irish people began to learn more about the inventiveness and adventurous spirit of the New World.

J.V. Downes made several trips to the United States in the 1920s and 1930s and amongst the buildings he photographed were the Rockefeller Centre, The Philadelphia Savings Fund Society building, by Howe and Lecaze, and the fantastic, Art Deco-style Transportation Building at the Chicago Fair of 1933. On his return in early 1934 he delivered a paper to the AAI entitled 'Four American Cities'. The Irish Builder reported that there was standing room only at the lecture. Illustrations of the skyscrapers of New York were shown and the writer described the reaction of the audience: *"While however we might have gasped and our sense of what is right and fitting may have been outraged by structural monstrosities... for such they may appear to be to those of limited experience... Mr. Downes inspired us with an admiration of the courage of those who undertake the design of such works..."*¹³

As the years went by Ireland watched in amazement as the great cities grew closer to the skies and it wasn't until 1965 that Ireland's first 'skyscraper' was built. Liberty Hall, headquarters of the Services, Industrial, Professional, and Technical Union (SIPTU) located along the River Liffey in Dublin stands at 16 stories, 60 meters high. It was originally the tallest storied building in the Republic of Ireland until it was superseded in 1968 by the County Hall, outside Cork city. As the buildings grew in America and in other European cities so did Irelands but at a much smaller scale. In September '08 the County Hall was surpassed by the Elysian also in Cork, a 17 storey mixed-used building with a total height measuring 72 meters. At present it stands as the highest building in the republic of Ireland. Although, with the go ahead given to many more 'skyscrapers' in Ireland including the Heuston Gate development, a 32-storey tower measuring 117 meters in Dublin and the Britain Quay

Tower (aka. U2 Tower) measuring 130 meters, in the South Docklands of Dublin, the reigning king of the high-rise is soon to change. On the contrary, it is interesting that at present it is structures such as our spired cathedrals (e.g. St John's in Limerick; 93.8m) and our bridges (e.g. Boyne River Bridge; 95m) that are holding onto the true title of the 'highest structures'.⁶ I shall ask the question; 'Has the time come for modern corporate buildings to dominate the skyline and over-look some of our cities oldest and historic monuments?' Or should we be sensitive to our cities existing skylines and historic cores?



Rockefeller Centre, New York, 1928-40. Model, photographed by J.V. Downnes. Downnes slide coll., slide no. 1350. *Courtesy of UCD School of Architecture Library.*

4

LAWS ARE TOOLS FOR SHAPING

‘The rule of money is strong; it absorbs an infinite amount of energy. If the skyscrapers are constructed wonderfully fast, in the record time of one or two years, complete, equipped, exactly on schedule, it is not the result of a shattering rapidity of mind; it is simply the imperitive law of money which mobilizes energies as I in the midst of a battlefield.’

Le Corbusier – “When the Cathedrals were White”¹

WEDDING CAKES AND TOWERS

The driving force behind the growth and shaping of the most famous cities in the world seem to always relate back to finance and building laws. Chicago and New York both offered strikingly different models of the skyscraper design and urban development, one regulated, the other ‘laissez faire’.² Due to the absence of height restrictions in New York at the beginning of its high-rise boom and small land plots, its skyline was dominant with tall, slender towers. Chicago, on the other hand, had zoning laws that capped heights of the buildings and along with large building lots; its early twentieth century silhouette consisted of low, flat-topped box like structures. Over the years that followed planning laws changed in both cities, alternating the heights and forms of its buildings.³ New York developed the classic ‘wedding-cake’, setback forms while Chicago developed the base and tower form. A century or more later and Ireland’s planning and zoning laws are too, having a strong affect on the formation of our cities. The Dublin City Development Plan 2005 – 2011 sets out a strategy to steer future growth – the development of suburban centers (Prime Urban Centers) and the development of key strategic Framework Development Areas. The city development plan includes the proposal ‘Maximizing the City’s Potential: A Strategy for Intensification and Height’. It identifies Dublin’s high and low-density areas, areas of potential economic and social development and zones, which deem suitable for future high-rise.⁴ ‘Dublin is predominantly a low-rise city,

and has remained so through the significant regeneration over the past 20 years, with heights generally maintaining European scale of 6-7 storeys. In looking forward towards higher density and more sustainable forms of development, the role of high buildings has been considered.’⁵ Through the intensification strategy Dublin City Council plan to promote height in a selected number of locations where it can make a significant contribution to the economic growth and development of the city. *‘While promoting height, Dublin City Council is also adopting a co-coordinated policy in order to prevent visual clutter or unintentional negative disruption of the city skyline.’*⁶



