# THE BOOK OF DISSERTATIONS VOLUME ONE

Sarah Mannion · Padraig Connolly · Jane Kissane · Orla Punch · Laura Pembroke · Rachael Rodkinson · Alex Griffin · Louise Fleming · Anna Bokodi · Paul Keane

*The Saul press · Two thousand and thirteen*

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**The book of dissertations. Volume One**

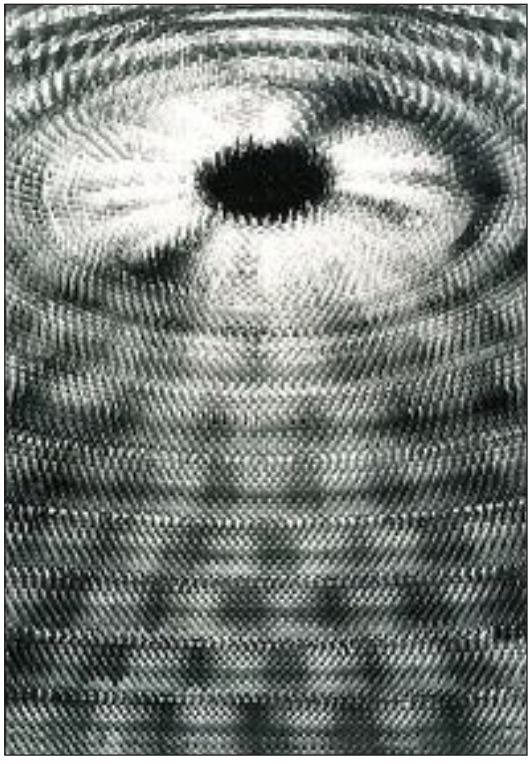
*This volume includes History and Theory dissertations written by the Third Year students of SAUL in the academic year 2012-2013.*

*Dissertations were supervised by Irénée Scalbert and the design layout was done by the students themselves under the guidance of Javier Burón.*

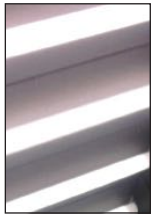
*May 2013*
**School of Architecture**
**University of Limerick**

A TALE OF

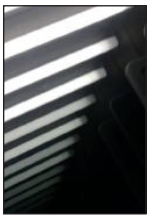
# WORLDS WITHOUT END



BY SARAH MANNION



## Contents



# Prologue

'If you have built castles in the air, your work need not be lost; that is where they should be. Now put the foundations under them.'
Henry David Thoreau, *Walden*

This is an invitation by a writer to join him in the act of imagining. He asks us to deposit first our thoughts in an unreal realm - to mould and contemplate them, to learn from them by expanding each to its fullest extent. We must enter the imagination, that platform for irrational thought that exists in every mind. It is most commonly a place that we each arrive at alone, then dwell in, often for extended periods of time weaving strands of thought into fabrications, before occasionally giving external expression to its contents through

words, pictures, actions or moving, perhaps interactive images. We follow long and complicated thought processes, sometimes consciously visiting this most malleable place and other times entering into it subconsciously and uncontrollably.

It must be stressed that Imaginings are most often enjoyable, and yet the whole mechanism is also a great challenge to us because we are so free to entertain and expand creative thought without regard to what is achievable under real terms. It is in translating these Imaginings into reality that one will come across the most difficulties, where they too often materialise as defective versions of great ideas. But if places that are only realistic in the imagination could fuel space-shaping in reality, one could learn from what might otherwise be seen as futile daydreaming.

Let us delay for a moment in the imagination: for from Imaginings spring fictitious worlds, cities, stories and living entities. The possibilities of architecture in a fictitious world are infinite; there have been many instances of such in which the limitations of reality are hypothetically banished and unreal things of considerable notice in terms of their virtuosity of design emerge from the depths of imagination. We en-

counter worlds without gravity, a world in the centre of the earth and many planets and unreal places to inhabit. Imagine what architects could design if the limitations of reality were removed from their thoughts, what anyone could design.

There are many who have evidently striven to create other worlds, places that are at immense odds with reality. Three disciplines of creative thought are of particular interest to the architect in exercising the imagination. These are in loose terms that of the writer, whose Imaginings are represented in words; of the graphic designer, whose Imaginings are put forth visually and of the video game designer, whose Imaginings are expressed interactively. These are people who allow themselves this luxury of freedom of thought, flight of imagination, with everything they produce. They can express the inventions of their minds through their selected medium, whether their ideas are mundane and practical or unattainable and unbounded. However, it is unnecessary for them to leave the platform of imagination at all unless they wish to attempt to replicate reality in their productions. In the imagination, there is room for the creation of an impossible architecture. Any backdrop can be created for any scenario or story that can be imagined.

What can these Imaginings mean for space-creation in the future? How can they influence architects, who would ideally have their creations built in reality? It is possible that by embracing design methods that are deep-rooted in the imagination, an architecture could emerge that is more attentive to human aspirations. There is a comparison to be made between those methods of creativity that could be instrumental in suggesting new types of place, serving to impact on the way designers think about making spaces and cities.

Building castles in the air is a grand gesture, but it describes only the tiniest fraction of what we are capable of imagining. Maybe then it can be viewed as a metaphor for a design process, an exercise that could benefit architects. Imagine disregarding notions of structure, material, time, permeability - to make space without obstacle! We must realise that once we enter into this method of design, it is likely that our thoughts will not transfer to reality. They may be more suited to remaining as intellectual tasks that serve to expand our creativity, to flush any resistance to re-imagining from our consciousness. We are not obliged to take Thoreau's words literally; the Imaginings that we can create do

not have to become manifest in reality to be of use. In fact, it may be possible that they are of more use to us as a process in the mind rather than emerging as incompetent imitations in reality.

## Narrative 1: γράφω, to write

Writing is a form of creative expression, a means of communication and a way to record information or memory. It is one of those disciplines that, suited as it is to relating stories in truth, can also elude reality and allow complete imaginative freedom to those who engage with it. Could this indifference to worldly restraints make it beneficial as a design mechanism to the architect?

The fiction writer is skilled in describing place without reliance on images or any other form of explanation: written descriptions are the exclusive informant of the story. When we read a passage, we see only what the writer has chosen to reveal to us, all that is necessary to get an appreciation of the setting and story in our minds. Words can have various meanings and connotations; names in the same way call to

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Plate 1: A part of the Rosetta Stone showing Greek script.
The stone displays three early writing systems.

Plate 2: The 1516 cover illustration of Thomas More's *Utopia*.

mind certain details. However, names can be more specific and raise more limited or directed thoughts. For instance, hearing the name of a city will make one think of things that are restricted to that place and a confined trail of other thoughts; memories, culture, aspects and oddities associated with that city. What if hearing its name could induce new versions of place in the mind? Words can have power in limiting thought, but they can never fully contain any meaning. Tendrils of unrelated thought form after every word we speak or read. We hear a word and it puts ideas and iterations of ideas into our minds; imaginings are unbounded. The black and white graphic of a page may have been immovably manufactured by the writer to contain a certain description, yet any one such anchored account will induce a different version of place into each reader's mind. The imagining and designing continues outside of the writer's own head.

Having said this, writing can be manipulated to serve the purpose that the author intends for it. It can disregard reality and invent extreme circumstances, places and cultures; anything. If anything is attainable and there are no limitations, the author is free to fashion the world of the text to exist in

its ideal form. In many books, there is evidently the ambition to create or represent model environments and cultures. One such story is *Utopia*, in which Thomas More describes an idealistic society with a strong emphasis on productivity and learning. The value of this text to the architect is the depth of detail in which More describes his vision. William Morris' *News from Nowhere* is one such other attempt to detail Utopia. Who cares to live in reality? For surely everyone has their own version of Utopia? These kinds of visions can seem flawed or incomplete to readers depending on whether the writer's proposals resonate with them: however, there is a great deal to be learned from them in terms of the extent of specificity to which writers will go to make manifest their Imaginings.

Ideas sometimes emerge in works of fiction that seem revolutionary; Jorge Luis Borges' *Fictions* contains many visionary descriptions dealing with radical themes that could not have been explored if he had been working under the shackles of reality. It is compositions like *Fictions* that call attention to the value of working within a limitless boundary, with emphasis on the results that can be attained from an exercise in imagining. Through writing under fictitious

conditions, the writer gains a skill set that is invaluable to the architect. These skills would enable the architect to design without restriction and develop an idea to its fullest extent without being concerned with its success in real terms. Every idea is then of worth because it can be reworked under fictitious non-limits whether it is attainable or not; writing can be seen as a credible mode of design.

The importance of writing then should extend to its acting as an aid to design as well as a medium for documenting ideas. Due to its potential independence from reality, this method of working can be used effectively by architects to design. One must consider a subject in immense detail in order to describe it suitably: if architects were to describe the aspirations for their own projects in writing, the specificities would cause them to think deeply about what it truly is that they wished to create.

## Narrative 2: Imaginings as Images

Images are usually contained on four sides by lines, either visible or imaginary, and though our eyes may be contained by those limits, our minds will inevitably wander when we look at a picture. Our thoughts are not confined by the solemn division between image and emptiness. It may be fitting that a well-known adage be rephrased here and to surmise that a picture can provide us with a thousand ideas. Or an infinite amount of ideas; for it is not just one that is furnished to us through an image. Thinking does not stop inside the box. We are always free to think of other things, imagine alternative possibilities. The mind may continue to rework an image long after it has been removed from one's sight. To the mind, an image is merely a starting point, the faintest hint of what is going on in someone's head. It is up to ourselves to

Plate 3: Disused planes at an airfield in Arizona, United States.
This image displays the extreme viewing angle that is a feature of aerial photography. (Photo: Yann Arthus-Bertrand)

reinterpret images, to allow them to mean something to each of us. Design through imagery is therefore not confined to a square of colour on a page; it also takes place inside the head of the person who looks upon it.

It can perhaps be said that image is that medium which is most used by architects, but it is generally used in this context to create realistic, readable representations of projects which may or may not exist. These are usually conventional plans, sections and other detailed drawings that would allow a building to be constructed. But what are more incredibly interesting are those images which express architecture, places and ideas which are less solid and more idealistic; those images that describe projects which could never materialise in reality. Certain visionary pictures produced by the architectural studio Archizoom Associates mimic the methods of a house of mirrors by multiplying one object to suggest infinity, alluding to the possibilities available to the architect in using this medium to design. As part of their *No-Stop City* project, it is a worthwhile exercise; the project in its entirety details a comprehensive Utopian infiniteness, to the extent to which such a venture can be called comprehensive. Archizoom's production and use of non-traditional imagery

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Plate 4: Tulips near Amsterdam, Holland. This photograph demonstrates how a landscape appears as an abstract pattern made up of miniscule elements. (Photo: Yann Arthus-Bertrand)

Plate 5: Market gardens in Mali. This photograph shows how the field of vision can be manipulated to hide the edges of a subject from view. (Photo: Yann Arthus-Bertrand)

to describe their ideas is indicative of a desire to forget reality, banish boundaries and design without limitation. How would any of this ever be actualised? It may not even matter; this can perhaps be accepted as an exercise in imagination-expansion and idea-expression.

Due to the visual nature of this mode of design, there are many aspects which must be considered in order for an image to be effective; giving careful attention to shape, colour, composition and other graphic elements can make images a powerful way to express Imaginings. This is a method that can be much exploited by the potential designer. A pencil (or any other given medium for that matter) can make any mark on a page; therefore any drawing can be created and any conceivable idea expressed in this way. The possibilities are always unbounded and when the person wielding the pencil is aware of this, the more likely he or she is to brush aside reality and draw Impossibilities in the realm of fantasy. Designers can make images as realistic or fantastical as they wish, enabling them to push this method to its limits as an exercise in design. Then there is the medium within the medium; what tools does one use to create an image and what methods can be employed? Collage, photography, montage,

Plate 6: Bottle racks in Germany. The composition of this photograph is such that it creates the impression that the many small elements continue on for infinity beyond its edges. (Photo: Yann Arthus-Bertrand)

painting, sketching... precision, indecision... iteration, infiniteness... There is an extensive range of choices available to the designer, meaning that there is always some method that can be used in an attempt to detail Imaginings.

What use do people in other creative disciplines make of imagery that may be useful for the architect to observe? Take for instance the photographer, whose action is to capture rather than to construct images. It is worth looking at the aerial photography of Yann Arthus-Bertrand in this context. What is it about images taken from above that are so captivating? Is it due to the viewing angle, which so often obscures the edges of the world from view? This may be the case; Arthus-Bertrand's images are often so abstract that they suggest a pattern rather than an actual landscape. It feels as though the world goes on forever beyond the frame of the photograph. When looking at his images, one sometimes first sees the larger pattern; upon closer inspection each picture is made up of miniscule elements; there is a depth to the composition of these photos. For the airborne photographer, the possibilities are unlimited; he can take endless pictures and as the ground passes beneath him, each picture taken will be of a new design. And if he passes over the same area

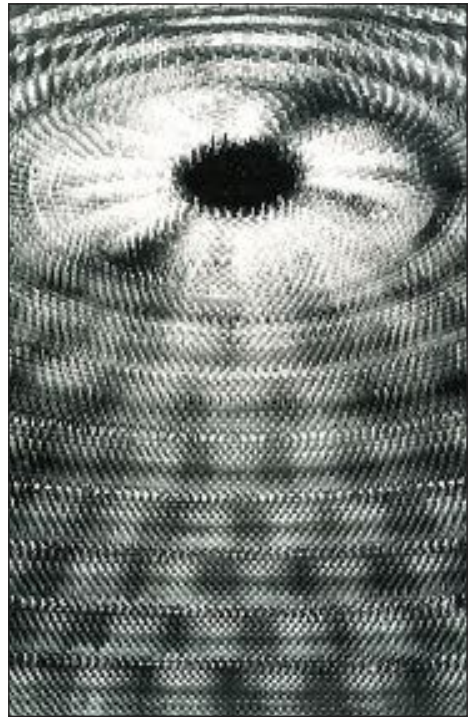

Plate 7 : *PCF, Paris*. This photograph creates a feeling of infinity. The repitition of elements gives the image an abstract quality. (Photo: Andreas Gursky)

at a later stage, it will surely have changed enough to allow the opportunity for yet another, different photograph. And so he may go on, producing images boundlessly.

Andreas Gursky's photographs are likewise capable of, in a way, capturing infinity. By limiting our view of a patterned or repetitious subject within the extent of the viewing frame, he forces us to imagine that the subject goes on forever beyond the edge of the boundary. This is of course a fictitious product of thought, as the full extent of the subject is being concealed from view, but it is a method that is highly effective and can produce powerful results. The story behind the image is always important, but for the architect, it may be more useful to observe techniques of composition as well as integrated notions of pattern, abstraction and culture which may be present in a picture. Such abstract photos as those that suggest boundlessness are valuable accessories to learning these lessons.

So why should architects continue to design through this medium? Can and should images be realistic? Perhaps they should remain unreadable and mysterious, thereby allowing the imagination to take its own readings of the image. Changes can be made to our thinking to ensure the im-

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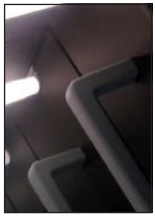
Plate 8: *Chicago, Board of Trade II*. By concealing the extent of the subject from view, this image allows our minds to believe that the situation is repeated endlessly beyond the viewing frame. (Photo: Andreas Gursky)

Plate 9: *Montparnasse*. The composition of this image creates an illusion of infinity in the horizontal plane only. (Photo: Andreas Gursky)

proved use of imagery composition; we do not always have to stay within the confines of reality while designing. Thinking through imagery, one can afford to enter the realm of the unbounded imagination and develop new ideas that are not possible when reality is imposed on design. It is vital to maintain the use and production of images in designing space; limitations do not necessarily have to be preserved, though they can give the impression of infiniteness as well as ostensibly bounding a subject. Edges, if retained, could in this changed mode of thinking be seen as beginnings instead of ends.



## Narrative 3: Inhabiting an Imagined Reality

There are many restrictions placed upon the architect when thinking under real terms; one can be bounded by customs, cultures, building regulations, gravity, material, economics and all manner of other things. Where then can one escape such manacles, and create space and stories without hindrance? The imagination, for one, is a platform for design in which there are no limitations but one's own creativity. It is possible to manufacture anything imaginable without reference to reality. But in order to share Imaginings, one requires a medium through which to articulate them. As the imagination is personal and introspective, it may need a mechanism that is visually expressive to achieve this, one that can allow for design without limits. Therefore, the world of video games is often used as a creative channel, largely due to its

Plate 10: Screenshot of *Armagetron Advanced* (2001). The need for a player to be able to experience a game in different ways, allowing it to be played many times or for its length to be extended is often recognised.

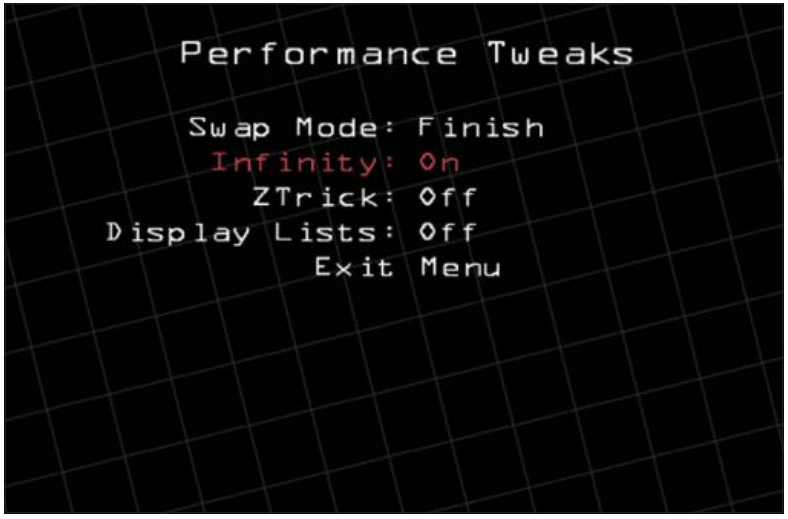




Plate 11: Screenshot of *SimCity* (1989). Areas are zoned for residential and industrial use. The map is viewed in 2D from above.

ability to accommodate, replicate and also allow experience of any kind of place, known or unknown; this is a design method that is free to expand beyond the limits of reality and therefore produce radical creations.

There can be said to be two parts to design in this method; they are the dreams and their realisation, the result of which is a synthesis of the geometry, calculations and precision that lie behind the loose, conceptual artistry and allow a game to be actualised. In the beginning there are the Imaginings, which are worked up as a game goes through the stages of production until it reaches the product that the player interacts with at the end; the intention of the game has then been expressed to the world at large. Once a game has come to fruition, it may allow for design to continue on after its completion, if that is its purpose. For there exist games designed for design, whether it is that of life, cities, architecture or stories. In this scenario, both those involved in the creation of the game and its players experience the ability to express their Imaginings.

*SimCity* (2013) is a city-building game that encourages its players to be creative in the field of urban planning. The game-world is experienced from above, allowing an over-

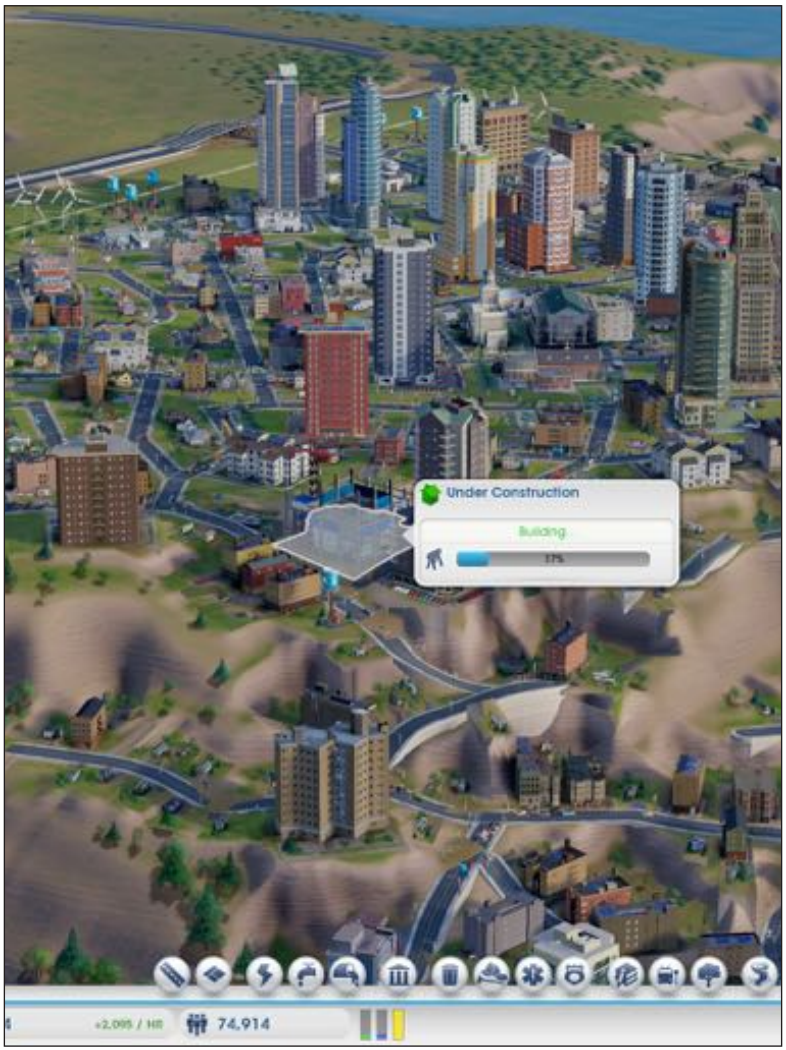



Plate 12: *SimCity* (2013). Buildings expand, making for a dynamic gaming experience. Despite the difference in representation between the 1989 and 2013 versions of the game, its intention remains unchanged.

view of the territory upon which one can build. The player must zone areas for residential, industrial and commercial purposes and in addition place important buildings in a way that allows the city to run efficiently. It is next to impossible to create the same city twice, and as a result, the experience of the game will always be variable; 'the possibilities...are endless'.[1] This is a game that should have appeal to designers, in that it admits original thought and the expression of Imaginings in a virtual world.

There is a quality to video games that incites the mind to think creatively and irrationally. Many games will acknowledge this by allowing for an unlimited amount of ways to play dependant on the player's style; just as every person is different, so the game can be experienced in an infinite amount of ways. Of particular interest then, in terms of design, are open world or sandbox games, where the player is presented with an environment that may be explored or moulded. While there may be objectives or missions that can be completed, there is usually no order in which they must be done, often no time-limit, and sometimes no obligation to engage with them at all. It can be argued that when one plays a video game, one is stepping into the resultant world


Plate 13: Screenshot of *SimCity* (2013). Players can place different buildings on the map that will allow their cities to function in various ways.

of the Imaginings of a design team and directed to follow a certain path regardless of whether gameplay is linear or non-linear. However, in sandbox games, although the surroundings are already imagined, they can often be altered to one's own vision, as in the case of *SimCity*, or experienced uniquely due to the way the player moves through a world; they offer a seemingly infinite amount of different playing experiences. Even a player who has completed a game (if it is possible to do so) will play it differently the next time round.

*The Elder Scrolls IV: Oblivion* (2007) is an open world game where there is an environment presented to players that they are free to explore as they see fit. It may be traversed in first-person or third-person mode, affording the player the sensation of inhabiting the game-world through the character on the screen. There are nine large settlements that are visible to the player on the in-game map, in which a lot of the main storyline of the game takes place. However, as one leaves the cities behind and explores the surrounding terrain to complete specific tasks, there are tiny settlements, far-removed shrines, abandoned tunnels and caves, lonely roads and lost ruins to happen upon, many with their own side-missions to complete. Every time the player engages in

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Plate 14: Screenshot of *The Elder Scrolls IV: Oblivion* (2007). The in-game map represents the expansive world which the player moves through.


On it, the large settlements are permanently visible while the smaller ones (represented by square markers) appear as the player encounters new places in the game-world.

these, the game is extended, giving one the feeling that exploring the vastness of its world might just allow the game to continue on indefinitely. The map, without actually being endless, can prolong the playing-time of the game by introducing complexity through additional storylines and opportunities at points over its extent. By spreading the storylines out over space, one may become distracted by minor missions, facilitating the continuance of the game.

In *The Elder Scrolls*, as with many open world games, intention and story are conveyed believably through consistency in the portrayal of the environment, enhanced by an artistry particular to that game. It is this continuity of thought that lends a world its narrative quality, where the player is immersed in a pseudo-reality complete in every detail and true to the intention of the game. The world of a game, however far a departure it is from reality as we know it, can be believable in its own right if there is a logic behind its generation. The artistry of *The Elder Scrolls* aids one's understanding of its setting in time and space. From observing characters, apparel, architecture and spaces in the game-world, which have been carefully shaped through a particular artistic style, one gains an appreciation that this is

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Plate 15: Screenshot of *The Elder Scrolls* (2007): view of the Imperial City. The artistry of the game gives one an understanding of its setting in time and space, telling a particular story.


Plate 16: Screenshot of *The Elder Scrolls* (2007). In accordance with our understanding of the narrative as informed by its artistry, elves, orcs and other invented races can easily exist in the game-world.

an environment into which invented creatures fit comfortably: elves, orcs and humans co-exist and magic can thrive. Such things are 'real' in the context of the game though they would not make sense in our reality. However, they are projected Imaginings, and therefore part of a story that is told through the artistry and detailing of the game-world.

Many factors influence the feel of a game; sound, colour, motion and field of vision or viewing angle can all substantially impact the quality of the final playable output. This sets video games apart from other modes of design in terms of representation. There are many elements that are combined creatively in order to describe a story, and in doing so, the qualities of the 'real world' are translated to a virtual world. *Quake 4* is a game with visionary artistry and gameplay, unlike anything that can exist in reality; it embraces a futuristic environment and projects Imaginings of what it might be like to occupy Outer Space. The darkness of the world which the player inhabits is part of the narrative of the game and is informed by its artistic style. The multiplayer part of the game has a number of maps available to players, some of which feature unfathomable arenas with several platforms suspended in Outer Space. It is next to impossible

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Plate 17: Screenshot of *Harvest Moon 64* (1999). An example of the viewing angle influencing the feel of a game; *Harvest Moon 64* uses isometric projection to create the impression of the game-world being 3D.


This is comparable to the technique of hiding the edges of a subject from view as used in images discussed previously (see plate 5).

to represent such a world so believably through any other medium. Where in the 'real world' would one be able to experience such things? It is only in games like this that such pseudo-realities can be tested, making them an ideal channel for testing out ideas of the imagination. The move to inhabit Outer Space and other planets has always been an engaging subject area for designers, and it is through video games that one can actually test the interaction between a humanoid character and such unreal architecture by moving through and using the spaces in a map. Everything adds up to the experience; details are carefully thought out in order for this fake reality to exist, to be inhabitable.

The architect can learn from exercises in design through video games, whether directly, by playing games designed for design, or by studying and re-creating the process that is followed to make manifest Imaginings through the medium of a virtual world. In either case, the interaction between the player and the game-world is a key point to observe, in addition to the impact that the added elements of sound and motion can have on making such a world feel 'real'. Although not conventionally used by architects in order to design, one surmises that this can be a useful tool.

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Plate 18: Screenshot of *Quake 4* (2005). The multiplayer map *Xaero Gravity* features an arrangement of platforms suspended in Outer Space.

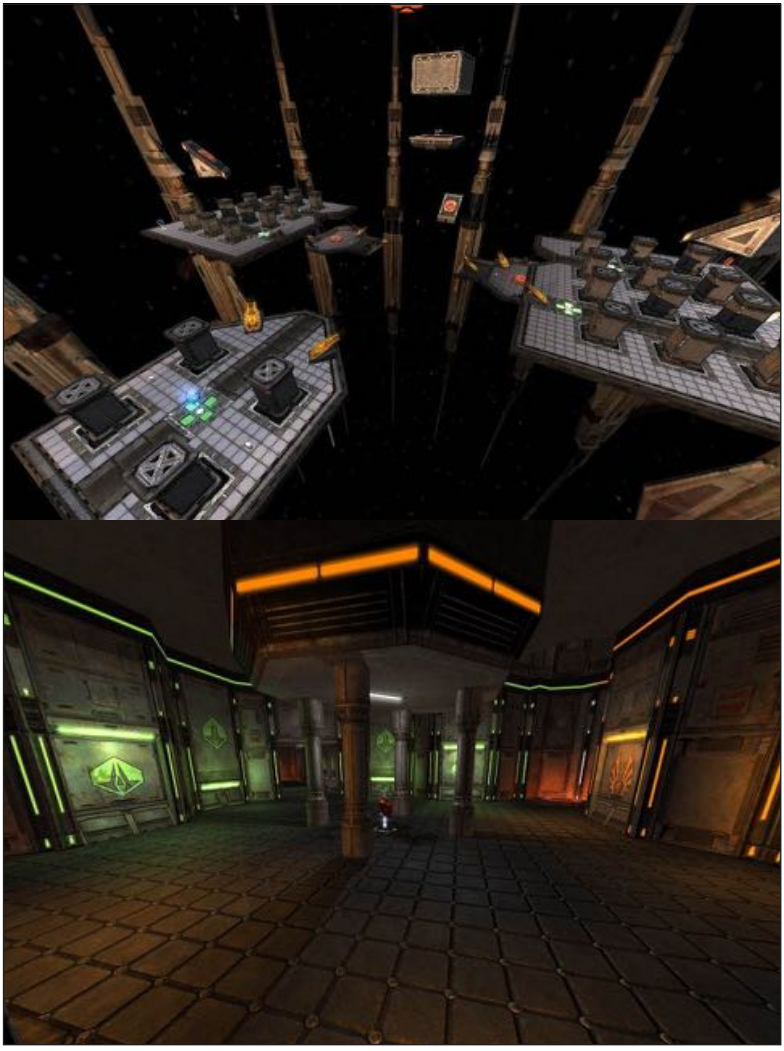

Plate 19: Screenshot of *Quake 4* (2005): the multiplayer map *Relativity*. The artistry of the game lends it a futuristic quality and enhances its narrative.

There is a lot that can captivate the interest of the architect in this mode of creativity; it is a medium that can be further tested in conjunction with the development of new gaming technologies and capabilities in the future, finally earning it a place in the architect's design skill set. In video games, there exists a mechanism that can serve to eradicate reality from thought, crediting this virtual mode of expression as a natural extension of the imagination.

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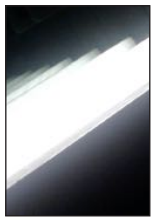
[1] Matt Kamen, *With SimCity's reboot, Maxis has upturned the foundations of a virtual world*, www.wired.co.uk, accessed 25 March 2013.



## Trialogue

The three modes of design discussed in this text have similarities and differences such that when used in conjunction with one other, they can form a very powerful part of an architect's skill set.

Each method has relation to the others in terms of inspiration and imagination. Observe the interrelation between writing and imagery; if a person reads a vibrant and colourful description of a place aloud to a group of people, and they each draw an image in isolation from the others of what they imagine that place to be, every drawing will be different, no matter how detailed the text. This is imagining taking place externally; the same words with different meanings abstracted by different people. This is also evident in the conversion of books to films, where textual Imaginings

become visual and writing is converted to moving imagery. These can often be disappointing and 'not as we imagined them' or they may reveal something about a storyline that one had never considered previously. Another case is that of literature influencing the creation of video games. Stanislaw Lem's short story, *The Seventh Sally*, may have influenced Will Wright, the creator of *SimCity* (1989), to construct the ultimate urban design game.[2] It is a case of thought from two minds being better than from one; anything that has been imagined and made accessible through one of these methods can provide inspiration to others.

The three approaches are all successful in progressing and communicating products of the imagination, whether used alone or with one supplementing another. Images are used in books to support text where words may fail. They are also used in describing the artistry of a video game while it is being developed; conversely, video games influence artists in the creation of images representing the world of a game or its characters. Where necessary, words may provide descriptions to images, moving or static, and video games can combine sound, colour, motion and three-dimensionality when representing thought. In reverse, video games are a source

of inspiration for novels, or can be converted to novel format where textual descriptions will further the understanding of the subtleties of a game. There are numerous, perhaps infinite, ways of combining the three to design within the realm of the imagination.

Each method has the ability to reject limitations and provide for the design of impossible things. This is of use to the architect as a way of exercising the imagination so that thoughts are not allowed to become too bounded by reality. There is great value to such methods as will allow designers to express and mould their thoughts without limitation. These three modes of design should form part of the architect's skill set in order to enhance creativity. It is sometimes necessary to embrace fiction methods in order to design; in any case, every building project has its beginnings in the imagination.

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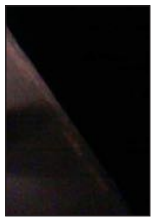
[2] Julie Lew, *Making City Planning a Game*, www.nytimes.com, accessed 17 March 2013.



## Project

It is in the project that fiction is present most powerfully in the field of architecture itself. A project is arguably a work of fiction, composed initially in the imagination of the architect, then described using tools of fiction such as writing, imagery or games, and later (optionally) actualised by its being built in reality. The mechanisms available to allow architects to somehow express their designs have a major influence over the outcome of a project; it can be visionary if the method of representation or design adopted has evaded reality, as there are then infinitely more possibilities available to the designer. So what projects have used these fictional methods and overlooked reality? And what of projects that have been imposed on reality, Imaginings that have become real? Which is more worthwhile, the project as an exercise in imagination

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Plate 20: A photomontage of *The Continuous Movement* by Superstudio.

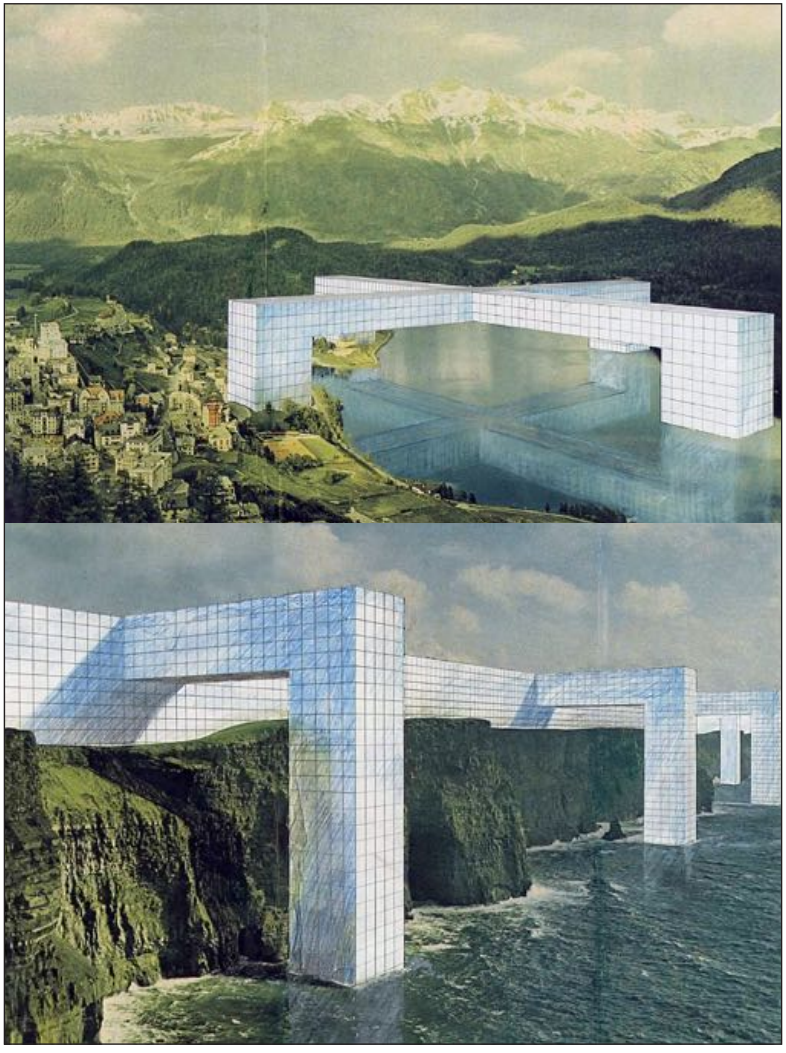


Plate 21: A photomontage of *The Continuous Movement* by Superstudio.

or the one designed under real terms?

A prominent architectural project that evolved from written material and was designed with attention to fiction rather than to reality was Giuseppe Terragni's *Danteum*, which was styled on *The Divine Comedy*, an epic poem by Dante. It is an example of a piece of writing forming the basis for design, where spaces in the building have been composed in accordance with a narrative. It can be said that the design process of this building was split in two, between Dante and Terragni, textual and visual mechanisms. It is a case in point of re-imagining taking place long after a subject has been put to rest by its original creator. Though never built, this project has a legible underlying theoretical basis that can be linked back to its origins in the text.

*The Continuous Movement* by Superstudio can in a similar manner be seen as a project designed under fictitious terms. Much of its representation and design take place through imagery; the photomontages created to describe the project are particularly compelling, with the monumental, cuboid forms of the structures imposed on existing landscapes paying little heed to what already exists. There is an ambition here to make this a universal architecture that can be insti-

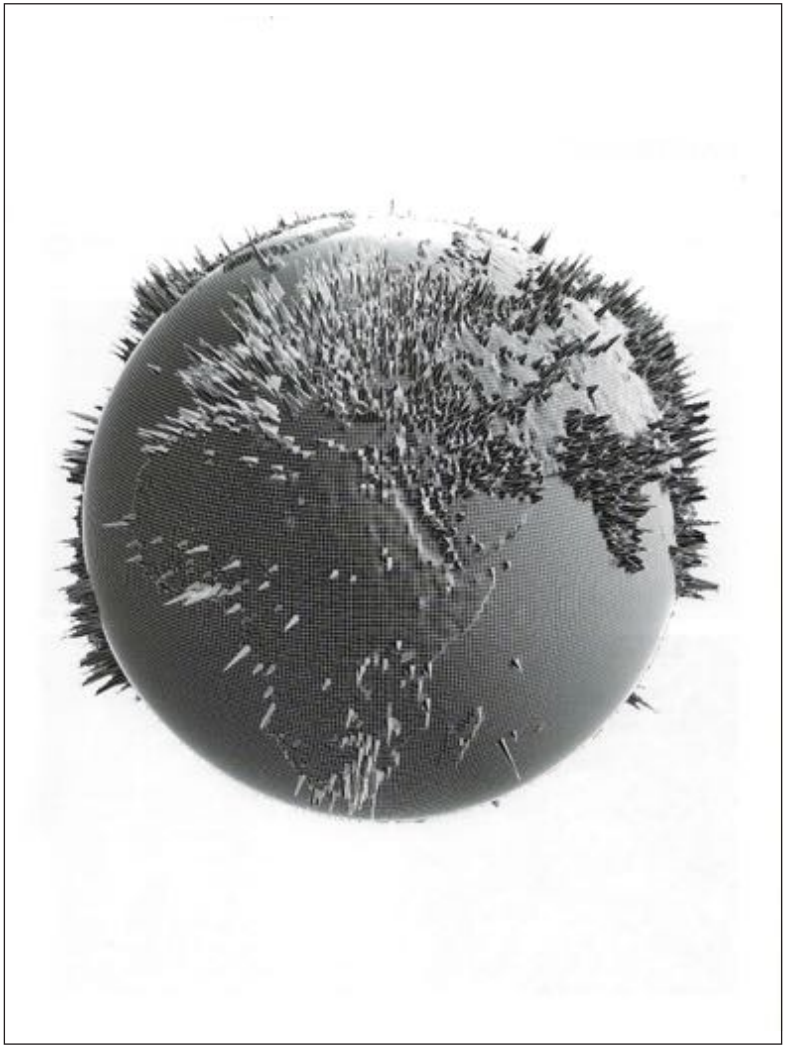


Plate 22: *SpaceFighter* by MVRDV.

tuted anywhere and everywhere; a nod towards infinity and a continuous mode of building. Perhaps it is because of its enormity of scale or that one is not furnished with details of how it would be built that this project has a distinct air of fantasy to it.

However, the initiative to use video gaming technologies as a way to design architectural projects has been one of understatement. Despite this, there have been several attempts to use games in this manner in recent years, including the research effort of the architectural firm MVRDV that is *Space-Fighter: The Evolutionary City (Game:)*. This project 'seeks to model interactive urban development as an evolutionary process' or to map the changing city using gaming technologies, creating a specific interface between the designer and the system and ensuring an ensuing tale of interaction and reaction.[3] It is a software that 'can compare, analyze, optimize, adapt and create alternatives' for the city.[4] True to its fictional nature, it can provide infinite possibilities for creating and re-imagining a city due to its ability to allow one to design interactively; to get a response from the software as one makes changes to the game-world presented, that in turn may have an impact on the real world. This is fiction

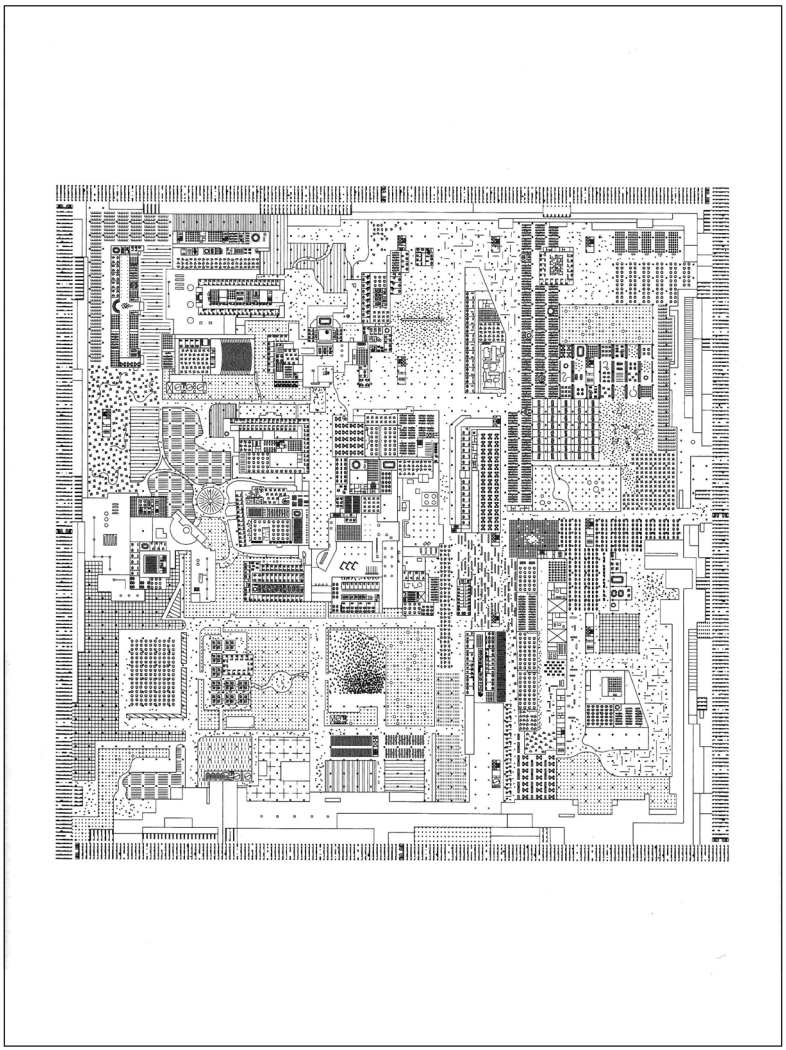


Plate 23: *A Simple Heart* by Dogma: An image-based project for the re-imagining of the European city.

being used as a design tool to reinterpret cities, allowing various versions of urbanity to be created and deliberately skewing information about a place in order to change it and therefore view it in a different way.