Tall towers and pyramidal setbacks characterize Lower Manhattan's skyline in the 1930's
Chicago's Loop in the 1930's presents a flat-roofed plateau punctuated by a few truncated towers.

PROPORTIONS

Proportion, scale, geometry, materials, and context are all the key factors we need to consider when introducing new structures into our cities. The correct placement of high-rise within the urban context is crucial for the city to operate smoothly and efficiently. If the context surrounding the new structure is not complimented; this ‘great landmark’ may dwarf and throw out of scale the small region at its base. In ‘The Image of the City’, Kevin Lynch writes, “A landmark feature may be so alien to the character of a district as to dissolve the regional continuity, or it may, on the other hand, stand in just the right contrast that intensifies that continuity.”⁷ High-rise will not work if it appears alien to the existing urban fabric (as I explained in Chapter 2 – Boston or Berlin), this is what happened to Paris in the 70’s.) Having said that, a certain degree of contrast is required for high-rise to work. A tower silhouetted over low roofs can have a huge visual impact on the cityscape. Single high-rise buildings are in many cities, weak references by themselves but if they are clustered they reinforce each other in a much more additive way. In the Netherlands the common strategy to incorporate high-rise in the skyline is to group them.⁸ Only slender structures like the Eiffel Tower in Paris can sustain the exception to that rule.

HEIGHT NEEDS BOUNDRIES

The introduction of height into the Irish cities is a big move as the history of high-rise in Ireland is relatively young. Dublin City Council has given a definition to the word ‘height’ in the Dublin City Development Plan. “A high building can be defined as a building that is significantly higher than neighbourhood or surrounding development.”⁹ In the plan they identify four height thresholds for buildings:

Low-Rise	up to 15m, 4 storeys
Mid-Rise	15m to 50m, 12 – 15 storeys
High-Rise	50m to 150m,
Super-High Rise	above 150m

It is evident in the plan that the label of ‘high-rise’ is allocated to a building not only depending on its physical height but also on how it sits in its surrounding context. “Within the context of Dublin, Liberty Hall at 58m is a high rise landmark building, in contrast to the tower at Charlotte Quay of 48m (mid rise) which sits comfortably in context with its surroundings.”¹⁰ The importance of urban setting cannot be emphasised enough. In the Cork City Development Plan 2009 – 2015 urban design is defined as; “the art of making people friendly places, and considers the relationships of buildings to one another and to the spaces around them.” “The City Council will require

development proposals to have clear and logical landscape strategies and landscape structures which add to the landscape character of the city."¹¹ Cork City Council has as Dublin has capped the height of buildings in the city center with the tallest building allowed to reach roughly 32 meters. Along with Dublin, they too have located certain areas where high-rise will work in order to be sensitive to the existing grain and landscape and to create a 'legible city'.

In all the 'City Development Plans' of Ireland each set out a list of 'rules' in regard to high-rise developments. Such rules allow a boundary as such to be created which gives the city a certain degree of control over its vertical growth. If such rules weren't in place the characteristics of the Irish cities would be lost, their historic cores would be destroyed and the existing high-rise churches and spires would be engulfed. With each city being different, each 'rule book' is different, therefore we hope that the generic 'iconic buildings' will not be seen all over the country. Instead we hope that the future 'skyscrapers' of Ireland will have their own unique identity and form in each city, much like the wedding cakes of New York and the towers of Chicago.