So should one design under fictitious or real terms? Is it better to always designs things that can become real or should it be acknowledged that projects that may have been created without this intention are yet of value? It is worth taking a brief look at a project which had its beginnings in fiction and parts of which are set to be transferred to reality. *A Simple Heart* is a work by the architectural firm Dogma, represented in images, that re-imagines parts of existing cities. The move that the project makes on the city is a large one, and in that respect one can take it to be a somewhat fantastical effort in re-imagination rather than a believable one that is set in reality. However, there is a second part to this, unlike in the cases of the Archizoom or Superstudio projects discussed previously; that is the forthcoming actualisation of the project. This is in the form of *Frame(s)*, a design proposal for social housing in Belgium. It is imaginably the essence of *A Simple Heart* that is about to be realised, albeit at a smaller scale - that of a neighbourhood rather than a city district -

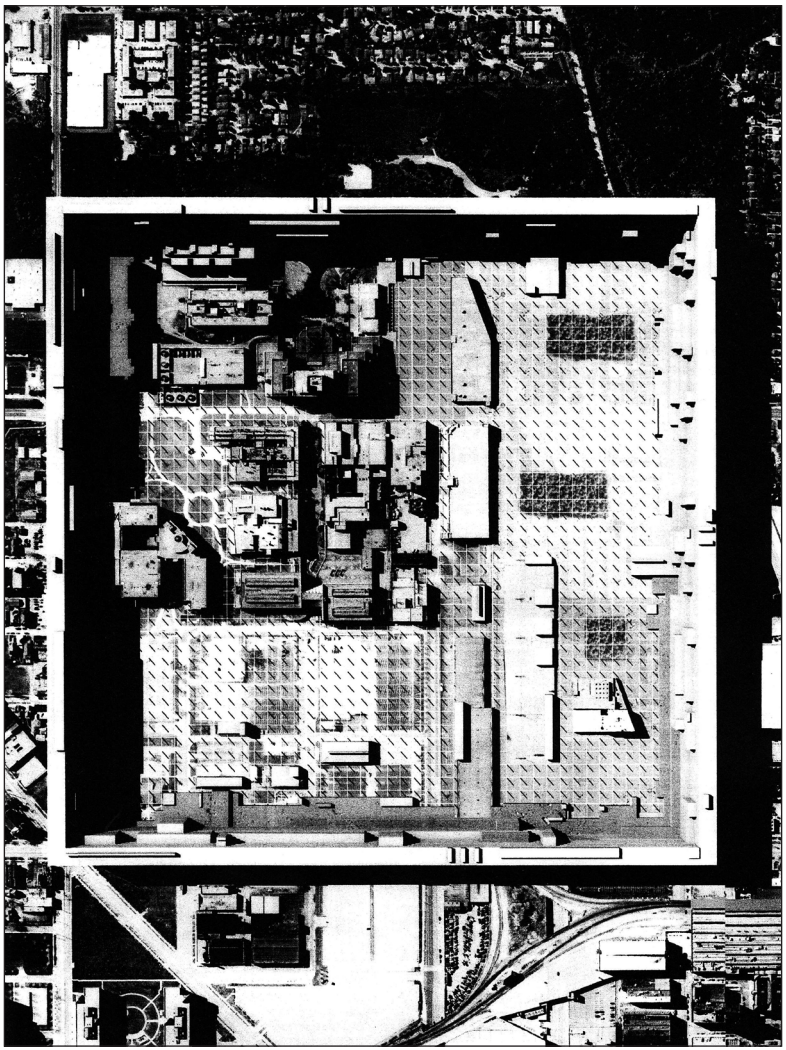
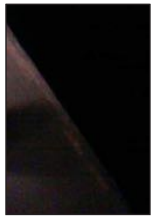


Plate 24: *A Simple Heart* by Dogma: Duisburg.

and designed for a real-life purpose rather than as a Utopian vision.

But how effective really is this as an interpretation? Is it true to the intention of the project or is it a failed operation? This is a question that must be asked of every invented project that is made real. There is an intriguing relationship between fictional projects and reality, but perhaps we have yet to discover it fully.

[3] Winy Maas, 'SpaceFighter: A Game for the Evolutionary City,' in von Borries et al., *Space Time Play: Computer Games, Architecture and Urbanism: The Next Level* (Basel: Birkhäuser, 2007), 362.



[4] thatfield, *SpaceFighter: The Evolutionary City (Game:)*, http://nowurbanism.wordpress.com, accessed 29 March 2013.

# Epilogue

'It was a kind of fiction, a work of the imagination.'
Henry David Thoreau, *Walden*

It has long been established that the imagination and therefore fiction, have been an integral part of architectural design. What is this correlation exactly, can we recognise its full potential, and is it an important one to retain? If fictitious thought is infinite, then built architecture is definite. This begs the question: do we have the balance wrong? Perhaps one should establish thoughts and hence projects related to design in the realm of fiction rather than in the banality of the real world. Exercises in the imagination are useful to the architect, especially ones that strive to consider all possibilities (and impossibilities), in encouraging one to

quit routine design. While it may be deemed to be time consuming or pointless, the mechanism of expanding an idea to its fullest extent must be tolerated; for it is often from this that the most valid ideas emerge. Thinking in unreal terms can broaden the mind of the designer and therefore induce in one the desire to create an architecture that is preoccupied with the impossible. In defending reality, we preserve limitations; meanwhile, imagination and infinity open the door to originality.

In essence, should we use fiction tools to design? And if so, should we use them by way of exercising the imagination or with the aim to design things that can be translated to reality? The importance of making things - whether story, image, game or building - so that they are immediately readable and recognisable as being of our world has perhaps faded. There is a new approach to making architecture that can be adopted upon observing this, potentially serving to benefit the design of cities and spaces in the future. Design through fiction is then, somewhat conversely to what it suggests, entirely credible.

It is undoubtedly gratifying for architects to have their compositions made real, but it is still reasonable to say that

architecture in its design stages may have become too firmly based in reality. A fresh outlook and new life can be imparted on the discipline if it bases itself instead in fiction, allowing it to be as it was in the beginning, is now and ever should be, worlds without end: pure, elemental imagination.

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# How does Ireland do Motorways?

Padraig Connolly

# Contents

# Introduction

Ireland today is about movement, about motion. The ability to travel fast both in and out of the country has changed the old image of local Ireland to the globally connected network that Ireland is now part of. How do we move in Ireland now?

The Auto-mobile has become Ireland's main form of transport. For high speed motion motorways are used. How has Ireland developed its network of motorways. How in Ireland do they plan the routes, the design of the road, the elements on it and the experience. How does Ireland handle high speed. Is it an experience or an afterthought?

Ireland has had its boom but what did that mean for the motorway network of Ireland? Is there a planned and sensible network or unfinished roads that go no where? Did the governments of the past ten years build a connected motorway network?

How does Ireland do motorways? The design of such a large scale infrastructural project requires design among many people but how did Ireland execute that? What components makeup this motorway network?

How does one perceive Irish Motorways? From the driver and the passenger? Does one experience the Irish countryside at high speed motion?

# Celtic Tiger Ireland: Motorways, we must have them

Celtic Tiger Ireland was the birth of Ireland today. High employment with high wages brought fame and money to the most unlikely of Irish people. The low corporation tax rate of 12.5%[1] brought multi nationals in there droves to Irish waters with big names such as Google, PayPal, Dell and eBay all setting up offices here. Many more smaller multi nationals came to get a foot in Europe. Ireland was ideally placed for American investors. With this we saw migrants arrive to fill the employment gap and the country as a whole change from the land of the stone walls of Connemara, to a prosperous economy attracting investment from all over the world.

The sprawl from rural to urban followed Ireland on its new path, with new commuter belt areas rising fast. Counties such as Kildare, Meath, Wicklow, Wexford, Louth, Laois and Westmeath all became commuter belts for the capital Dublin. With this saw the need for a new infrastructure to be built with a main emphasis on Dublin, the area of greatest growth. With 96% of movement done on roads[2] in Ireland, the government at the time were determined to invest big in the motorway network. On the 5th February 2004, Seamus Brennan announced the largest single financial commitment by the Exchequer - €6.8 billion in state funding for motorways and other national road projects[3]. The private sector would contribute another €1.2 billion amounting to €8 billion in funding for motorways. This figure would rise later to €10 billion and eventually finish according to Fitzpatrick & Associates costing €22 billion[4].

The costs of this new network was spiraling out of control at a rate the government couldn't control due

to the original figures only been, "rough, ballpark, back of the envelope"[5]. The National Roads Authority later admitted it didn't have the expertise for costing the plan. Eamon Ryan of the Green Party stated; "they've pushed aside all criticism of the motorway program because they just want to pour concrete"[6]. The criticism for the motorway plan was valid due to figures complied in the NRA study, 'National Roads Needs Study' 1998. Its showing found that only 25% of existing national roads user would move to the new motorway as most of the traffic found along the main routes to and from Dublin were used by commuters only traveling 24 km each time[7]. Noel Dempsey asked the plans finding to be ditched as he was under pressure to deliver something far greater in scale. The N4 through Sligo town is an example of where necessity and use were put to the side. A total of 52 houses, mostly in use had to be removed to accommodate the plan. The road cut through the town costing €74 million, €50 million over budget. The road was supposed to be an "urban street" but is too thin to accommodate urban frontages(Fig.2). Bare faced concrete walls line it while Sligo's gridlock problem still isn't solved and another bypass is planned. The road cut down the urban fabric along the road, and the area is now in decline. A Celtic tiger design.

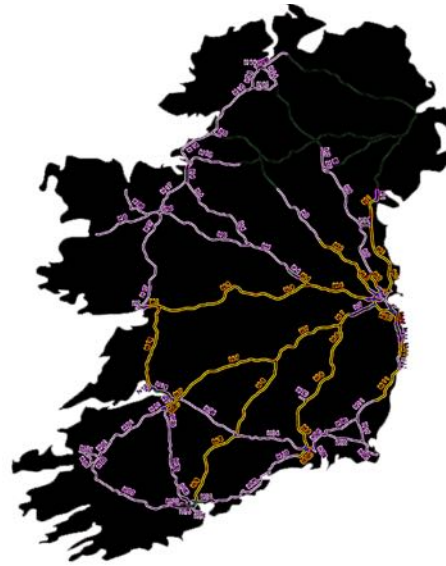

Fig. 1: Irelands Motorway Network

Fig.2: N4 "Urban Street"

Irelands motorway network is made up of eleven main motorways (M1-M4, M6-M9, M11, M18, M20). These serve the vast majority of the country only not reaching the north west and south west. The Motorway network has been planned with one goal in mind to allow access to Dublin. Dublin serving as the capital with the highest population and trade.

The network works on a radial and spoke system. The network circulates out form the M50 at Dublin. The placement of the roads through the country is decided on the existing national roads. The motorway network isplaced at maximum 7.5km away from the national road. For example the M7 follows the path of the N7 and only wavers either side by 7.5km. The decision to follow this plan was made by the NRA in 2000.

Irelands Original National Development plan saw a different set of plans in 1999, when first published. The plan was to act as a guide to many infrastructure projects throughout the country. The plan originally stated that five new motorway were to be built. The plan according to Julie O'Neill, Secretary General of the Department of Transport at a public accounts committee in 2004; was so unclear and open-ended that

to attack it in 1999 was to box shadows[8]. The plan failed to go into detail about design, planning process or feasibility of the network. In "Traffic in Towns" by Colin Buchanan who wrote that motorways should not follow the inherited road system of a country, Instead he recommended streaming traffic into a new network which would be relatively "Sketal" compared to its predecessor. This information combined with the NRA's study "national Roads Needs Study" showed that green field motorways directly going from point to point would of been a better, cheaper and efficient model. On top of all this information Joe Rea, former Irish Farmers Association Leader pointed out that other possibilities of combining motorways were possible; for example the combination of the M4/6 with the M7 and branch out away from Dublin. Rea stated; "Lets not proceed on a basis of a rush of blood to the head- motorways, we must have them"[9]. But contrary to all the opposition to the planning process the government proceeded.

# Motorway Design:
# The Components that make a Motorway

Motorways have become a component of the world we now live in. A freeway or motorway more commonly used in Ireland is defined by the oxford english dictionary as a dual-carriageway road designed for fast traffic, with relatively few places for joining or leaving. However Lawrence Halprin writes, "Freeways which carry the automobile in its adventure are among the most beautiful structures of our age. Freeways out in the countryside, with their graceful, sinuous, curvilinear patterns, are like great free-flowing paintings in which, through participation, the sensation of motion through space are experienced. In cities the great overhead concrete structures with their haunches tied to the ground and the vast flowing cantilevers rippling above the local streets stand like enormous sculptures marching through the architectonic caverns. These vast and beautiful works of engineering speak to us in a language of a new scale, a new attitude in which high speed motion and the qualities of change are not mere abstract conceptions but a vital part of our everyday experiences. Though man is dwarfed by size of these immense structures,he regains his relationship to them by participating in their use. Freeways involve each of us visually through the strength and urgency of their structure and also through the qualities of motion which they make possible"[10].

According to G. A Jellicoe, motorway design should follow the principles; the planner determines the need and the route, the engineer drafts the line, the landscape architect adjusts the line; the engineer drafts the levels; the landscape architect adjusts the levels; the engineer drafts parallel boundaries, the bridges and other elements; the landscape architect organizes a series of pictures along the road and he

re-examines the engineers plan to alter parallelism and the horizontal plane of the tracks[11]. Motorway design is a combination of many people and components in order to be successful. The components of a motorway therefore need to be considered strongly in their design.

Fig. 3: Candian Flyover showing chaotic but curvlineer curves.

Fig. 4: Flyovers showing the chaotic and beautiful structures they can be.

The bridge is an everyday element found through the Irish and international landscape. The bridge gets its name from bridging place to place. Bridges have two values in the landscape[12], they punctuate space and link one side with another. In the context of the motorway the bridge is used in several ways. It is used mostly to gain people entrance and exits from the motorway. This use can become a flyover when the bridge connects one route to another. The flyover is where the greatest structures are found in motorway design. The structures are often large curving pieces of sculpture that float above (Fig.5) or below the landscape.

The first flyover was constructed in 1843 at Brighton to carry trains over the Brighton main line. With the arrival of motorway in the the 1924 flyovers soon came into use to handle the junction between one or more routes. The flyover main design requirement is to be able to retain the current speed (or a small fraction less) while changing routes. Traffic density determines their size while there level of curvature if any is based on the connection needed (fig. 3,4,5).

Fig. 5: Flyover connecting motorways

In Ireland the flyover takes a different view to its American counterparts. In Ireland the process of making this connection is done by transforming the ground again to place the road on top of it. The connection between the M7 and M20 (Fig.6) is a large curving road that allows one to keep speed while changing between routes but isn't looked at as a piece of structure in the air but a large mount of earth moved to make the transition.

With the excitement one can gain from the curving free flowing structures, the other components of the motorway can be tame in comparison. However in order to keep the process of motion constant other components must be designed. Tunnels are used to go under cities, rivers lakes even oceans. The tunnel is a feat of engineering that requires a structure that works below ground. The building of tunnels is done

now by large tunnel boring machines and organized explosions."Geology defines the way you drive the tunnel,"Amitabha Mukherjee said in describing the root the new second avenue Subway line on the east side of Manhattan, New York is taken[13]. This is followed in all tunnel construction as the rock around the tunnel ensures success.

Fig. 6: The M7/M20 Inter-change

Built structures along the motorway are few. However. the toll gate has a built presence on the route. The design of the gates is based on controlling the reduction of speed while allowing the movement of vehicles to certain gates based on size. Toll gates now take on the form as if to echo the motion happening before and after them(Fig.7). Previously the form was more like a wall(Fig.8). The toll gate is a point of pass on the motorway and should act as the designers place to show

Fig. 7: M1 Toll Gate

Fig.8: Former M50 Toll Gate

the intend of the motorway. Motorways can have different reasoning. The reasoning of the M50 compared to the M7 is different. The M50 is a radial motorway acting to connect people quickly by short term use on the motorway while the M7 is a connecting motorway bringing Limerick to Dublin. The difference should be seen in the motorway in its elements. This can be seen in the new M50 toll gate which has no longer barriers but the fee is payed later to save time(Fig.9).


Fig.9:M50 Barrier Free toll Gate

The motorway is defined by two edges, the crash barrier and the landscape around it. The crash barrier is made up of a solid piece of concrete that has the ability to be struck on either side(Fig. 10). They are known as Median barriers. Their purpose is to stop vehicles crossing over lanes and causing head on collisions. The design of the barrier is to take the most impact of the hit. The other edge to the motorway is the landscape. The landscape of Ireland is a constantly changing. In Ireland the current practice for the layout of the motorway is based on keeping no more than 7.5km away from the national road. There are ample cases along the motorway network (Fig.10) which show large amounts of rock movement to simplify the route. The edge one finds on the motorway so changes constantly showing picturesque photos of the Irish landscape to large rock outcrops. This is then where the pictures of the landscape can be made as G. A Jellicoe mentions.

Fig.10: M3 Median Barrier. In the distance the earth has been reformed for the motorway

The other main component found along Irish motorway is lighting. Nearly all of the M50 is lit due to the regular exits. However the vast majority of the motorway network isn't lit. The light that the motorway illuminates then becomes one of the most important elements to consider. The "glow" of the motorway can have massive impacts in cities and even bigger impacts in the countryside.

# Motorway Experience: The pleasure of the Drive

The different components that make up the motorway allow the motorway to be an experience. When one removes these elements, the motorway has the power to become mundane and dangerous to drive. Could the motorway be more of an experience than a functional piece of infrastructure.

The ability to move freely has changed civilization. The open movement between countries has opened up the world. The ability to travel in an airplane far distances has changed this generation but the automobile has given the greatest possibility of freedom. The car. not like a plane. has the ability to be owned by everyone. It gives single freedom. The Smithson's wrote in their book, AS IN DS; This new kind of freedom, achieved in the lifetime of our generation is now sufficiently immediate history that it can be considered.... to discover the nature of the sensibilities we must have unconsciously developed.... and to see if fresh apraisal of them can bring these sensibilities through to generate a rethinking of the many basic assumptions related to our inherited way of seeing landscape and towns.... establishing a fresh understanding of what sort of places we wish to build towards[14w]. The motorway network already mentioned has given us a radial system of distribution from Dublin but how does one experience it.

Currently the experience of Irish motorways is lacking the sensibilities in design that the Smithson's were hinting towards in their book. These new roads that we need to posses high speed movement need to be treated better than we now see them. The current process is strongly based on the idea that the landscape is a movable object, one to be changed, re-sculpted in or-

Fig.11: M7 showing the vast blasting of rock for the motorway

der to place these new roads. The vast blasting of rock surely demonstrates enough power, time and expense to possibly change this current practice(Fig.11). This current process ensures a straight forward driving experience which one can achieve maxim (120km/h) on Irish roads.

Fig.12: Grafton Architects "Pier"

The components one finds on the motorway already mentioned have the ability to make the motorway an experience. In design the M4 Airport Interchange Bridges in Dublin, Grafton Architiects looked at how the bridge could be considered;

" front view of the bridge tapers along its length giving an impression of lightness; the deck recedes from the motorists' view as he approaches the roundabout

and enters the 'dished landscape'. Each element of the bridge was considered. The support column (Fig. 12), "The pier, in contrast, is designed with sharp lines so that the form is clearly visible to the motorist traveling at speed. The dynamic form echoes the grandeur of air travel. The pier, however, is set-back to give the impression that the deck is floating; suspended in flight.'[15]

Fig.13: Roadbed following the natural flow of the landscpae

The placement of the motorway in the countryside could also increase the experience on Irish motorways. Sir Humphrey Repton[16] set down nine rules for the design of country roads in the eighteen century of which the principles remain the same in todays roads; The roadbed should follow the flow of the landscape (Fig.13).Roads should curve around hills, if need the road should be split up. The quality of curves should be gentle with long radii and should be transition curves rather than tangents. Routes should be planted with native vegetation. Wide rights of way are necessary and vista points should add to the pleasure of the driving experience. The freeway should be fitted carefully into the landscape by grading. For scenic values to be preserved grading should be replaced by structures (Fig. 14). Interchanges should be large enough not to drastically reduce speed and no objective land use

should be permitted along the right of way. The idea of these rules is to increase ones excitement in driving on these roads. The experience one gains through vista and curving roads encourages an excitement in motion. One of the greatest problems today with motorways is their length with no excitement or even pleasure.