Zoning diagrams of New York, three height districts
(image - Carol Willis - Form Follows Finance)

5

THE ROLE OF THE SKYSCRAPER

We must ask ourselves what is the role of the skyscraper? Carol Willis, author of 'Form Follows Finance' wrote "*Skyscrapers must be understood both as the locus of business and as businesses themselves*".¹ Since the beginning of the skyscraper, the structures were symbolic to 'big business' and as a result created the clichéd 'Corporate Skyline'. In 'When the Cathedrals were White' Le Corbusier describes the skyscrapers in New York as 'acrobatic feats'. "*Here the skyscraper is not an element of city planning, but a banner in the sky, a fireworks rocket*".²

THE OFFICE UNIT AS THE BUILDING BLOCK

Form the 1800s through to the 1920s the consolidation of industry and business and the rise of corporate capitalism helped transform American cities. The companies themselves built most of the skyscrapers. Therefore, was the role of the building to promote its owner's business? On the other hand, the majority of skyscrapers built at the time were not corporate headquarters but speculative buildings i.e. built by individuals or groups of investors purely as rental properties.³ Also, many of the 'big businesses', which erected the corporate skyscrapers, only occupied a fraction of the building while renting out the rest to other smaller companies. All in all, the main function of the skyscrapers was to either promote or house businesses of many kinds. Carol Willis writes that the "*Skyscrapers are the ultimate architecture of capitalism. The first blueprint for every tall building is a balance sheet of estimated costs and returns.*"⁴ We must remember that the skyscraper was designed from the inside out. The first office unit was designed and repeated numerous times, through numerous floors. Isn't that a sign? If one unit of the skyscraper equals one office, then isn't its role purely corporate? "*The great masters of economic destiny are up there, like eagles, in the silence of their eminences. Seated in their chairs, framed by two plate glass windows which fuse their rooms with the surrounding space...*"⁵

LANDMARK

Ireland seems to be looking at the skyscraper as a tool that will not only enhance the corporate and economic side of things, but also will also solve low-density issues, urban sprawl and promote our 'fair city'. Dublin City Council write in their City Development Plan that high-rise in Dublin will have three functions: ⁶

1. Landmarks: They will identify places and key activities in the city – formally spires and domes, now marking new centers and gateways and contributing to urban legibility.
2. Icons: They will be images of modernity, significant prosperity and ambition.
3. High-Density: They will form clusters with significant capacity to promote urban regeneration and increase Dublin's competitive edge.

The description of the skyscraper as a 'landmark' is an interesting one. Kevin Lynch in 'The Image of the City' describes landmarks as one of the key physical forms of the city along with paths, edges, districts and nodes. Landmarks are "*point references*". "*Their use involves the singling out of one element from a host of possibilities.*" ⁷ He believes that landmarks whether big or small are one of the key components that guide the person through the city. "*Landmarks may be within the city or at such a distance that for all practical purposes they symbolize a constant direction.*" ⁸

Landmarks are not necessarily just multi-storey buildings, they can be simple physical elements which may vary widely in scale from a tower silhouetted over low roofs, a church among stores, a street with a certain kind of brick paving, doorways of houses in a certain district, etc... Landmarks can indeed be skyscrapers but they can be many more things too and together they become elements, which the everyday person uses to help them move easily through their city. Kevin Lynch describes this tendency of city dwellers relying increasingly on systems of landmarks as their guidebook.

However, when viewing high-rise landmarks from a distance it can be difficult to pinpoint their exact location. It is an extremely interesting subject in regards to city organization and planning. Kevin Lynch describes such landmarks as sometimes appearing '*bottomless*' among the dense urban landscape. One may identify a certain building from a distance but may not be able to make their way to its base. In Boston 'The John Hancock Building', the 'Custom House', and the 'Court House'

are “all dominant on the general skyline but the location and identity of their base is by no mean as significant as that of their top”.⁹ Landmarks in cities will not work on their own but along with other city elements they will. We as designers must create cities, which are richly provided with landmarks, districts, nodes and paths, cities that make use of not just one or two form qualities but of all of them.



Entering Boston City along the Charles River View of city and all its elements.