Fig.14:Structure Preserving Scenic Values

In the city the motorway has power to be exciting again, Lawernce Halprin in freeway states; "The freeway in the future city in order to fulfill its function, must allow people to travel within the city and in the process, enrich the very qualities of urban life which bring them there." By this the city should have a very different approach to the country. The experience one has in the city is going to require less about views and curving routes rather a sensibility in design. The city has to be preserved. Here we see the consideration of different types of motorway types. The possibility of raising the motorway above ground so pedestrian life can continue or the use of tunnels. Other considerations have occurred that inhabit the motorway. Geoffrey Jellicoe proposed a new bridge across the Thames in London to incorporate a seven story structure with a motorway at the bottom level (Fig. 15)[17].

The use of the motorway as a tool in the city could see what we see as a motorway change to become a tool for excitement. High speed motion is exciting to watch so the placement of motorways through cities can have a visual impact for those around as well as those using the motorway. The motorway expe-

rience isn't something one has to always be driving for. The use of elevated structures in the sky allowing activity under them while activity is on them can give a new experience to city life. Le Corbusier plan for Algiers in 1933 shows how infrastructure like a motorway and housing could be treated as a single, integrated system[18].

Fig.15: Jellicoe design across the Thames

An experience is something one should remember. In order for Irish motorways to gain this characteristic one has to believe that driving at high speed can be an experience again. If safety is a problem the speed limit should be reduced in order to find that sense of enjoyment, of engagement with the route one is about to take. The motorway is more than function. It is a new way of looking at the countryside. The current Irish practice of removing and re-sculpting of the earth has to change and be replaced with free flowing routes that take advantage of the Irish landscape that attracts so many already. In the city motorways must stop ripping apart what it is trying to serve. The use of tunnels, of elevated structures all have the ability to add rather than take away as the current practice do.

# Irelands future Motorways

The motorway was once an exciting experience but how does one get that back. The Autostrada del Sole use of bridges as Sir Humphrey Repton already stated preserves scenic values. The Autobahn of Germany hold an excitement because of the speed one can do. What should Irish motorways do? How should Ireland design its future motorways?

Over the past ten years Ireland has failed at planning the best future for its people. As people we changed from the old Irish to a money driven people only wanting success and fame rather than sensibility in our lives. This has also been the case in our motorway network but now we have a chance to learn from our mistakes. Peter Hall points outs that not all motorways are needed in reference to London's 1981[19] plan for a motorway.Now we have to decide what motorways would help Ireland functional, and to enrich or view of the landscape. These are expensive and also invasive structures to insert into the landscape so they must be needed. If we prioritize a sensibility in future design we have the potential to create a network worthy of the landscape it sits.

"In the modern landscape every country road leads to a highway and all highways whether we follow them or not lead to the city."[20] Motorways are tool which help us move so why not enjoy that movement? Irelands has one of the best known and exciting landscapes due to its extensive level of glacial and fluvial process. Motorways moving forward in Ireland should contain a high level of understanding for the landscape they sit. The motorways is a tool for motion, not for destruction. The work of the architect, the civil engineer, the planner all need to be understood to ensure

the best design comes forward. The political system needs to stop politicians planning motorway for their own re-election.

Streets, towns, cities may not always need cars. But architects can and should have a role in designing for mobility. In Ireland, besides adding to the congestion of the landscape, the car continues to offer a potential for freedom and pleasure. Engineers provide the technical and safety elements in road design. Alongside them, architects can help in recapturing the pleasure inherent to the experience of driving - the speed, the sweep, the ease - and bring it in harmony with the landscape.

The want for motorways is still a priority in Ireland today so now is the opportunity to make the motorway become more than a road, not just a connecting piece of infrastructure but a new type of pleasure that sits in its landscape in peace with the surroundings. The need for an experience is a relevant and possible. The role of a road has always been about a functional requirement, but this is not a rule or a law just a misconception. Sergey Brin, a co-founder of Google, predicts that driverless cars will be ready for sale to customers within five years[21], so the need for roads to do more than function is a real consideration for Irish roads. Irelands landscape is one to be seen and to be participated in. The Landscape that can attract so many every year can have the power to be seen clearly at high speed if we consider the motorways for more than function.

The motorway is a complex design process. The route, the planning , the elements along and on it all make the process a separated one. But if motorway design becomes about creating an experience and all the other process are connected by that, then motorway design become a process all based on one main idea. That idea has the power to make an experience like no other. In Ireland if we take on the motorway as a tool

for moving forward it can stand for a new Ireland we want to built. Something that is integrated into our landscape, preserving it and enriching the way we see it. We move forward with something we enjoy and believe in the experience of what traveling at high speed motion can be. "The freeway in the future city, in order to fulfill its function, must allow people to travel within the city and, in the process, enrich the very qualities of urban life which bring them there"[22].

Fig.16: The Washington-Baltimore Parkway with curvilinear sweeping forms and interchanges.

Fig.17: Robert Maillart Bridge Design

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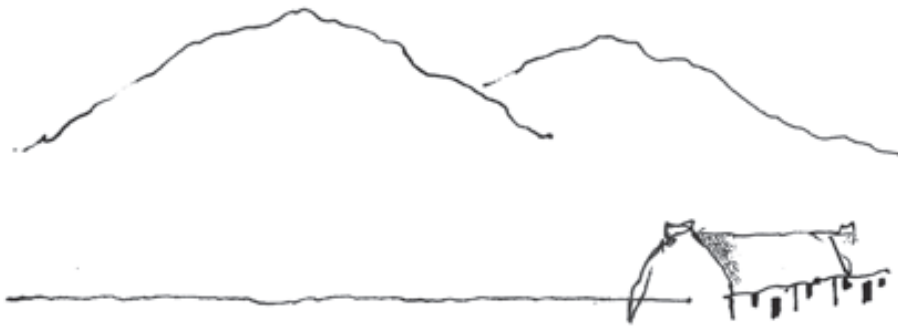


# The Architecture of The Country

A study of the Irish landscape, built and unbuilt.

*Jane Kissane*

# Contents

## *Introduction*

"How do we know where we are?"

This is the question posed by Kent Ryden in *Mapping the Invisible Landscape*.[1] It is a question inherent to human nature, that we often do not realise we are asking ourselves. From early history the hunter gatherer has placed significance on a certain tree or stone from which they can decipher the path ahead. Kevin Lynch explains how 'people adjust to their surroundings and extract structure and identity out of the material at hand'.[2] We have marked the landscape by a multitude of means over the centuries, one of which being our architecture.

In A Lost Tradition Mc Cullough and Mulvin describe the architecture of Ireland as having a 'vivid familiarity'.[3] As you move across the landscape there is a similar pattern of markings on

the landscape; school houses, one-off housing, graveyards, narrow roads, fields and hedgerows. This is the result of a dispersed settlement pattern; centred on many of our rivers, hills, and route ways, a system of communication, mainly horse or foot, influenced the actual location and distance between centers and as a result a pattern has evolved which generally repeats itself throughout the country. Central to many Irish settlements are examples of our most striking architecture (e.g. passage tombs, forts, round towers, monasteries, castles). This 'constant' pattern of ancient architecture reinforced by centuries of settlement can help define the architecture and landscape of this country and tell us where we are.

# *Chapter 1*

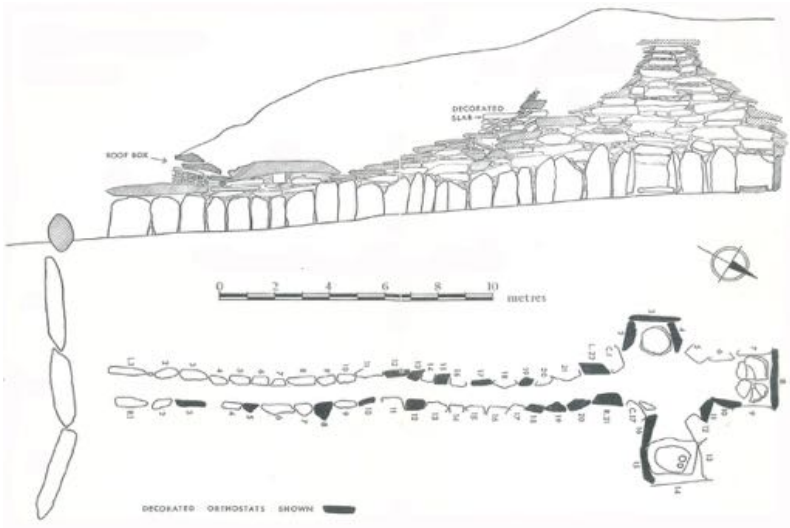
## *The Irish Artefact*

*'I placed a jar in Tennessee,*
*And round it was, upon a hill.*
*It made the slovenly wilderness*
*Surround that hill'*

*Wallace Stevens, 'Anecdote of the Jar'* [4]

Similar to Stevens' jar, architecture has the tendency to define an area of landscape, highlight it or inform us of our location. Today the passage tombs of the Boyne Valley, Co. Meath still define the area in which they reside. One of the strongest holds of Neolithic architecture, it is situated forty kilometers to the north-west of Dublin. The valley demonstrates how there is a 'tendency for Neolithic monuments to be clustered in groups and located at similar topographic positions'.[5] There are three major tombs which are surrounded by minor tombs and ringforts. Each tomb has a basic circular plan that is punctured by a long narrow passage towards it hearth where remains of the dead were once held. Each tomb has been constructed in the masonry style of the time 'corbell'. One of these tombs is Newgrange, a feat of architecture and engineering that preceded the pyramids.[6] This repetition of a 'type' of architecture that defines the landscape introduces the idea of an 'artifact'.

Aldo Rossi defines an artifact as a building which contains a 'multiplicity of functions…over time and these functions are entirely independent of the form' and is 'very similar…to a work of art'.[7] He




*Section and plan of the passage and tomb of Newgrange, Co. Meath*

goes on to explain 'it is precisely the form that impresses us; we live it experience it, and in turn it structures the city'. In *Architecture of the City* Rossi explores the idea of the artifact in an urban context; however it can also be applied to a rural setting. Rossi himself makes the point that Cattaneo would not make a distinction between the city and country, all inhabited places are the work of men: "…every region is distinguished form the wilderness in this respect…this land is thus not a work of nature; it is the work of our hands, our artificial homeland".[8] Therefore there is a case for a rural Irish artifact.

Vernacular Irish architecture such as our passage tombs in the Boyne Valley, court cairns, forts, round towers, monasteries, churches or even castles at one time were 'symbolic mountains [that] anchored and defined the focal points of the medieval European sacred landscape'.[9] Today many still hold this monumentality without any distinct function and 'one is struck by the sheer size and permanence of these constructions'.[10] Although spanning almost 4000 years these structures are often compiled in effort to represent Irish architecture. Their archaic qualities and form– monolithic and monumental appearance, large cut stone, single material – add to their singular image. This view attains to the idea of them as 'artifacts', works of art, single entities.

These examples of vernacular architecture or art are countrywide, often positioned in close proximity to avail of prime locations in the topography-highpoints, bridging points. Time has passed and their original function has also passed;

*'the most exciting and bewildering sight...was this old castle in the countryside, the bottom floor used as a cowstall, with cows wandering in and out, and in the shadow of the castle an old man…who never even raised his head to look at it'* [11]

This example demonstrates how this architecture has transcended its original purpose to now appear as an 'object' on the landscape, a distinctive form with no use, 'an object of nature and a subject of culture'[12] , an artifact.

As mentioned previously there are desired qualities for settlement. Large structures like these artifacts would often act as catalysts for new settlement. People wanted to live near the round tower or castle for protection. As a result there is a 'role artifacts play in organising our surroundings, imposing order'.[13] In the case of forts, castles and round towers it is all about defense. The ruling clans or chieftains chose locations with height or bridging points along a river to allow for stronger defense. Towns such as Kilkenny are an example of the 'imposing order' of the artifact. Some of the more resonating images of the Irish countryside are its structures. Taking pride of place amongst the landscape and after centuries of settlement they often become central to our lives; 'architecture structures social practices by imposing a particular order on the contexts of daily life'.[14] Beacons in the landscape they often punctuate the skyline drawing attention.

Irish artifacts 'draw on the visual imagery of the natural world in their architectural representation'.[15] Historic Irish architecture often demonstrates techniques and styles that are unique to this island whether due to means and/or knowledge at the time. Newgrage with its corbel roof is an example of a sophisticated architecture for the time. The La Téne culture introduced by the Celts[16] played great emphasis on decoration based on nature and with the introduction of Christianity symbolism remained evident. Architecture became a facilitator for artistic expression. This connection between art and architecture strengthens an example of 'artifact'.

However it was not until the last thirty years or so that their architecture was regarded something to celebrate. For hundreds of years these buildings would have fallen into disrepair and become overgrown and forgotten. At the turn of the 20th century, with a new found Nationalism and groups such as the Gaelic League promoting our heritage there was a new found respect and pride for our history. The wealthy Anglo-Irish such as the Yeats illustrated this pride in their paintings and poetry. This new found pride meshed with a population that could begin to think of more than just mere survival, the rise of tourism and a means to finance a revival was what allowed these buildings to re-emerge into our towns and landscape. For years the stage for games of 'hide-and-seak' or a refuge or fort for the youth many now aim to resemble what they did at their height. This changing function helps demonstrate how these examples of Irish vernacular architecture begin to resemble the traits of a rural 'artifact'. Emphasising the idea of an 'artifact' in the countryside, it can be said these buildings that were once of use have become 'images'. An image that now represents Ireland. This archaic architecture has become a resounding symbol for the country -often used by the Gaelic League. On the other hand they could be viewed as monuments, and their permanence can be discussed.

# *Chapter 2*

*The Landscape*

*"Apart from famous monuments…architecture does not hold a high place in the Irish popular imagination or rest comfortably in the lexicon that defines our image. This role is held by landscape."*

*Niall Mc Cullogh and Valerie Mulvin* [17]

-

*"The heath, the woods, the cultivated fields, the uncultivated zones, are related in an inseparable whole, the memory of which man carries with him"*

*Pierre Vidal de la Blache* [18]

As suggested by Mc Cullough and Mulvin above, the landscape holds great resonance with Irish people, more so than our architecture. We connect to the landscape; the mountains, the fields, the roads, a natural life that Rossi highlights that we carry with us. That tells us who we are and where we are.

One cannot attempt to draw an account of the Irish countryside without consideration of the geography and topography of the country. The rise and fall of the landscape, bridging points and mountains all hold a similar monumentality in the countryside that man-made artifacts hold. Formally part of mainland Europe, soil composed from sediments deposited at a time near the equator and subjected to glacial processes of the ice age, we have been left with a distinct topography within this small island.

The west of the country is known for its harsh, and sometimes desolate, mountainous and rocky relief. Almost like a saucer the country rises at its fringes¬ with a low lying center of peat lands which in fact 'cover more than 16% of land in the Republic…and are our oldest natural heritage feature having been present since the last Ice Age.'[19] The mountains along the coast are situated on the cusp of the expanse of ocean beyond act like a barrier or boundary condition in the landscape similar to an artifact defining place. A mountain like Ben Bulban in County Sligo sits high above the major settlement surrounding it. As you traverse the countryside of this area you cannot remove yourself from its shadow. A monument with such a hold and prominence on the landscape can be considered as monumental as a staigue fort in west Kerry or a round tower.

Irish people have gained 'distinctive sense of place'[20] as we live and experience a landscape.

*'Each cultural group interacts with the landscape in a way that is consistent with the particular beliefs and values that knit each of their cultural forms into a coherent whole'.*[21]


*A Connemara Village, Paul Henry, (National Gallery of Ireland) 1933-34*

We experience the landscape we inhabit. Artifacts have become objects amongst the landscape that help pin together our idea of a place. How we experience the landscape is a source of inspiration for many artistic fields. Readings of the country are reproduced in various oral, literary and visual media, and images of the landscape are thus defined, redefined and passed on. Like any 'cultural phenomenon, this is a recursive process: representations of the landscape form and are formed by interactions with the land.'[22]

Irish artists such as Paul Henry (1876-1958) have demonstrated their affinity for the landscape, making it a central character to their work. Jackson describes how paintings deliver the 'harmony between world of man and the world of nature'.[23] Henry captured a particular vision of the landscape of the west of Ireland. *A Connemara Village* (National Gallery of Ireland) is a typical work with its wide cloudy sky and distant blue mountains towering above turf stacks and thatched cottages. The success of these paintings lies in their simplicity – 'a limited palette, the reduction of the landscape to a few elements, and the broad simplified treatment of the masses.'[24] People can see their own versions and memories in these paintings and feel a connection.

The play, *The Field* by John B. Keane is based on a man's pride and love for the land set in the west of Ireland. First performed in 1965, it follows the trials faced by this farmer the Bull McCabe to defend the

land and keep it in local hands. It demonstrates an aspect of the Irish psyche that emerged after the famine, the desire for ownership of land and its value rose. The local police man makes it clear when speaking to the Bull; 'There is nothing in your heads but pigs and cows and pitiful patches of land'. Bull McCabe emphasises this viewpoint himself by telling his son; 'The Land is all that matters, Tadhg boy, own your own land' [25]

An image of the landscape has also been popularised by the tourism industry. 'The rise of tourism some four centuries ago marked the beginning of a new and much closer relationship between people and the landscape they lived in, and it was not the philosopher or the scientist who did the pioneering but the solitary, uninformed traveller, setting out, hardly knowing why, in search of a new kind of pleasure and a new kind of knowledge'.[26] Travellers to Ireland began to recount stories of a rolling green landscape, 'forty shades of green' and the prominence of castles. Even from the 1960's John Hindes' postcards began to highlight these images of the landscape. These images have travelled the world representing Ireland cementing an image of our landscape.

Though there may been have been attempts to capture this landscape by a multitude of media, all fail in comparison to experiencing the walk to the top of these mountains, driving these roads, traversing the rivers or working the land.

*Ben Bulban, County Sligo*

# *Chapter 3*

## *Experiencing a Sentient Country*

> *'…the generalized mental picture of the exterior physical world that is held by an individual. This image is the product both of immediate sensation and of the memory of past experience and it is used to interpret information and guide action'.* [27]
>
> *'Each activity influences the reading of the country: a critical aspect of this is the physical interaction'* [28]

Lynch simplifies the formula required to generate a 'vision' of our environment - a combination of artefacts, their surroundings and memories; a personal response not the image in a postcard or painting. Jackson in A Sense of Place, A Sense of Time explores how 'innumerable works in a variety of media have been produced over the years as people have attempted to tell others what certain places look like and feel like' but also that 'a sense of place is something that we ourselves create in the course of time'.[29]

As was previously explored, much of vernacular architecture has lost its original function and now merely acts as an object or image in the landscape. People apply their own function to these artefacts - sign posting, a playground, a pile of stone or even a cowstall. Yet however little we believe such buildings shape our lives they do have some impact. It is Colin Richards' opinion that 'Architecture structures social practices by imposing a particular order on the contexts of daily life.'[30] Many vernacular buildings have taken pride of place in towns and villages throughout the country for over a thousand years. Often times they have been the original settlement in an area. They then of course influence the social structure.

The landscape too has this effect. We must obey mountains, rivers, soil types, to only build where possible. Fertile land would result in large open fields with large and wealthy buildings. However in the poorer soil of the west, stones had to be removed from the soil to allow it to be cultivated. These stones would go on to build the small stone walls dividing small fields, another image that has been romanticised. This is not the case in the west However sometimes attempts are made to alter or change direction of the landscape, Jackson mentions how 'since the beginning of history humanity has modified and scarred the environment to convey some message'.[31] This message, at the root, is a means to inform people. We 'scar' the landscape with roads to direct people, buildings and signposts to represent a named place; it is how we tell people where they are, to generate 'a sense of place'.

To physically answer Kent Ryden's question we have made permanent moves on the landscape. This division, cultivation, development and naming of land also influences how we read our environment; 'The

*Cum a Chiste, Co. Kerry. An example of our attempts to 'map' the landscape.*

allotment of land for private or public use, is that it makes the social order visible' .[32] A major support in this organisation of the landscape is the map. Ryden himself declares the map as 'a perennially central form of geographical communication, it is probably one of the most densely packed communications media of any sort',[33] a means by which to inform people of the landscape and the built environment. Although we cannot see the lines drawn by a cartographer on the landscape as we move across it we cannot ignore them. 'They imply a transition between realms of experience, states of being; they draw an ineffable line between life as lived in one place and life as lived in another'. [34]
The name given to a place between these boundary lines also has a great impression on our sense of a place. People may associate experiences, interactions with people or even stories to a named place before they have set foot in it. This disconnection with a place due to a name is something that has been explored by many. In There are no Names but Stories the poet Kim Stafford explores that same idea that we must experience a place our self and give it our own name;

> *'When the anthropologist asked the Kwakiutl*
> *For the map of their coast he told them*
> *stories: Here? Salmon gather. Here?*
> *Sea otter camps Here? Seal sleep*
> *…A place is a story happening many times'* [35]

However in Irish tradition old Gaelic place names have been given as a result of the landscape or built environment. Place names beginning with 'lios' refer to a fort or stronghold (e.g. Liscarroll, Listowel). Dublin comes from 'Linn Dubh' which translates to 'black pool' in reference to the original settlement point. So the naming of the landscape can have some connection to our experience of a place.

# *Chapter 4*

*Monuments and Theory of Permanence on the landscape*

> *"Nothing is experienced by itself,*
> *But always in relation to its surroundings"* [36]

We have looked at the natural and man-made structures across the landscape. Although they may be isolated from each other and studied singularly there is something to be said in how they can work together and how we relate to them. Just as Lynch states in 'The Image of the City',

> *"Pairs may reinforce one another, resonate so that they enhance each other's power or they may conflict and destroy themselves"* [37]

The 'artefacts', I mention in chapter one, take advantage of the landscape - highpoints, bridging points. More often than not defence was important in choosing a site but this and the original function of buildings have no resonance today and we are left with these objects and moments on the landscape. However they still hold some purpose – a combination of artefacts and landscape help define the countryside, as Allen states 'each object in a human system nearly always plays a more complex role than is suggested merely by its use' .[38]

As explored in the previous chapter they together help define a sense of place and help us ascertain geographically where we are. We become attached to them as we make connections between artifacts, the landscape and our memories. Douglas and Isherwood maintain that material objects 'make stable and visible the categories of culture'.[39] As such they help give society a form; it is how people view the landscape. A combination of artefacts and the landscape can hold a monumentality that leaves an imprint on the social conscious. The great monolithic structures like Dún Aonghus in county Clare can initiate our thoughts on the past and pride for our ancestors who built these structures and felt the necessity to do so. Some images of the landscape have been magnified and saturated to tourists but they can still give a feeling of pride or patriotism.

In Uncommon Ground by Veronica Strang she believes 'social value is ascribed in both material and symbolic terms. Although the physical aspects of the value equation are fundamental, the intangible 'affordances' of objects – their potential for carrying and expressing symbolic meaning – are perhaps more important.'[40] We have great respect for our forts, tombs, monasteries and castles, buildings that represented the political, religious and spiritual leaders/hierarchy of their age - structures that highlight the prowess of money and patronage something that has remains in the Irish psyche and social order. Today we continue to be impressed by power and money though now we place emphasis on our shopping centres, epicentres of money and the height of social order

some would say.

But still this respect for artifacts in recent times lends to them being seen as monuments - objects in the landscape and sometimes the landscape itself that refer to a momentous period of time or even strong social memories.

'The process of objectification places both meaning and value into elements of the environment'.[41]

This meaning and value is instilled in people. As monuments they must have a sort of permanence to remain in Irish eyes. I believe an object only reaches permanence in someone's mind. Their prominence on the landscape, teaching in schools and patriotic vision means they shall remain somewhere in the Irish conscious and I believe this gives them permanence.

## *Conclusion*

The Irish playwright, Brian Friel, once argued that 'beneath the patina of Hiltonesque hotels and intercontinental jet airports and mohair suits and private swimming-pools, that is what we still are - a peasant people'

It is human nature to work with and define your surroundings. Agriculture is a basic response to the landscape but Irish architecture, art and writing have all placed emphasis on it too. Our architecture was designed around the land and its function. Newgrange possesses a 'light box' that allows light to enter on the shortest day of the year- a point of celebration for megalithic farmers. Castles were the central outpost of an area to which land and farmers would belong and to which they pay tithes. The beauty of the landscape has inspired some of our greatest artists. We have a symbiotic relationship with the land.

By looking at why we build and where we build, the connection to the landscape is evident - The importance of that relationship and its significance to an Irish typology. The values placed in Irish architecture over the ages. With this in mind we can respect traditions, interpret them with more understanding and move forward with greater vision for this country.

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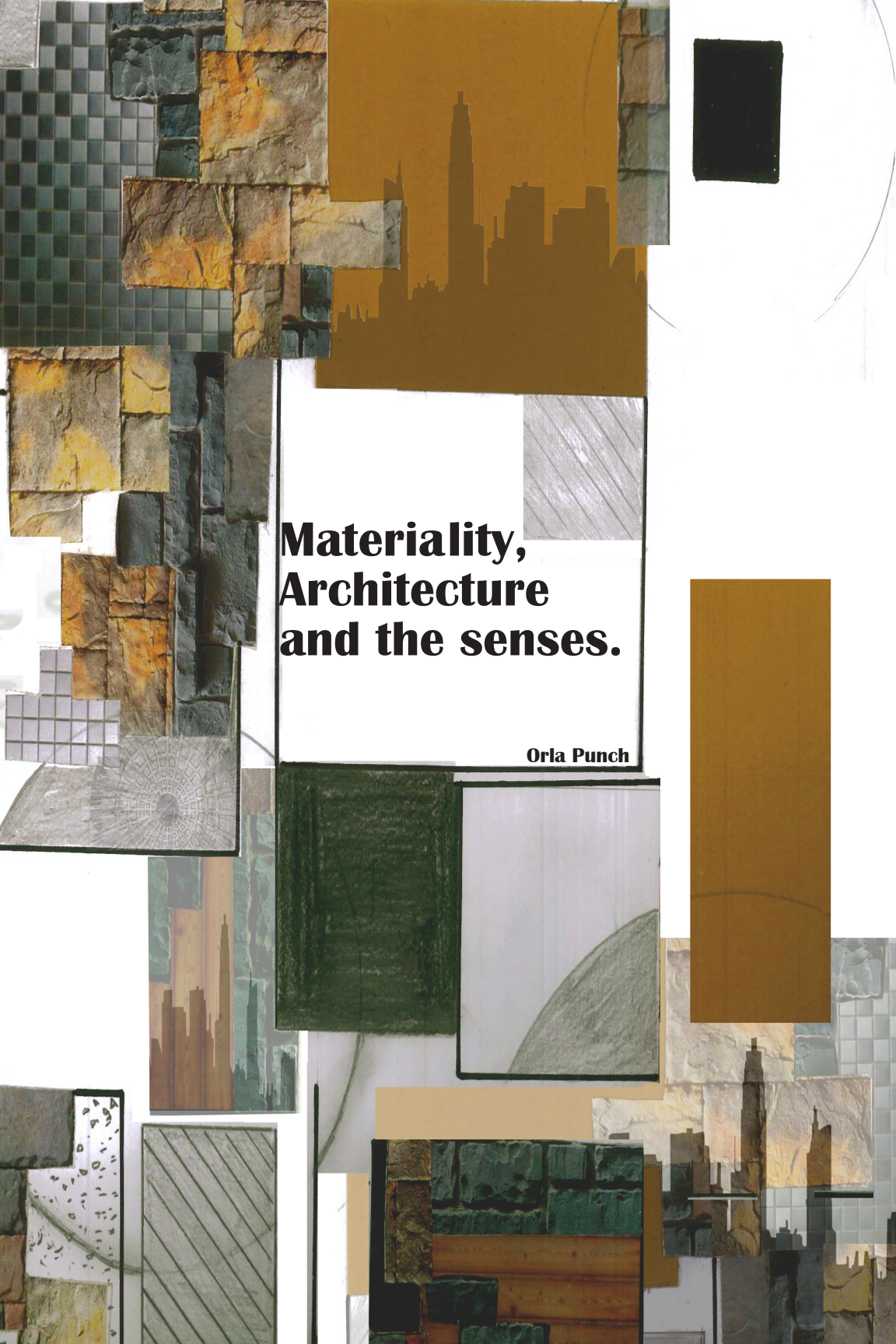

# Materiality, Architecture and the senses.

Orla Punch

# Contents

## Preface

# The Human Experience in Architecture

**Remembering...**

The front door was arched and bright red, it had a golden doorknocker and an oddly placed post box that was too high for me to see over. It opened into an entrance foyer that gradually became a long hallway, at the end of this hall stood the kitchen door that was also arched and cream in color.

The first few meters of the hallway were lit from two stained glass windows that framed the front doorway. When it was around lunchtime each day - depending on how cloudy it was - the sun would shine through the stained glass and create a beautiful rainbow of colours onto the hard wood floor. This multi-colored spectrum would stretch as far as the staircase, which stood as the halfway point in the hall. On the days when the weather permitted sunshine, the light would act like a spotlight, and would highlight a large scratch on the wooden floorboard in such an unusual way that almost made it appear as if it was a deep ravine carved into the timber. I used to worry that I would drop something down there and it would be lost forever.

The staircase was U-shaped and wooden like the hallway flooring, but the elaborate balustrades and banisters were painted cream and had a shiny lacquer finish that was chipped in places. This shine was very prominent during the daytime as there was a large window that began on the landing of the staircase (which was quite long) and continued to the first floor - it must have been at least two and a half meters in height and it seemed - to me - to be huge. Therefore when you entered the house from the front door, the stairs always appeared illuminated and seemed to guide you through the hall towards the kitchen.

The stairway steps had a red carpet covering them with a small edge left bare on either side exposing the wood. Directly across from the foot of the stairs was an alcove that was indented into the wall. Here sat a dark wooden table on which was a black dial-up telephone with white buttons. A little stool sat beside it with a cream and golden cushion with flowers embroidered onto the fabric in brown stitching. A number of small photo frames also sat on this table, they were mix-matched, all depicting different frames of different sizes, portraying images of familiar faces.

I remember the table was semi circular in shape with a marble top and had three legs supporting it. The legs were carved into the shape of – if my memory is correct - a lion's paw or perhaps some other large animals foot. A large mirror with a golden frame was hung above the table and bounced light from the window that was directly opposite it.

The walls were wallpapered in a cream and taupe floral paper that had texture to it. It was slightly raised in certain areas following the sequence of the pattern. I remember running my hand along it, and it felt almost sponge-like to touch – similar to the texture of the little balls of Styrofoam that are used in packaging.

These are the memories I have of my Grandparent's home in Rathmines, Dublin. They moved to a different house when I was six years old, but yet I can still remember parts of the house so vividly – especially the hallway. Unbeknownst to me, this might have been one of the earliest memories of me personally experiencing architecture.

I wonder to myself why this hallway in particular stands out above all other things? Was it the association it had with the excitement of going to visit my grandparents? For example the hallway was the first space in the house where my Grandparent's would greet me, and the first part of the house I would enter each time I would visit. But I believe its more then these associations that have created such a powerful memory of a space. It is how all the elements of this hallway combined made me feel.

Architecture is something that we experience from the very moment we are born. Some of it we observe knowingly, but I believe that generally the human experience in architecture is absorbed subconsciously. Though we may not realize it, it impacts our lives everyday. We experience architecture through our human form. It is something our bodies explore through sight, smell, taste, hearing and touch. The experience of architecture is truly multi-sensory.

Juhani Pallasmaa, a Finnish architectural theorist states that architecture acts as the art of reconciliation between humans and the world and that this mediation is carried out through our senses[1]. Our sensory experiences become integrated through our body[2]. We perceive things by comparing them to ourselves in a physical way. Something can feel huge because we are small; something can feel cold because we are warm-blooded. Timber and brick are perceived as warm earthy materials, is this because they are a similar color to human flesh? For example; in Kenneth Frampton's Studies in Tectonic Culture, he discusses a quote from Tadao Ando's characterization of the Shintai and Space; 'man articulates the world through his body… man has an asymmetrical physical structure with a top and a bottom… When I perceive concrete to be something cold and hard, I recognize the body as something warm and soft…"[3]

The materiality of architecture or in fact of any object plays a dominant role in the way it impacts our senses, and in turn how it makes us feel. In his book Thinking Architecture, Peter Zumthor discusses how even the mere presence of an object alone creates an architectural situation[4]. The first thing that springs to mind in terms of an architectural situation is of course a wall and the structural elements that create a building. However this also applies to the less obvious or dominant objects that can alter a space and our feelings just by simply being present. These are objects such as doorknobs, furniture, lamps, books etc...

**Materiality is vital in the way architecture impacts on our human senses.**

# Part One

**"The retina is like a movie screen on which a continuously changing stream of pictures appears..."[5]**

Through our eyes our first impressions and opinions of a person, place or an object are formed. The primary sense and perhaps the most obvious is the visual. When we relate vision to architecture, it is our first form of contact with a building. Instantly we see the materials present in the façade, the form, the structure, and its orientation in the land. Subconsciously the materiality and form of the exterior creates a perception to the user of what the building might be like to experience, or even what its uses are. This is a perception generated from a biological response that raises the question "do I want to enter this building?" and more importantly "why?"

Throughout history, sight has been deemed the noblest of our five senses; the act of thinking was understood to work in terms of seeing[6]. Plato manifested vision as a metaphor for humanity's greatest gift. Similarly Aristotle considered sight as the most noble of the senses[7].

Biologically the majority of our sensory receptors are located in our eyes. The sole purpose of the eyes visual process is to create a specific and correct cognitive and motor response – the mental processes such as learning, decision making, thinking, remembering etc. The eyes therefore have a major prominence and are thought of as the starring role of the body's' cognitive organs. Historically our five senses may have been originally designed as a way of keeping our Neanderthal brother alive, but they have evolved into so much more then that through the millennia that have past.

One has to wonder, however, maybe we over value the sense of sight and undervalue our other senses? When asked the difficult question of which sense would you forsake, the majority of humans – I included – would never forsake our vision. Therefore are we biased towards our sense of sight? What is it about it the sense of sight that we have thus created this hierarchy of senses with vision at the very top?

After all sight doesn't evoke memories the way in which taste, smell and hearing are capable of. When I think back to my Grandparent's house in Dublin, and that hallway that has been etched into my mind. I wonder if I were to go back to that exact same hall today would it appear the same way as it does in my memory. Our vision can have a way of tricking us. If the retina is in fact acting like a continuously changing movie screen, then do the images that we once saw change when they are locked into our minds eye?

Juhani Pallasmaa titled his book "The Eyes of the Skin". This title highlights the suppression of our other four remaining senses when compared to our vision, in particular our sense of touch - which I believe can be argued as our most undervalued and even forgotten sense. Pallasma argues that the tactile sense of touch does in fact have dominance and this is becoming more increasingly evident.

**"I have learned that our skin is actually capable of distinguishing a number of colors; we do indeed see by our skin".[8]**

Can it be said therefore that each sense is co-related, attached and working with the next to create our sensory experiences? Are all our senses – including the sense of sight – extensions of the tactile sense?[9] Pallasma believes so; "The senses are specializations of skin tissue, and all sensory experiences are modes of touching and thus related to tactility."[10] One cannot deny that this is simply down to the biological make up of our human bodies.

**"Significant architecture makes us experience ourselves as complete embodied and spiritual beings".[11]**

Architecture is manifested as something we can relate space and time to[12]. In the twenty first century, what does the architecture we design today say about our generation? It is something that is synonymously related to us, and in fact it is something that should manifest what our era stands for, but yet I find that it does not translate well. The hierarchy and dominance we have attached to our sense of vision has molded architecture into what it is today, and has given us a case of tunnel vision. This stems from an important period in time that stands as the modern movement. Modernism brought about a huge change I believe in how we as architects design – we should design for the senses – we don't.

Modernism created the modern interest in the minimal. Resulting in minimal architecture, minimal aesthetic, and the minimal life. Modern architecture lacks the materiality of its predecessor; the less materials present the more modern a building feels. The developments in technology of the early twentieth century fueled and even demanded the desire for buildings to be both functional and technological. Though full of great advances and generating some exquisite, and revolutionary architecture - as well as architects - the modern movement can be argued to have been somewhat detrimental to the architecture we have today when examined on a human and habitable scale.

**"The inhumanity of contemporary architecture and cities can be understood as the consequence of the negligence of the body and of the senses..."[13]**

In fact, this modern world we inhabit can be argued to entirely diminish, underuse and undervalue our senses as a whole. Computer images, television screens, smart phones – modern technology in its entirety flattens our multi sensory stimulations and imagination by turning (in example of the architect) the design process into a passive manipulation and a purely retinal experience.

Bizarre "squiggles" on a computer screen become the concept for the modern architecture of the twenty-first century. The design process revolves around these abstract concepts often with little regard to how one might actually inhabit this "**squiggle**" on a human level.

It often appears that the prime focus of a building is given more to the façade and how monumental the building will look when constructed. This is opposed to perhaps how well the building will function at a human perspective. Modern construction methods with unnatural materials such as aluminum and steel are used to make these complex buildings a reality. The results are often a mass obscure form. **Should architects not design for the human senses?** One can only imagine the positive effects of a building that could activate and **stimulate each sensory aspect of the human body.**

# Part Two

## "Vision reveals what the touch already knows..."[14]

When looking at a material, for example timber, it is impossible not to imagine its tactility - how it feels. In my opinion this can be said for most things, it is something that we, as humans subconsciously do.

As I argued previously **man articulates the world through his body**. This integration works both ways acting like a mirror. If it were a perfect world the body would be reflected in the environment around us - the non-built and the built, the natural and the un-natural. In the language of architecture this refers to matters such as scale, materiality, structure and form.

The great scholars, scientists and architects in the history of architecture and indeed throughout the history of mankind studied the make up of the human anatomy and its form. From that in-depth studies were carried out between the relationship of architecture and the human form.

The Renaissance highlighted the new found interest and importance given to symmetry and proportion as methods of connecting everything together. It was thought this would create universal harmony. Leonardo da Vinci's Vitruvian Man conveys Vitruvius's belief that the human form was the basis on which the classical orders of architecture were created. Le Corbusier was obsessed with finding and creating universal harmony and correct proportions. He developed the modular man that was based on the golden section and consisted of the mathematical ratio of the human form. Its function was to design, improve and create architecture that was better suited at a human scale.

Our forefathers before us understood the importance of the human body and its relationship with architecture. Why is it today that we seem to have undervalued, forgotten and even dismissed all that the successful architects before us used to create buildings that are both iconic and sensuous? This can be seen especially when considering the scale, design and materiality of some public buildings that have been designed in the last twenty years.

For example the world renowned Zaha Hadid – an award winning architect of the twenty first century. A recent project designed by Hadid completed construction in Beijing in 2012. The Galaxy Soho - seen in figure 1 - stands as a multi-functional structure that consists of an entertainment complex housing offices and retail businesses[15].

Hadid's concept for this commission was to integrate and stay respectful to the historical architecture style of China; the design concept was to have neither corners nor sharp edges with a continuous flow throughout the building[16] (which can be noted is similar to the majority of Hadid's design concepts). Each transition is designed to flow on into the next with large open spaces – this is Hadid's new approach to the traditional Chinese courtyard[17].

Figure 1

Figure 2

The overall scale of the structure stands at sixty-seven meters tall. The surrounding environments materiality consists of densely populated residential neighbourhoods. These neighbourhoods have been a historical part of Beijing's urban fabric for centuries[18].

They are connected through very narrow passageways named hutongs, which are presently under decline due to Beijing's increasing construction development[19].

In figure 2 one can see the effects of The Galaxy Soho on the surrounding landscape and built environment. How this building is even remotely respectful to historical Chinese architecture, or indeed how it fits in with its surroundings are questions I find difficult to answer.

In terms of materiality – or lack of - the façade consists of aluminium, which glares a stark, sterile white on the eye. The architecture of this building is that of monumentality and nothing more.

**One has to wonder does it all simply boil down to A QUESTION OF IMMATERIALTY?**

Humanity as a race are sensuous tactile beings. To convey signs of respect and sincerity we shake hands when first meeting one another. The French kiss cheeks when greeting each other. When happy or sad we hug one another. We convey our emotions to one another through our sense of touch, but our desire for tactility is also much more then a tool for emotion and communication.

When a baby is first born the importance of human contact is huge. The importance of normal sensory stimulation in developing children is vast – studies show that developmental delay in children who are deprived of sensory stimuli is common[20]. For example this involves children who have been institutionalized or orphaned at a young age, or even premature infants who are kept in incubators when first born. It was thought that this was down to maternal deprivation, however recent studies suggest that it is sensory deprivation that is causing these issues[21].

Another example of the importance of tactility and the sense of touch was carried out when employees receiving chair massages whilst at work showed an increased accu-

racy and speed on solving numerical problems. The test carried out also highlighted a simultaneous reduction in anxiety and blood pressure[22]. Massage therapy has proved to benefit those suffering from health problems and a variety of ailments.

It is also a proven fact that stroking a pet dog can lower stress levels and anxiety and even blood pressure in a person. Therefore, what does this say about the effects of tactility in architecture on a person? I believe we cannot even begin to scope its effects on us.

If this is so, then the effects of architecture – our home, the buildings we work in, the stations we commute through, the schools our children learn in – every aspect of the built environment that we occupy on a daily basis is effecting our senses thus impacting on our human bodies.

The **sensuality** of architecture in today's world holds little importance. It can indeed be argued that we live in an age of immateriality. Natural materials are overlooked for machine made synthetic materials that can be manufactured in bulk at very high speeds. These materials do not express age in buildings the way natural materials do. Nor do they express character. They display a sterile cold and stark image of perfection that does little or nothing to impact or stimulate our human senses.

# Part Three

**Remembering...**

The wind whistled through what must have been a weathered crack in the old timber framed windows, although I couldn't tell from which specific one. The eerie sound echoed up the corridor giving an insight to the size of double height space where I sat on a church style wooden bench and awaited my turn.