THE SKYLINE

Tests made by Kevin Lynch on the three American cities; Boston, New Jersey, and Los Angeles made clear the significance of space and breadth of view. “*The dominance of Boston’s Charles River edge is based on the wide visual sweep it affords on entering the city from this side, a large number of city elements can be seen at once in their relations; one position relative to the whole is abundantly clear. Los Angeles’ Civic Center was noted for its spatial openness; Jersey City subjects responded to the view before them as they descended the Palisades toward the Manhattan skyline.*”¹⁰ People get pleasure from the view of a city skyline. A broad view of a city may expose chaos, express characterless loneliness. A well-managed panorama seems to be a staple urban enjoyment. Dublin City Council note in the plan that while they are “*promoting height in Dublin City, they are adopting a co-coordinated policy to prevent visual clutter or unintentional negative disruption of the city skyline.*”¹¹ It is important to create a well-proportioned cityscape that can be easily read and understood by the eye.

CONCENTRATIONS

“The skyscraper is an instrument for the concentration of population, for getting rid of land congestion, for classification, for internal efficiency.”¹²

Le Corbusier, ‘When the Cathedrals were White’

The skyscraper is a miracle in the urbanization of cities. It makes possible extraordinary concentrations from 3,000 to 4,000 persons on each 2 and one half acres and it does so while taking up only 8% to 12% of the ground, 92% - 88% being restored, usable, available to circulation of pedestrians and cars. It is the answer to urban density issues.¹³ High-rise at the moment in Ireland is being built not to solve urban density issues, but instead they are corporate driven and are taking on the role of creating ‘iconic images’. This is where the problem lies.

BALLYMUN

Attempts in the past to solve housing issues using high-rise did not work. The ‘Ballymun Flats’ in Dublin were built in the 1960s to accommodate the rising population, and particularly to accommodate former residents of inner-city areas, which were being cleared in the process of the 1960s ‘urban slum clearances’. The area suffered from many social problems such as drugs with rampant crime as well as many other problems. The deployment of the flats has been described as the ‘Irish state’s *worst planning disaster*’ by the environmental journalist, Frank McDonald, in his book ‘The Construction of Dublin’.¹⁴ The ill-conceived high-rise towers were thrown up as a quick-fix solution to the housing crisis of the 1960s. Lack of amenities and poor maintenance over the years forced disillusioned residents to band together to campaign for improvements. The suburb is now undergoing a multi-billion euro renewal. Over the next 10 years, as a key part of the regeneration of Ballymun, all of the Ballymun flats blocks will be decanted, soft stripped, cleared of hazardous substances and demolished. The first demolitions began around mid-2004 and the demolition programme is expected to finish this year.¹⁵ The solutions may not lie in the building of high-rise developments in single locations but may instead involve managing increased densities with supporting facilities and services at district level. The truth is that high-rise will not work unless there is long – term management of such developments in place. If such issues are not addressed in our urban management, the conflicts and tensions surrounding the introduction of high-rise will continue.



Ballymun Flats, Irelands answer in the 60's to Dublin's Tenement's Crisis

6

RECESSION MEANS REALITY

The 'R' word is something which has taken over our newspapers, televisions, radios and our minds on a daily basis over the last year. Yes folks, Ireland is in a recession! So, is all this talk of regeneration plans, new and exciting buildings, improved transport facilities and the moderisation of our cities really just talk or are there possibilities of such wonderful things when our economy is in an economic crisis? It seems that after a significant boom in Irish building over the last ten years or more we are at the end of our adventure. Many of the plans of high-rise building have been put on hold so the hope of our shiny new cities is dwindling fast. With the R.I.A.I (Royal Institute of Architects of Ireland reporting more than 40% of Irish architects loosing their jobs in 2008,¹ it seems that we are paying the price and it is an expensive one. All is not lost however. We must review the history of such building boom phenomena.