Attached to the wall behind me was an incredibly old iron radiator painted an off-white colouring that let out a low hissing sound. The hiss was barely audible but all the same it was a constant factor. Along the corridor stood five doorways. There was a faint rhythmic sound of a metronome ticking behind the closed door to my right. The keys of a piano played and paused with low muffled voices conversing during the intermittences of the music.

Further down the corridor sound seeped out from behind the five doors and intertwined creating a mash up of music. It was impossible to know what to listen to. The high-pitched sweet sound of the violin combined with the deep low plucking of the double bass strings. A clarinet or some sort of flute playing a classical melody contrasting - if not trying to battle - with the strumming of a Spanish guitar. The double height spaced corridor produced echoes of each sound, making the notes last longer creating an orchestra of lingering music.

This is a memory I have of waiting for my weekly violin lesson at The School of Music in Limerick. The building was originally constructed in the early nineteenth century, designed for the purpose of a hospital. Today it has been converted into a college and a music school. I remember even when no music was playing; the building had a distinct "sound" when it was silent. The long double height tiled corridors that connected to the central stair core would carry and resonate the sound (or lack of) throughout the building.

However, when one imagines a building, they don't simultaneously think of hearing it. Sound isn't often associated with architecture. Different shaped spaces can generate different sounds, as do different sized spaces. In terms of materiality, different typologies of materials reverberate and resonate sound depending on their properties. Architecture-

does not generate a light…but yet it can still be **seen**.

Through the reflection of light we see form and material. Light can alter the effects of how a material looks; the difference between the appearances of concrete on a sunny day compared with its appearance on a dark night is vast. Similarly through the reflection of sound an impression is conveyed of form and material[23]. If not taken so literally, it can be said that some buildings scream at you, whereas others **say nothing at all.**

## "Hearing structures articulates the experience and the understanding of space..."[24]

Silent films make up for the lack of sound by having the actors over act – they use dramatic gestures and facial expressions to convey a certain situation in a scene. Could the same apply to buildings? Or rather, to silent buildings. Perhaps modern architecture today is over acting.

This over acting is in order to compensate for the lack of things it has to "say". For example, monumental structures demand our attention but often upon venturing inside these buildings, they do little for us and can be in stark contrast to the expectation the façade had initially created. Modern glass facades that have become a popular design aesthetic over the last century reflect the image of the outside world and offer light and transparency. However on close examination this architecture often does little to captivate our senses, one can be left feeling empty or simply feeling nothing at all from these buildings. This is caused from lack of materiality, which then creates a lack of sensuality, which subsequently creates a lack of stimulation.

## "A space is understood and appreciated through its echo as much as through its visual shape"[25]

This quote directly applies to the memory of my lessons at the school of music. In fact I believe once we examine our experiences of architecture, it too rings true for every building we subject or have subjected ourselves to. The sound of a building is experienced often as a secondary and background experience, one that we are not aware of, but one that affects us subconsciously. Today, we as humans are often seldom aware of what, or of all that we hear[26].

## "The nose makes the eyes remember..."[27]

The same applies to our sense of smell and even taste. The nose needs only the single figure of eight molecule substances in order for a nerve ending to react and trigger an impulse that then creates a smell[28]. That scent alone can reignite memories long forgotten by the eyes. A scent for that matter can take you back to a vivid memory of a place you had even forgotten existed, it can suddenly transport you back to your childhood and create a sequence of images in your brain that can stimulate all of your sensory receptors.

Without us realising it, smell is one of the most memorable things about a person; we take note of the scent of a person subconsciously. Animals identify their young in huge herds through their scent alone. It's a defining characteristic, a primordial one that holds more power then we are aware of. Everything in our world has its own distinct odor. The same applies to architecture, every building has its own scent depending on the type of materials that are used in its construction, and depending on its functionality. Timber in

particular has a distinctive natural earthy aroma regardless of how many times it has been treated. It brings the natural environment into a building. This is in stark contrast with the synthetic non-scents of aluminum and steel. This can heighten our taste in a building - it can define whether or not we like it.

For example; a bakery is not often a building people detest, where as a hospital or clinic might be. This is down to the strong powerful odors that are associated with both – both scents creating very different outlooks

In terms of the sense of taste in architecture, it does not literally transcend to tasting a building in the way in which we taste food, such as the Brothers Grimm story of Hansel and Gretel - architecture is not constructed with gingerbread and confectionary. However, Pallasmaa argues that specific colours and details can evoke oral sensations - the human tongue can subconsciously and automatically sense a polished stone surface[29]. Can we actually taste a building or a material as Pallasmaa describes?

It is debatable and a difficult question to affirm. Although it is undoubtedly evident that there is a correlation between architecture and the sense of taste, which then subsequently results in the stimulation of all four remaining senses to create a multi sensory experience and correct biological response to a certain situation.

# Epilogue

**"The sense of a place; the idiom is so pervasive that the word sense is almost completely transparent" [30]**

Architecture stands as an extension of the natural world into the man made realm[31]. The human senses are the basic and fundamental tools we use when experiencing it. They create our sense of space, our spatial awareness. However in the twenty first century world of architecture and design, we seem to have in some cases forgotten or even taken for granted all the factors that effect the human mind through our sensory receptors in building design: light, texture, tactility, colour, materiality, scale, form... The list is endless.

This highlights the question - **what is good architecture?** Pallasmaa states that architecture acts as the art of reconciliation between humans and the world, this mediation is then carried out through our senses[32]. Our sensory experiences are integrated through the medium of our body. Therefore, must good architecture address and stimulate **all of our senses at once?**

Architecture is something that we experience from the very moment we were born into this world. Though we may not realize it, it subconsciously impacts our lives everyday. Memories from our childhood involving certain places such as the corner of a classroom, the window seat at a friend's house, a particular room in our own home, or in my personal experience the hallway in my grandparents house – the spaces we liked or disliked – these are our earliest architectural experiences.

**"Architecture reflects, materializes and eternalizes ideas and images of ideal life"[33]**

Figure 3

Something that perhaps stands as a metaphor for, and reflects the human ideal life or the "American Dream" is the dollhouse. It is a common toy we give our children, it can often even be found as a collector's item in an antique store. Yet it can be said that for the child that interacts with one, it also stands as a tool in spatial layout and materiality.

When examining a Victorian dollhouse (figure3) it is clear that each space is "rendered" with different materials; each space coveys a different use and situation. It portrays the real emotions, the feelings and the mood that are found in buildings generated from human presence, and also from the materials present.

It can be said then that because of the care that is put into their design, these dollhouses can be described as a works of art. Peter Zumthor argues that architecture is the "art of space"[34]. It is manifested as the art of the built world on many levels. If this is so, architects should be more conscious of the materials they use to construct and form their buildings, just like artists are meticulous about the colours they use when painting a simple brush stroke on a canvas.

Our buildings have developed into image products that are separated from depth and sincerity[35]. Architecture that is monumental and that suddenly impacts on the individual does nothing to impact, engage or stimulate them in the long term. The importance of tactility has been overlooked in many of today's modern constructions. Architects now favor synthetic materials that on a human scale are often cold and hard such as concrete, steel and glass. It cannot be argued that these buildings are not visually impressive, however that impression is from the controlled perspective of a beautifully rendered image on a computer screen. Standard construction today is increasingly more flat and is strengthened by a weakened sense of materiality[36]. This weakened sense or lack of materiality is created through the use of modern unnatural materials.

Natural earthy materials such as timber, stone and wood have a sense of authenticity and a true story behind their origin. Over time they become weathered and aged, this aids to their character and sensuality. Modern materials give off a persona and image of timeless perfection, but in humanity this doesn't exist. This is another factor to why they do little to stimulate our human senses. **We do not see ourselves reflected in them.**

Architects by profession are constantly searching for new ways to design a better world for us in which to live. Therefore a solution to the immateriality and lack of sensuality that has become modern architecture has to be found. We have become entangled and caught up the world of technology so much so that we have forgotten the importance and the **power** that our human senses hold in architecture.

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# The Rise, Fall and Renewal of Limerick City.

*A dissertation by Laura Pembroke*

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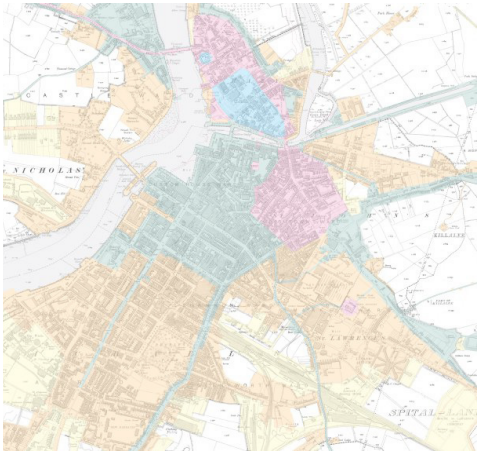


# Introduction

***'Perhaps the first thing that should be said about medieval Limerick is that it is lost.'*** [1]

Lost is a word, in fact, that can accurately be used to describe Limerick in its entirety, and not just the medieval quarter. For a city with such a rich history of different cultures and architecture, we have very little to show for it. As Limerick expanded into a new area, the existing area was forgotten about, disregarded and not kept or regenerated. *'It is the imprint rather than the form of the medieval buildings that remains.'*[2]

Limerick has developed and grown throughout history, expanding and forming new towns, each designed in a different style of architecture, making them distinctly different and easy to recognise. Beginning within a wall on King's Island, the city expanded across the river to form new towns. The Englishtown, on King's Island, was originally the centre of Limerick city. As the Irishtown, or new town, grew across the river, it took over as being the more important and successful market place, making it the centre of Limerick. With the construction of the Georgian new town, the centre of Limerick shifted yet again. Finally, the Victorian City showed the construction of pivotal buildings in Limerick. These eras of development spanned from 1197, when the Walled Town was established, to 1906 and have already shown many changes in Limericks form and layout.

Currently the centre of Limerick is fluctuating from place to place due to the location of shops and marketplaces. The recession has also played a part in this as some shops cannot afford to pay city centre rent rates with the drop in sales that they have had recently.

In my dissertation I would like to look at the movement of people through the towns of Limerick. As a new town in Limerick is developed the sense of place in the old part is lost. Everything is focused on the new town and the old town falls into decline. The importance of the old town is lost. The wealthy people move on, leaving the poor people behind. There is also a clear distinction between the towns in their plan. John Stephens describes the layout of the Englishtown as;

***'the whole consists but of one large street, the rest being all narrow lanes.'*** [3]

This is a stark contrast to the Georgian Town based on a strict grid that can be easily understood. It stands with wide, straight, long roads running parallel and perpendicular to each other. Limerick has always been defined by the wall surrounding the English town, then the Irish town and the roads that connect them both together. As Limerick expanded and the walls were dismantled, the roads became the only remaining thing that defined Limerick. The physical and class difference of the old and the new are further reasons why it is not connected. By looking at Limerick in this approach, being the physical, as well as the social aspects we can understand the urban structure and rectify what has gone wrong along the way.

Services in a city are one of the most important things to make a city function properly. Public transport is how most people get around and the route of the public transport is also important. Buses are the main form of public transport in Limerick but if you look at the main bus routes, it is evident that many parts have no public transport connecting them to the rest of the city, making them less accessible to its inhabitants. By looking at successful public transport systems in other cities, there could be a potential resolution to our problem within them.

# The Construction of Limerick, town by town


If you were to describe the basic physical form of King's Island as it was between 1197-1691 it would be as follows; a great wall several metres thick surrounding the town with one main street running through the centre. It is connected to the main land by gates at two opposite sides of the island. The main street was connected to a series of narrow side roads and was described as looking like; *'a comb with a double row of teeth'.*[4] The plan of the streets today is much as it was in the middle ages and the wall was the outline of the city. During The Great Siege of 1642 and The Williamite Siege of 1690-1691 the city was confined to inside the walls. The walls were the main defensive feature of the island. When the Treaty of Limerick was signed the people of Limerick were safe to go outside of the walls. The town then expanded over the Shannon to form the Irishtown. This town was built in a similar fashion.

***'The streets were wider and some of the houses were more modern but it became part of the walled city even though it retained a separate identity.'***[5]

Built in different times with a slightly different style of architecture, the difference between the two towns was evident. However, they were always known to be connected, although they were referred to as two individual towns; *'Map after map presents the old city as the two walled towns linked by a single bridge.'* [6] They were two towns separated by the river Shannon but both surrounded by the city wall.

In peaceful times, however, the wall became a recreational feature. *'The impression of the wall had a recreational function.'*[7] It was no longer needed for defensive reasons and the threats to Limerick were no longer in the form of battle. An elegant description of the towns was given by John Carr in 1805;

***"The ancient city consisted of two divisions – the English-town and the Irish-town connected by a bridge called Baal's-Bridge, which crosses the arm of the Shannon: that river gently adds to the beauty as well as the opulence of the place: both these towns were formerly fortified against each other, or against the common foe."***[8]

As Carr described the towns as being 'formerly fortified' it is clear that there function as a defensive feature has expired. *'Carr's uncertainty about the function of the walls indicates the degree to which their purpose had been forgotten in an age when external threats to cities came in the shape of acts of parliament rather than out of the barrel of a gun.'*[9] Although the function of the wall had changed, the physical form of the fortified towns that connected at only one point had remained. This single connection point had become a symbol of the medieval city, a symbol that remains to this day.


It is evident that the wall had lost its defensive function. With people coming in and out from inside the walls, they became permeable. Now that people had nothing to fear beyond the walls, outside resources could be used.

Trade was now coming in and out. The city began to rely on the produce of the land outside the city both to eat and sell; horses, cattle, wheat, honey and other agricultural produce being the main export from the city. Townspeople were daily engaged in activities that took them outside the walls. They were a lot of bonuses related to using the land outside the walls; land outside the walls was free from taxes, there was more space and there were new roads and government incentives.

With this expansion and outward development in mind, in 1769, Edmond Sexton Pery had blueprints drawn up for a new town to be built south of the Irishtown. It would be called Newtown Pery. It consisted of broad straight streets that bisect one another to form expansive blocks. It was clear that Edmond Sexton Pery was a clear-sighted, organised city planner. Built with Georgian Style design,

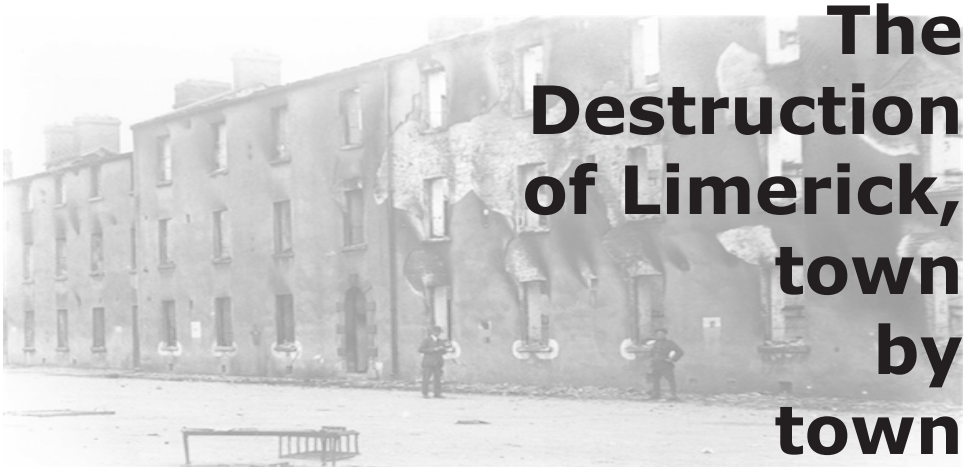
***'the new town was immediately distinguished by the style of its architecture and the wealth of its inhabitants.'[10]***

The new town expanded rapidly. Along with the Georgian houses of Newtown Pery, the quay's were also under construction and between 1763 and 1767 George's Quay, the South Mall (now Charlotte's Quay) and Sir Henry's Mall were all erected. The Custom House and the Assembly House were then erected in 1769 and 1770, respectively. All of these developments were built on the fringes of Newtown Pery properties. In the years to follow Newtown Pery expanded with new brick dwellings and shops which drastically changed the appearance of the city. The later urban renewal schemes from 1989 to 1997 have complimented the Georgian streetscape.

The Englishtown, Irishtown and Newtown Pery make up Limerick City Centre. The streets of Limerick began with one wide, long street that ran through the town that was joined to narrow lanes throughout the town, to slightly wider streets, still with the idea of one main street in the Irishtown, finally, to wide parallel streets of Newtown Pery, with a strict grid and no superior street.

***'Maps and aerial photographs illustrate how neatly the broad straight streets cut across one another to form spacious blocks. From the air one can see noticeable differences in the streetscape of the older and newer parts of the city.'[11]***


The towns vary architecturally and are unique and distinctive to each other, however, they are all connected via bridge or street. Dismantling the city wall in 1760 opened the huddled island town to a new city waiting on the banks of the Shannon and the construction of the Custom House on Rutland Street, built on the fringe of Newtown Pery, connected the new town back to the Irishtown and then to the Englishtown. Each part of Limerick has its own core and physically, each core is connected. But are the people from each town one community, or are they as divided as their town's architecture?



# The Destruction of Limerick, town by town

In 1750 a city gaol was erected on the site of the Thosal in Mary' Street. This suggests the old town still formed the centre of the city life. Not only social but also commercial life was thriving there. The taverns, shops and businesses of the city were still located on the main street that bisected the old towns. The wealthier merchant's lived and worked on the King's Island, where the government buildings were located but it was discovered that they owned land in both the centre and the suburbs. Although the Englishtown remained the commercial centre for some time after the Irishtown was built, eventually merchants began to venture over to the Irishtown and colonise the buildings on Rutland Street.

The market House in the Irishtown also attracted merchants. In 1787, a local printer described the new streets and market place of the Irishtown as *"an avenue to the city"*[12] but *"the city's focus is still King's Island"*[13] However, when the Custom House and the quays of the Irishtown were built, the focus was concentrated on the Irishtown and the business aspect of the city was now split between the two places. Markets were held in both towns though the Irishtown gradually became the more important market centre which was located on Corn Market Row where it still resides today.

***'The Irish town by this time was no longer considered to be the suburbs, outside the main walls of the town but an integral part of the city.'[14]***

Social and architectural boundaries now existed between the English and the Irish towns. The grand houses on the new quays were built for the wealthy. Impressive public buildings were constructed for social functions. The Englishtown was now associated with the poor Irish people, although it was believed the rich and the poor lived *side by side*. *'The divisions were hidden and only became manifested as the new town [Newtown Pery] expanded and the possibility of separation presented itself.'*[15]

The new town expanded rapidly. The wealthy people immediately wanted to live in these beautiful new Georgian buildings. Along with the new brick residences, shops also opened in the Georgian buildings. *'The development of Newtown Pery led to the downgrading of the Irishtown. Formerly fashionable houses were turned into tenements, the more prosperous inhabitants moved away, and even today some sites remain cleared, but undeveloped.'*[16] The striking beauty of the new Georgian buildings against the decline of the towns was very evident to locals and visitors alike. One visitor described the harsh contrast between the old and the new towns as follows:

***"I know of no town in which so distinct a line is drawn between its good and its bad quarters, as in Limerick. A person arriving in Limerick by one of the best approaches, and driving to a hotel in George Street, will probably say 'What a handsome city this is!' while a person entering the city by the old town, and taking up his quarters there - a thing, indeed, not likely to happen – would in fallibly set down Limerick as the very vilest town he had ever entered."***[17]

In the eighteenth and nineteenth centuries Newtown Pery made Limerick an architecturally significant city in Ireland. It was most definitely the beautiful part of Limerick and was admired by everyone. It was often compared to London's remarkable Georgian quarters and was *"unquestionably superior to anything out of Dublin."*[18] Although extremely successful and popular when it was built, Newtown Pery was always seen as a suburb of the old town. The bishop, mayor and all the judges still worked in the old town meaning the status of the new town was partially cultural, partially social, but not political nor religious. Like the Englishtown and Irishtown that have fallen before it, Newtown Pery also fell into decline.

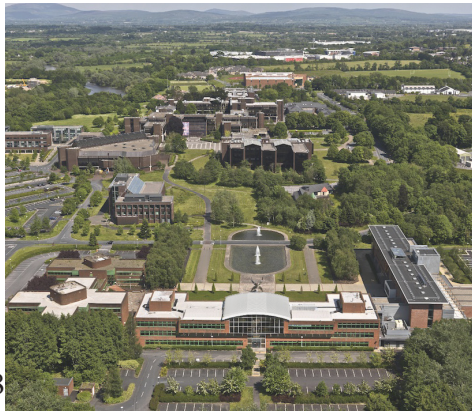
Today the name Newtown Pery remains but it has no official designation. Its history has been unforgivably neglected while its very fabric has deteriorated. There are a number of possible reasons why Newtown Pery has become neglected; poverty and a lack of civic resources and the fact it is not an Irish heritage site leads people to believe it is not worth preserving. Some Georgian heritage has also been compromised and is now a shadow of its former past. Although housing an important collection of Georgian architecture and acting, at one point, as Limerick City centre, the future of Newtown Pery is uncertain and is in decline.

The one time retail core of O'Connell Street and William Street has been eclipsed by massive retail developments in the suburbs, such as The Crescent Shopping Centre, East Way Retail and Business Park, Childers Road Shopping Centre, The Parkway, Jetland and Coonagh Cross. More and more business and retail facilities leave the city centre for the convenience of the suburban shopping centres, with easy access and free parking. Poor planning and lack of investment has resulted in a high vacancy rate and dereliction which plagues some parts of the city centre.

A common trend of the rich moving on the new, modern part, while the poor are left in the old, neglected town is now becoming apparent. The wealthy people are move on the next new place without leaving roots in the older town. They no longer care for their former home and do not care if it falls into decline. The wealthy people are the ones that can afford to maintain their houses and keep them looking respectful.

However, once the rich move on to the new town, the old one almost immediately falls into decline. Where have all the wealthy people gone once they left Newtown Pery? They moved to the suburbs. Affluent people, nowadays, prefer to live in the suburbs with their family. The Georgian houses are now too small for what people want. They want more room, big gardens and a sense of community.

The city is not an appealing place for people to live. It has become part of Irish culture that no one wants to live in an apartment forever. Although in most cities around the world city centre apartments are coveted by all those living on the outskirts, in Limerick, property prices are significantly lower in the city. Why is this? Properties in the city centre are a lot older and not well preserved. There are more sports and recreational facilities in the suburbs. The University of Limerick and Limerick Institute of Technology are on the outskirts of the city centre. The students have very little reason to come into the city, the majority stay on campus or in the surrounding estates for convenience.



Parking in the city centre is very expensive while parking in the shopping centres on the outskirts is free. Public transport is not one of Limerick's best qualities, getting in and out of Limerick city can be quite a hassle as buses rarely stay to the timetable and are always late. Taxi fares are very expensive so one would not usually order a taxi unless it was absolutely necessary.

On a separate note, Limerick's reputation for gangland violence is a very negative aspect that is often brought up in the news whether provoked or not.

***'Recent and not so recent manifestations of a hostility more insidiously damaging to the name and fame of Limerick than any of those ancient sieges were to its valiant citizens.'[19]***

The media has put a great deal of time and energy into tarnishing Limerick's name with such nicknames as 'Stab City'. Although widely known in Limerick that this drug related violence in kept mainly between two feuding families, and that petty theft in Limerick is low compared to the national average, tourists are very often deterred from visiting Limerick because of this false reputation because they fear for their safety.

Is there anything that can be done to save Limerick from this downward spiral? Is the only option to knock it to the ground and start again? Limerick has some outstanding qualities that are not being fully exploited. We are letting this negative image get the better of us. Our city was once a thriving metropolis that was internationally known for its beauty and commercial success. I believe it is possible to gain this status once again. By better using our resources, Limerick can return to its former glory. To reunite Limerick as to become one city, actions must be taken first to improve each area individually. Instead of concentrate on one area, if we can improve all of them, people will be enticed to all aspects of Limerick.

In the next chapter I would like to look at other towns and cities around the world that have had the same faith as Limerick and how they people of those towns dealt with it. By looking at what resources and facilities Limerick already has, we can exploit these to make Limerick the best it could be. As Jane Jacob discussed in her book; 'the Death and Life of great American cities' city planners can often be unsympathetic cities and have master plans that rarely actually work on the ground. She believes the real vitality of cities their diversity, architectural variety, teeming street life and human scale.[20] Limerick has great architectural variety and it would be a shame to destroy it by completely replacing it so like Jane Jacobs, I would like to look at ways we could restore the city instead of just starting again.

# Rebuild, not replace

*"A city should be like a good party – you just don't want to leave."*

- Professor Jan Gehl

Limerick is not a substantial city, but it did, however, manage to gain worldwide recognition for its famous lace, its succulent ham, its immense interest in sport, the beauty of its women and the love of its citizens for music and song. It is situated on the estuary of the longest river in Ireland, the Shannon and has unparalleled scenic beauty. Limerick has an ages-old history with a wealth of story and legend, of song and tradition, in English and Irish that has been passed down through generations.

Limerick is split, architecturally, into three towns; The Englishtown (King's Island), the Irishtown and Newtown Pery. As the new town developed, the former town became inaccessible, damaged and without life. Limerick is not the only city in the world that has suffered from areas of decline. By looking at the case study of the Old Town in Marbella, maybe we could utilise some of their solutions to improve Limerick. Although circumstances in Marbella are very different that they are here, the headings in which they used to tackle the problem of decline might be useful to us. In Marbella the main issues they dealt with were:

- **Pedestrian priority**
- **Urban recovery**
- **Management and maintenance**

# Pedestrian Priority

Limerick's main streets are permanently congested with traffic, giving pedestrians second precedence. In the 1990's Cruise's Street was pedestrianized on the site of the former Cruises hotel. The development was for a time very successful. '*Traders learned that direct parking spaces right outside their premises were not necessary for a city centre business. Footfall is key.*'[21] In early 2000's Thomas Street and Bedford Row were also pedestrianized and resurfaced. These pedestrianized streets are very popular and are filled with people on a day to day basis. However, they are connected by O'Connell Street, which runs perpendicular to them. This is the main road that brings traffic through the city. It is a busy and dangerous road for pedestrians.

I believe by giving pedestrian priority on parts of this road, it could tie together the pedestrian streets of Limerick City and unite them as a retail centre. No traffic allows pedestrians to ramble through the streets in safety and comfort. An achievable solution to this problem could be system they use in Place de Jemaa el fna in Marrakech, Morocco. Cars are allowed on the square until 1pm and from then on it is just pedestrians. This arrangement would allow delivery trucks and people going to work to pass through in the morning.

# Urban Recovery

It is very apparent that urban recovery needs to take place in Limerick. The Granary and all the buildings on Rutland Street opposite the Custom House (now the Hunt Museum) are vacant because of a retail project that never materialised. This area of Limerick is in serious need of urban recovery. This area also acts as the entrance of the city centre when you enter from the North East side. This unattractive view of rundown buildings, broken windows and empty shop fronts is enough to stop anyone even daring to enter further into the city. Unfortunately, this is not the only area of Limerick that is in dire need of urban recovery. The once exquisite Georgian core of Limerick is in decline. Investing money into the recovery of this area would be very beneficial to Limerick in its entirety. Bringing back the beauty of the original Georgian style architecture could put Limerick on the map, once again, as a beautiful city.

Spitalfield in London is another example of a Georgian district that was desperately in need of saving. The city of London council wanted to expand the market square by adding new structures to the existing Georgian buildings. The local people had a strong desire to save the original housing and merchant terraces from being demolished for redevelopment. They opted instead to refurbish and modernise, keeping as much of the existing structure as possible. Along with the restoration of the old streets, they introduced shops and restaurants to the vacant Georgian houses. This was a very successful recovery project and the outcome is a thriving market place. The most effective part of the scheme is that it transformed Spitalfield into a destination, and not just a market to visit for fresh produce.

# Management and maintenance

The management and maintenance plan would deal with the day-to-day cleaning and maintenance of the city centre. The streets do not have a clean look or feel to them which are an unattractive characteristic for both locals and tourists. Features like clean streets, green open spaces and trees by the side of the road are not features found in many places in the city but that could really enhance the city's beauty. These delights make a city a pleasure to be in. As a result;

***'Marbella now has extremely efficient and effective cleansing services – there is no graffiti or litter anywhere.'***[22]

Urban renewal schemes have attempted to regenerate the Irishtown, in recent years. Older historic buildings have been restored and the people of the area, and Limerick, are now more conscious of their heritage. By continuing this restoration along with some of the ideas used Marbella, Limerick has a very good chance of returning to its former glory.

# Savour our city services, scenes and facilities

## The automobile alternatives

If we are discussing making part of the main street, along with other streets, pedestrianized, we must look at the changes from a car user's point of view, as well as a pedestrian's. Prohibiting cars from entering the centre of the city for the majority of the day will prove to be a burden on most car users and may also deter them from going into the city to avail of the retail and commercial facilities there. If we were to improve the public transport system, being the bus, it would entice more people to use it.

*'The great reality is that the better the public transport is – better in the sense of being frequent, fast and safe – then the more people will choose to use it.'*[22]

Currently, the city buses are very unreliably. If no one can rely on the buses, then no one can use them successfully in their day-to-day routines. In addition, the bus routes of Limerick also need to be looked at. At the moment, all bus routes in Limerick begin in the city centre and spread out to all the different suburbs. They work on a linear access going back and forth. If we you wanted to get a bus from one part of the city to the other, it would be very difficult The bus routes in Limerick only facilitate the suburban residents coming in and out, they do not connect the different areas of the city together.

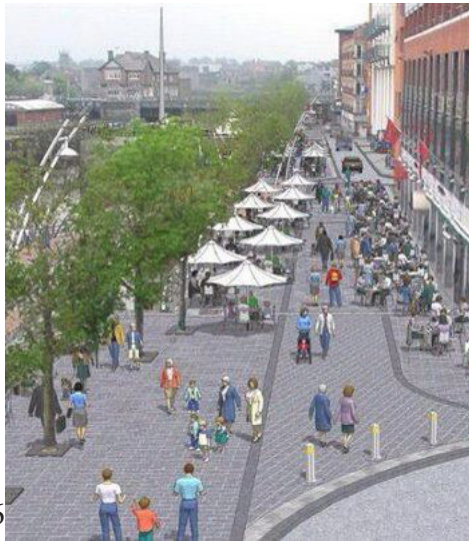
If there is no public transport to and from the different area of the city, is it no wonder that people don't travel around the city more? By introducing new bus routes or even a shuttle that would take you from, for example, Pery's Square to King John's Castle, then locals and tourists alike would be more inclined to make those trips around the city.

A scheme that is already underway to improve sustainable transport in the city is the Limerick Smarted Travel. It aims to create a number of bicycle paths around the city and also leading out to the University of Limerick and some of the other suburbs. It will create wide, smooth, lit pathways for cyclists making in safer and easier for them to get around Limerick. It will also encourage more people to cycle to the city centre. There will be a number of bicycle hire centres around Limerick for those who don't already have a bike. This scheme will also connect the city back together as some of the routes are radial patterns around the city centre so people will also be able to cycle, at ease, from place to place in the city centre.

# Reviving the riverside

Since the creation of Limerick City, the river has always been its finest quality. The location of Limerick on the River Shannon is one of the reasons it is a well-known city, with is scenic views unparalleled to other cities in Ireland. Regrettably, in the last few years, the focus on the river has lost, its beauty no longer appreciated. An urban embankment development project looking at the Rhine looks at some interesting developments that could regenerate the riverbanks, allowing them to become 'highly attractive and much frequented places which [would] shape the identity of the region and should create an international image [of] the region.'[24] The developments are as follows;

- Riverbank promenades
- Squares, buildings and events of cultural and social significance
- Broad pedestrian and cycle paths
- Locations with enough space for large events of regional attraction[25]



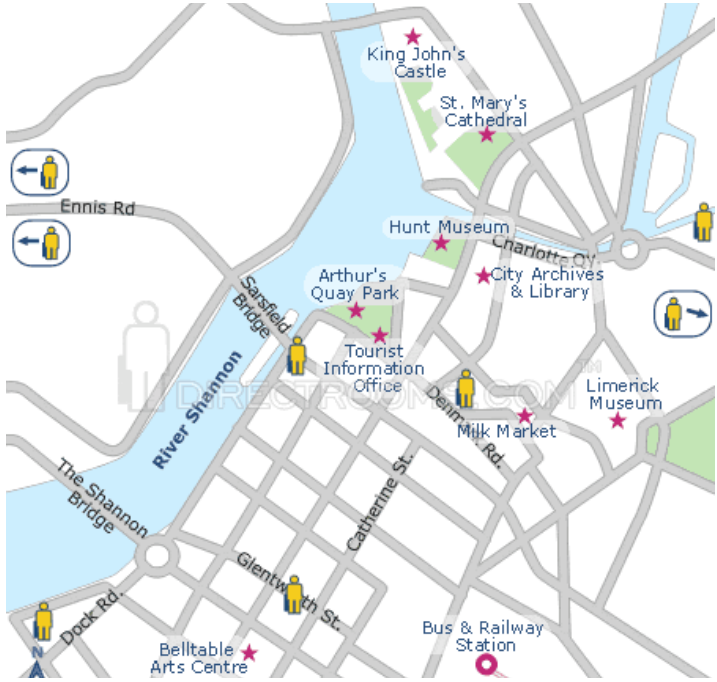
This project is talking about festivals such as Riverfest to take place more frequently and bring life back to the riverside. It seems absurd that a river of such beauty and character be ignored when it has so much to offer the city.

# Availing of our amenities

In terms of Limerick's historic and scenic attractions, it is quite spread out and not always easy to get around. Along with the idea of shuttle buses around the city and the smarter travel cycle routes, an interesting case study to look at is Bristol, The Legible Project. It aims to improve people's understanding, experience and enjoyment of the city but addressing the following things;

- Place identity and way-finding
- Choice of transport
- Exploration
- The city by night[26]

The legibility of a cityscape is very important. Being able to find your way around a city at ease is pivotal to both locals and tourists. At the moment, Limerick is not the easiest city to navigate your way around. Although most of the city is built in a grid, it can be hard to locate where you are with very few monuments and statues on the streets to distinguish them from one another. The legibility project would help people get around the city and be able to enjoy what it has to offer.



## Lest we forget the locals

*'Authentic local attractions are the key elements that draw tourists and locals alike.'*[27]

Although tourism is a big part of any city, the local people are what sustain the city. Tourists, in most cases, will visit a city for two reasons; to go sight-seeing, and to experience the lives of the local people. Although tourists want to see the city itself, it would be nothing without the people that inhabit it.

The city must give back to the local residents so that they can love and enjoy the city they live it. By restoring the decaying buildings of the city, the locals can feel a sense of pride in their city that can be shared with the tourists when they see the true beauty of Limerick.

*'Grand architecture and sweeping avenues may look imposing but are not enough by themselves. The skill is to create an urban environment that feels human and generates a subtle sense of ownership and usable public space – a vital aspect of urban vanity.'*[28]

# Conclusion

Limerick's rich heritage is constantly under the threat of being lost. Some is already gone. Most buildings '*have either been ignored as meaningless or demolished as hindrances.*'[29] This has to stop. We can either look at our city as a broken up series of towns with no significance to each other, or as a '*sequence of spaces*'[30]created by buildings that can stimulate

***'our sense of position through moving from the wide to the narrow and out again into some fresh space.'[31]***

Limerick has great potential, but it is our duty to see it. Before I did the research for this dissertation, I had no idea about the rich history of Limerick. I was unaware of the existence of the Englishtown, Irishtown and Newtown Pery as all being separate towns create in different eras. I have lived in Limerick for my whole life and did not know about this history so I would conclude that there are a lot of people in Limerick that are also uneducated about the wealth of culture and history Limerick has to offer. I would be in favour of using these old place names for designated areas of Limerick to revive the dying history of these towns. If people referred to these areas as their areas with their original names, it would reignite them in history and also give a renewed sense of place to the parts of Limerick that have been left decaying for years. It would allow people to see the timeline of the history of Limerick and give people an insight into the way it was back then. I have looked at the towns of Limerick; how they were created, physically, how they were destroyed, socially and economically and how we could revive them and unite them once again. As I have said before, the towns can't be connected successfully unless we fix them individually first. We need to make Limerick a place where the existing residents are happy to call home and perhaps gradually, more people will more back into the city to fill in the lonely voids that have exited for centuries.

# Endnotes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# Construction, Destruction & Reconstruction.

*Rachael Hodkinson*

# *Contents*

# *Introduction*

*Figure 1 ; showing Chicago modern day.*

Chicago, often referred to as the 'windy city', is a modern metropolis, it is a world renowned city for tourism commerce, industry, transportation and telecommunications. However this great city had once been the site for sheer devastation and hardship. The Great Chicago Fire of 1871 had destroyed over a third of the city, leaving hundreds dead and thousands more homeless. How had this city been restored and redeveloped so dramatically after the devastation of the fire? How does a city become urbanised? What are the key factors that change and transform a city? The exploration of the city's development both before and after the fire is important in understanding the processes that Chicago undertook to become its modern day metropolis. An understanding of the grid and its effect on a city and the wider landscape of America, and also its use as a means to the urbanisation of a city, is a key factor in the discussion of Chicago's growth.

# *The Grid*

*Figure 2; The Chiacgo Grid,*

The Grid is by far the commonest pattern used in the layout of planned cities in history and especially within America. According to Spoiro Kostof in "*The city shaped*" there is:

> *"no better urban solution …for disparate sites or as a means for the equal distribution of land or easy parcelling and selling of real estate."*[1]

The grid has great flexibility and is easily adapted to the landscape. The natural flatness of the geography of Chicago allowed for the easy adaptation of the grid, in the creation of the city's infamous layout.

Spiro Kostof uses the example of New York to show effectiveness of the Grid in terms of urban expansion. However the city of Chicago can also show its dynamic nature within an urban landscape. The Chicago Loop is a prime example of the grid.

Chicago is one of the many cities

[1] *The City Shaped, Spiro Kostof, Bulfinch; Reprint edition May 4, 1993*

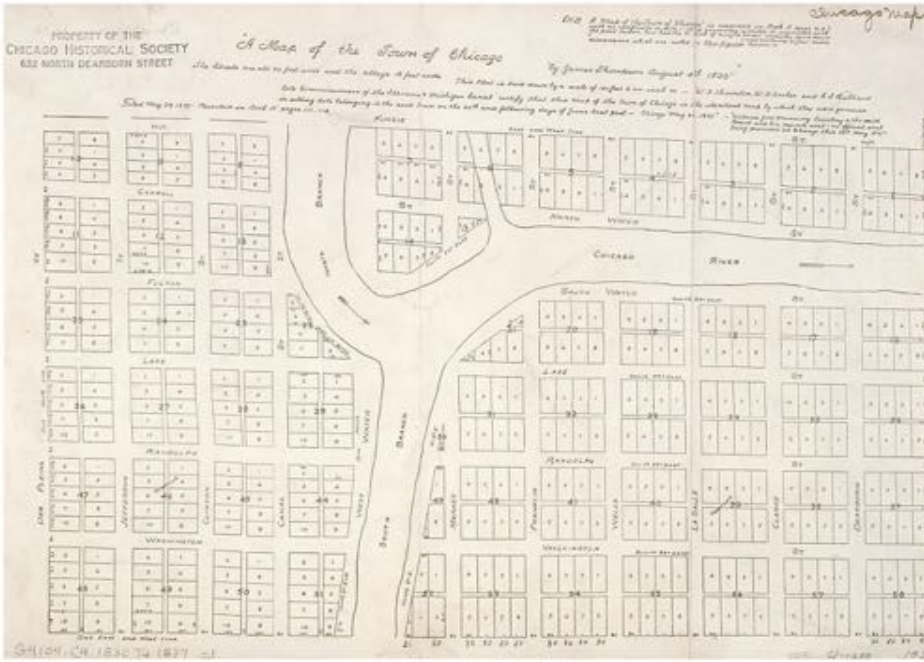


*Figure 3; Plan of Chicago 1830,*

within America that adapted the gridding to the layout of the city and the wider country. Thomas Jefferson created his famous grid layout and while L'Enfant greatly criticised it for being so timid, Jefferson's victory was greater. Although Jefferson's grid lost out to the Frenchman's "*splendid imperialist diagram*"[2], Jefferson's system was adapted to the nation and affected the layout of America for decades to come. The National Ordinance ensured that the urban blueprint for the most of the United States would be the grid.

Thomas Jefferson was deeply annoyed by the lack of open spaces in the plans of the new towns; the gridded layouts lacked open spaces, were dense and filled with congestion. His checkerboard grid was devised in a pattern of open squares and subdivided blocks, that according to Jefferson would create a healthier city.

> "*The atmosphere of such a town would be like that of the country, insusceptible of the miasmata which produce yellow fever.*"[3]

Daniel Hudson Burnham, an architect and city planner, had a key role in the creation of many cities including

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[2] *Thomas Jefferson's checkerboard towns, John W. Reps, University of California Press October 1961 Vol 20, no 3 pp 108-114*

[3] *Thomas Jefferson's checkerboard towns, John W. Reps, University of California Press October 1961 Vol 20, no 3 pp 108-114*

Chicago. His career culminated with the Chicago plan of 1909. In John Reps' article "*Burnham before Chicago .The birth place of modern American urban planning*",does not focus on the plan of Chicago primarily but on that of other cities that were built in America around the same time. It is likely that these influenced Burnham in the creation of the Chicago plan. It has been suggested that he must have studied many city plans and urban centres among them Boston from which he drew inspiration. The report on Boston had many proposals.

"*One of its proposals called for the creation of inner and outer boulevard to provide circumstantial connections to Boston… a system that Burnham used in his Chicago plan, although with far greater symmetry.*"[4]

Although only parts of the plan where implemented it influenced the development of Chicago for decades to come and it had a huge effect on the overall layout of Chicago.

The Chicago loop is a historic and commercial centre of downtown Chicago and it includes many cultural institutions such as the Art institute of Chicago, the Chicago symphony orchestra and the Chicago Cultural Centre. It is the second largest commercial business district in the US and it's a major part of the city's economy .The Chicago loop was one of the areas that the great Chicago fire of 1871 devastated. Was this for the better?

Chicago has an infamous skyline; many of its renowned buildings are located within the gridded pattern of the loop. The Willis tower, formerly the Sears tower, the tallest building in the western hemisphere, stands in the western part of the loop in the heart of the city's financial district. The loop is also home to many parks and recreational centres including Grant Park. Most of Chicago's lakefront is green space. Modern Chicago is far from the Chicago that existed pre 1871. How had this city developed and what effect had the use of the grid on the city?