THE PRODUCTS OF THE GREAT DEPRESSION

In the Great Depression of the early 1930s, the ambitious building of Manhattan's three greatest skyscrapers demonstrated the confidence in the future that in the end turned out to be fully justified.² The Chrysler Building, the Empire State Building and Rockefeller Centre were all built around this time and while the Empire State Building remained three quarters empty for the first decade of its existence, it eventually began to turn a profit by 1950 and is now noted as one of the most famous iconic buildings in the world. Cities grow primarily in the fits and starts that are real estate cycles with the tallest buildings generally appearing just before the end of the boom. So at the beginning of a recession has the boom of the tall buildings ended before it has barely begun? We must decide if the skyscraper really is the answer to all our problems. Marc Coleman writes about the 2006 Census in his book 'The Best is Yet to Come'. Between 1996 and 2006 over 600,000 dwellings were built. Some 266,000 were reported as being vacant on the day of the 2006 Census, of which 50,000 were holiday homes. Allowing for the fact that some occupants may

have been absent that day it still left around 200,000 empty houses in the state.³ So, with so many vacant dwellings why are we panicking to accommodate the growing population? The amount of vacant housing could accommodate almost a third of the population growth expected between now and 2050.



The Empire State Building, New York, 1931



The Chrysler Building, New York, 1930

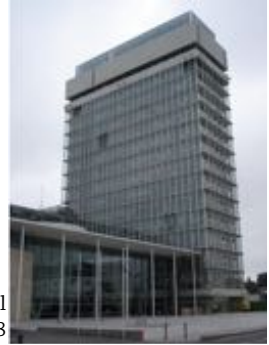
INFRASTRUCTURE OVER ARCHITECTURE

Housing and apartments in cities were historically developed with enclosed courtyards or open spaces with good rail infrastructure and good urban management. After the Second World War the development of many European cities was driven by and created around urban and regional transit systems such as metro or urban trams. Ireland has seen many proposals for high-rise in the last few years but the absence of integration in the management of urban development – in terms of transport and district-level facilities makes the creation of high-density residential developments in Ireland problematic. Sterrin O’Shea of the small Irish firm Sterrin O’Shea Architects speaks of the future of Dublin’s urban development and believes that strong infrastructure needs to be in place before we begin to build. “*London has had an underground for 150 years. In a way, the infrastructure has to be there before all the building and all the urban ideas can work.*”⁴ Existing infrastructure deficits will only be exaggerated by additional development. I believe that such deficits require attention before our skylines do. Comparisons with other European cities indicate that

our planning, urban management and development systems start from a radically different policy basis.



Liberty Hall, Dublin
1965



Cork County Hall
1968



The Elysian,
Cork
2008



The Clarion,
Limerick

Existing High - Rise in Ireland

It seems that “*There is nothing like a recession for bringing architecture back to its senses*” (Hugh Pearman and Shane O’Toole, Culture Magazine, Jan 09).⁵ With less money to build, there is more time to think. Time to think about our cities as they are, to examine them as they are without thinking about what to build next. The reign of the over blown, eccentric and crowd stoppin’ ‘iconic’ buildings is over. After the last Irish recession in the 1980’s a new generation of cool modernists were born. So what will be the aftermath of this one? Even though the property market has slowed down, the growth of the population hasn’t. The existing problems of sprawl etc. will not begin to dissappear as the recession moves through the years. Building is still going on, but developers, architects, planners and engineers now have more time to carefully decide which building goes where, how it will be built etc.. We need

to put more thought into how our cities move, our existing infrastructure and our urban management. When the time comes to start building again we will be ready. I think we should take the Recession with a pinch of salt and look at it as a blessing. With many of the speculative buildings that have shot up in the last few years remaining vacant we can be brought back down to the ground and back to our senses. The future of high-rise is still on the horizon, it just may take more time than we thought. Better planning and design will be the result of this precious time given to us and it will be worth it all in the end. All we need is a bit of patience.

“It is clear that the form of a city or a metropolis will not exhibit some gigantic, stratified order. It will be a complicated pattern, continuous and whole, yet intricate and mobile. It must be plastic to the perceptual habits of thousands of citizens, open-ended to the change of function and meaning, receptive to the formation of new imagery. It must invite its viewers to explore the world.”⁶

Kevin Lynch, *The Image of the City*.



The only way is up: a Pittsburgh - style skyline imposed on the Dublin docklands area (looking upriver).
Image courtesy of The Irish Times, Sept 2007

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