The Grid is an effective system in city planning and gives us an insight into Chicago as a modern metropolis. However it is also important to look back at Chicago pre the Great Fire (1871) in order to understand the development of a city after its destruction

[4] *Burnham Before Chicago: The Birth of Modern American Urban Planning, John W. Reps , The Art Institute of Chicago, Centennial Lectures 1983 pp 190-217*

# *Chicago, Before The Great Fire of 1871*

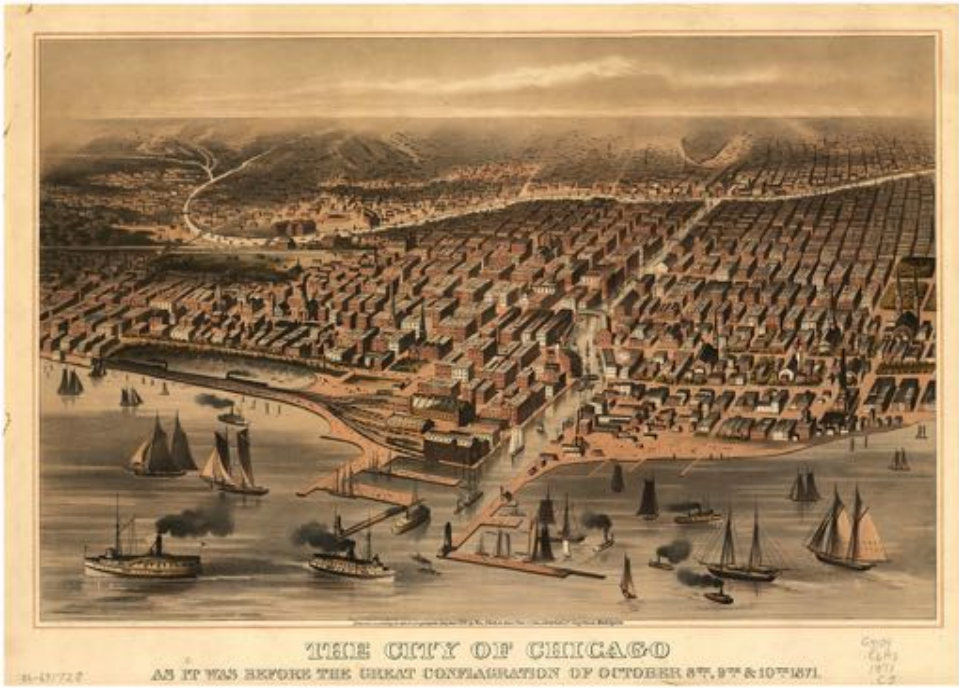


*Figure 4 ; Image of the city of Chicago 1800s*

The city of Chicago is located in the north-eastern part of Illinois on the south-western shores of Lake Michigan. Today Chicago is the 3rd most populated city in the U.S with over 2.7 million residents. The city in 1833 was recorded to have a population of 200 people, by 1837 it had increased to 4000 residents .On the 4th of March of that year Chicago was incorporated as a city and went on to be the fastest growing city in the world for several decades to come. According to Mark Twain in Life on Mississippi:

*"It was hopeless for the occasional visitor to keep up with Chicago-she outgrows his prophecies faster than he can make them.She is always a novelty for she is never the Chicago you saw when you passed through the last time."*[5]

It was no doubt that Chicago was

[5]*Mark twain, Life on the Mississippi,James R.Osgood & Co,Boston,1883 (U.S edition)*

*Figure 5; Image of the Wicker Park District,showing a street in Chicago in the 1800's.*

a city of rapid expansion and growth but what were the contributing factors to this growth and creation of the city ?How had the Chicago developed into a great city of commerce industry and culture, when 40 years beforehand in was a handful of cabins in a swampy landscape?

First and foremost Chicago's location is one of the biggest contributing factors to the expansion of the city. According to Carl W. Condit in "*The Chicago school of Architecture*" it can be argued that the city of Chicago is ideally located in terms of transport, tourism and commerce.

The city lies beside the huge freshwater lake, Lake Michigan and two rivers, the Chicago River and the Calumet River. This provides the city with great opportunities for transport. The construction of the Illinois-Mississippi Canal provided the city with a huge boost to the transportation of goods. The further construction of canals and waterways lead Chicago to be the *"focus of the large system of inland waterways in the world"*[6] and had a huge influence on the development of the city.

The waterways provided the city with an ideal transport network. These networks, both railways and waterways brought about the development of coal, steel and timber industries.Later in the chapter it will explore the construction of the buildings within the city and

[6] *The Chicago school of Architecture: A History of commercial and Public Building in the Chicago Area, 1875-1925, Carl Condit, University of Chicago Press November 15 1998*

*Figure 6; Image of the Chicago's first railroad Depot,*

the surrounding landscape. Largely timber framed buildings that were swiftly constructed with little regard to the safety regulations. Perhaps this was an underlying factor in the overall devastation of the fire?

The creation of the numerous railway networks were a key aspect of this development of Chicago. The first company to operate trains in and out of Chicago was the Galena and Chicago Union in 1848, within a few years it connected to the lead mines, providing easy transportation routes for trade and development. In 1869 the line joined the Union Pacific Railroad at Omahn and was the first rail route to the pacific coast. This of course was a huge opportunity for Chicago in terms of transport trade and tourism.

The Chicago and Rock Island rail was chartered in 1847 and ran trains in 1854.This was the first railway to cross the Mississippi river, which provided a huge boast to the economy. The Aurora Branch Railway (1849) joined Chicago and Aurora in 1852, and later reached Quincy, Illinois in 1855, which became known as the Chicago, Burlington and Quincy Railroad. In 1856, the railway to Cairo extended on to the Ohio River.

The Michigan Central, Michigan Southern and Northern Illinois railroad (1853) were the first companies to

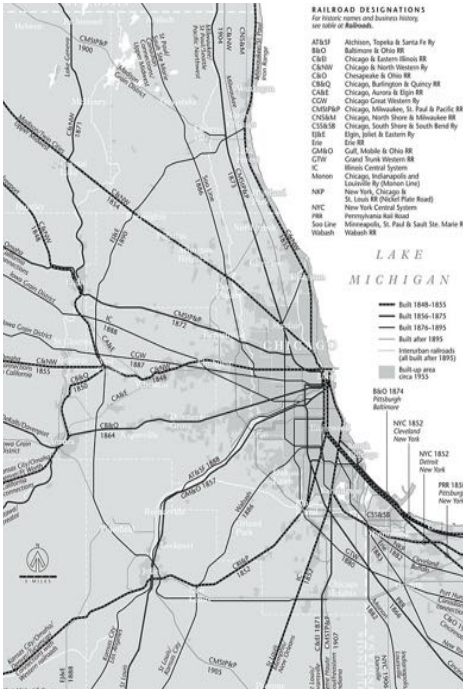


*Figure 7; Railway Networks*

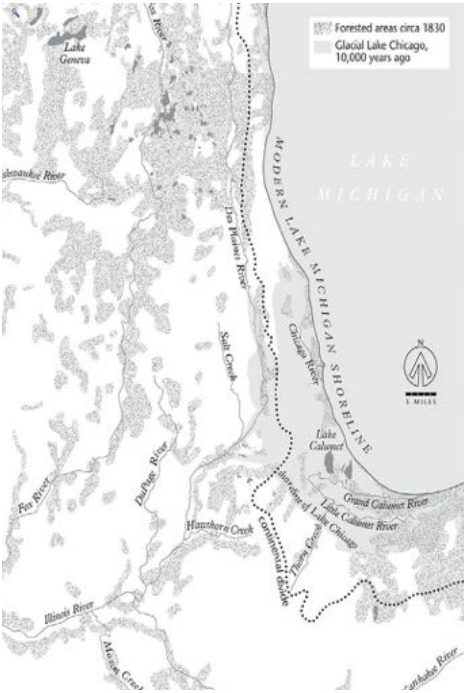


*Figure 8 ; Image of Chicago before human interference*

operate trains east of the city. In 1869 the latter two merged with 7 others to form the Lake Shore and Michigan Southern railroad. The Chicago to Buffalo line allowed connections to Albany and New York. In 1856 the Pittsburgh, Fortwagne and Chicago railway made connections to Pennsylvania. By 1871 Chicago was a hub of transportation networks. It had over 10'750 miles of line with annual revenue of $82,777,000, with carriers operating 75 passengers per day. This provided the city with great opportunities of trade, tourism and lead to a great boast in the economy and to the city itself.

The creation of these railway networks linked Chicago to focal points across America. With this came the development of the agricultural industry, with the railway network being established the transportation of goods allowed for a massive increase within these industries.

The increase in agricultural industry was another development that sparked growth. The Union stock yards were founded in 1865. This was a central point in operations particularly in the slaughter process of the meat packing industry. Along with this, the milling and stockyards growth was described as

[7]*The Chicago school of Architecture: A History of commercial and Public Building in the Chicago Area, 1875-1925, Carl Condit, University of Chicago Press November 15 1998*

''*astronomical*" . With this rapid growth of these industries, came about a huge surge in immigration to the city with people emigrating from places like Germany, Poland and Ireland. These industries had a huge demand for workers and thus the city population was increasing rapidly.

In terms of city planning, Chicago adapted the infamous grid pattern. The city originally had 58 blocks it now has expanded immensely over the years. The Illinois and Michigan Canal Commissions hired James Thompson, a surveyor from Kaskasai in the downstate Randolph County, to create Chicago's first plan or map showing the proposed layout in 1830. He laid out the town with straight streets uniformly 66 feet wide and with alleys 16 feet wide bisecting each block. However before Chicago was adapted into a city it was inhabited by a Native American tribe, the Potowatawi and in the early years of the city's development many settlements located along the old trails of the tribe. Mills, taverns, churches, stores and schools were built along them. In later years with the rapid expansion of the railway networks, settlements developed along the rail lines, many of the railway routes had begun to spread in a spider web pattern outward from the city. The Union Stock Yard is an example of such a development. This is key in the expansion and reconstruction of the city after the fire, which will be discussed in later chapters.

Much of the development of Chicago is based on the Federal land survey carried out before people settled in Chicago. It framed the gridded system that began the city. Many of the section lines of that gird, became the major arterial streets in Chicago as it expanded. According to Carl Abbott in "*Planning Chicago*":

> *"Chicago's first planned suburbs represented attempts to think through and express a better relationship between the people, their city and their landscape"*[8]

In terms of architects and their influences at the time, W.W Boyington and John Mills Van Osdel were the city's most prominent architects before 1871. While many of their buildings were destroyed in the fire, however they were among the most important buildings at the time. These would include Boyington's 1869 water tower on North Michigan Avenue and Van Osdel's 1857 McHenry County Courthouse in Woodstock.

The construction methods at the time were a key factor in the growth of the city and also in the spread of the fire. During the colonial period the construction method was simple and allowed for the rapid construction of the city with

[8] *Planning Chicago, Carl Abbott, Encyclopedia of Chicago, Web publication ,Authors entry,2005*

standardised timber materials. A simple balloon frame construction was used, it had smaller timber pieces than in older methods and the joists were simplified mortise and tennons. The construction was cheap and allowed for the rapid development of the city fabric in the years prior to the fire. This was a key fact in the devastation.

Such enormous expansion of a city and its population without proper planning and regard to safety regulations was an impetus to disaster that came about on the Sunday October 8th 1871.

# *The Great Fire of 1871*

Figure 9; *Chicago burning*

Chicago had become a city of immense growth and rapid expansion. The city had been transformed into a central hub of transport commerce and industry. Had this developed too quickly? Was there a lack of attention for the well-being of the city, not only in terms of its inhabitants but in terms of the cities fabric? Was the Great Chicago fire an impending disaster?

The great Chicago fire caused huge devastation to the booming city of Chicago. This momentous event left hundreds dead, thousands homeless and resulted in widespread destruction of the city. The fire began on Sunday October 8th 1871 at around 9.30 in the morning and burned intensively for 3 days until the 10th of October 1871. The exact cause of the fire is unknown. The fabricated story of Mrs O'Leary's cow kicking over a lantern in the barn, stormed the press in the weeks after the fire. This was later proven to be untrue

Figure 10; *Progress of the Chicago fire 1871*

and from the imagination of a reporter, Michael Ahern who thought it would make a good story, he later confessed to the fiction in 1893.

The weather was one of the main causes to the spread of the fire. The summer of that year was extremely hot and left the ground very dry and the wooden city very vulnerable. In many reports and from newspapers before the fire, the city at the time is described as a disaster waiting to happen. The amount of rainfall recorded that summer and autumn was one-fourth the normal amount of rainfall between July and October. This caused Chicago's wooden buildings and sidewalks to become dried out from the intense heat.

The fire started in or near the O'Leary farm located at 137 Dekowen Street, southwest of the Chicago loop. The fire began here early that morning and had engulfed the barn in a matter of minutes .On the first night of the fire the weather was a huge contributing factor of the devastation. There was a strong south-westerly wind which exacerbated the fire.This wind created convection spirals or *"fire devils"*[9] which spit burning debris in all directions, causing many buildings to be engulfed in flames. These strong winds forced the fire north and east towards the Chicago River. The fire jumped the river and began to move towards the business district. This was one of the shocking factors about the spread of the fire, its ability to ignite the river running through the city. The city's river the Chicago River was so polluted the fire was able to burn across the top of it and spread to the other side rapidly and without faltering.

The fire fighters of the time were overwhelmed by fires in the locality coming up to the event. On the morning in question, they were mistakenly directed to the wrong street and by the time they arrived at DeKowen Street the fire had engulf the barn and was raging

[9] *The Chicago fire of 1871 and the 'Great Rebuilding', Mary Schons, National Geographic January 25 2011.*

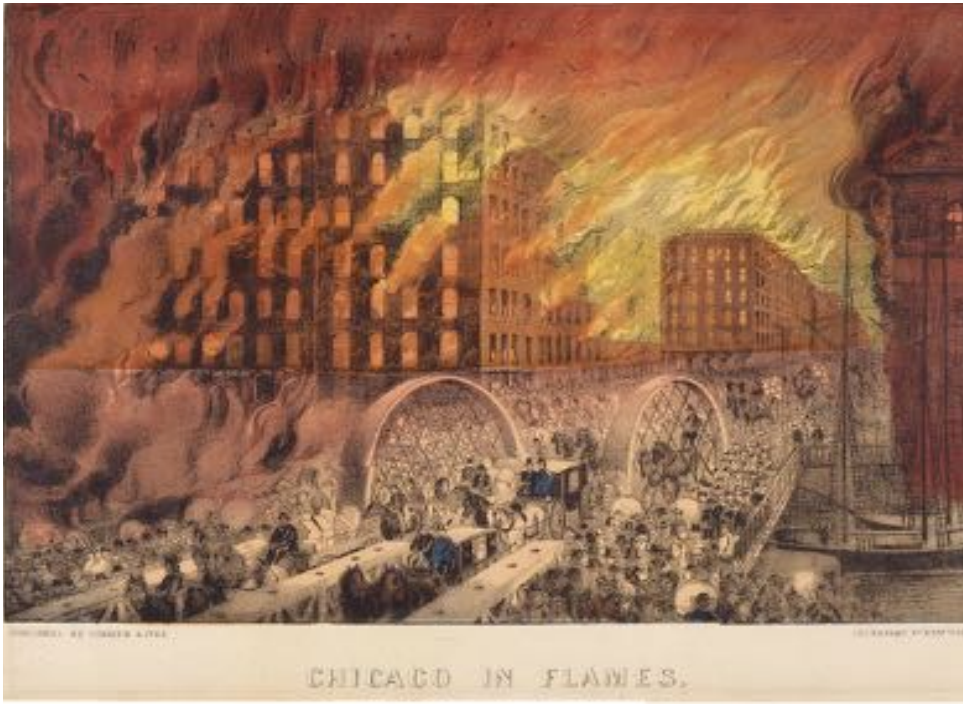


*Figure11 Rush for Life over the Randolph Street Bridge (Chicago in Flames)' Artist: Currier & Ives*

out of control. The wooden houses of the time were no match for the intensity of the flames and were soon transformed into a monstrous blaze. The fire spread across the wooden houses, private mansions, commercial and industrial estates consuming them in flames. By the Monday morning fire-fighters were powerless to act. Many of the citizens fled to the lake in fear of their lives. Here they were then trapped by the fire and watched a large portion their city burn to the ground.

After about two days of this continuous inferno rain began to fall and the fire died out on the morning of the 10th, leaving in its wake a scene of severe destruction and devastation. The cities central business district was levelled .The fire had burned an area of 4 square miles, destroying 17'500buildings and 73miles of streets. It left thousands homeless and 300 people dead. While only 120 bodies were recovered it was believed that the rest were buried within the rubble or incinerated by the blaze. The fire obliterated the cities central business district, 1600 stores, 28 hotels, 60 churches and left 90'000 people homeless which at the time was just

*Figure 12; Aftermath of the Great Chicago Fire, 1871*

over a third of the population.

The fire burnt over one third of the city destroying a large portion of the business district, many houses and even spread across the river. Many of the building that were considered to be 'fire proof' due to being made from stone were left with the stone façade and rubble in the interior. Buildings often had a layer of fire proof materials on the outside but the structure was predominately made of wood. Another cause of the devastation of the fire was the destruction of the waterworks building on Pine Street. This building had a pine structure and when it caught a blaze, it was quickly burnt to the ground. It was the city's main water supply and caused huge problems in the fire-fighter's attempt to control the fire.

While the business district was the main area that was burnt, the railways were virtually undamaged. This allowed for a huge relief effort from the surrounding nations to give aid to the city. Within a week 6'000 temporary structures go up.

Throughout history there have been many disasters that have brought cities to their knees; the great London fire of 1666 is prime example. Similar to

[10] *The Rebuilding of London After the Fire, T. F. Reddaway , The Liverpool University Press, The Town Planning Review ,Vol 17 no4 (Dec 1973) pp 271-279*

[11] *The Rebuilding of London After the Fire, T. F. Reddaway , The Liverpool University Press, The Town Planning Review ,Vol 17 no4 (Dec 1973) pp 271-279*

*Figure 13; Farwell Building 1871*

Chicago, London was a city of rapid growth at the time of the event:

*"The increase in the trade of the world and the changes it the routes along which it passed had combined with the greater need of the government within England to force the growth of London"*[10]

The fire was a huge disaster but it "*provided the city with the most dramatic opportunity in its history*"[11] for change and redevelopment. The health of the city was improved; there were no longer huge outbreaks of plague or disease as catastrophic as before. Improvements in the streets allowed for a better flow of traffic. A new *"superior building material*"[12] was needed and the construction of buildings and new building techniques such as the use of brick were established.

*"The catastrophe of the fire provided the opportunity of doing as a whole what would have otherwise have had to be done as a piece-meal"*[13]

The fire was a horrific event in the history of the city but it provided the people with huge opportunities of reform. Had the great Chicago fire provided the city with a similar opportunity for transformation, could the city learn from their mistakes and create new buildings, use new construction techniques and provide an opportunity for architects to create innovative and influential buildings?

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[12] *The Rebuilding of London After the Fire, T. F. Reddaway , The Liverpool University Press, The Town Planning Review ,Vol 17 no4 (Dec 1973) pp 271-279*

[13] *The Rebuilding of London After the Fire, T. F. Reddaway , The Liverpool University Press, The Town Planning Review ,Vol 17 no4 (Dec 1973) pp 271-279*

# *Chicago after the Fire*

*Figure 14; The city of Chicago*

*''The Great Fire has traditionally been understood as the turning point in Chicago's early history, the moment when the city proved its greatness. The fire lead to critical shifts in land use, new forms of investment and finance and innovations in technology and architecture. Chicagoans did rebuild their city at a pace that can only be described as heroic."*[14]

The Great Chicago fire is one of the city's most devastating events. It left the city in pieces but provided the city with a huge opportunity for reform and redevelopment. While the fire of 1871 is the huge historic event in the development of Chicago, a smaller fire in 1874 sparked the most demand for change and transformation.

*"Chicago has paid for penalty of permitting her handsome business blocks to be surrounded with wooden buildings."*[15]

[14] *The great fire of 1871, Karen Sawislak, Encyclopaedia of Chicago, Web publication ,Authors entry special feature page,2005*

[15] *Chicago Burns Again:The Second Great Fire, Alice Maggio, (web publication) Ask the Librarian February 9 2006(Gapers block established 2003 Chicago)*

After The Great Fire of 1871 the city established many fire regulations prohibiting the construction of buildings made from timber north of 22nd street or east of Halsted Street in the downtown area. However temporary timber framed buildings were allowed to be constructed for up to a year before they were supposed to be taken down but many were left and the law was never enforced. According to Karen Sawislak the months after the fire were filled with hardship and depression. Many of the inhabitants were homeless or hugely effected by the fire, they opposed the idea of "*fireproofing*" as they could not afford to rebuild in brick or stone

> *"Thus forcing the Chicagoan's to confront the meaning of their cities social and economic fissures*"[16]

The fire of 1874 had burnt the entire area to the ground and left it in ruins. This sparked huge controversy and many home owner's insurance companies and business owners demanded reform. This later lead to the formulation of Chicago's building code, increased organization of the Fire department and infrastructure changes to increase the city's water supply to critical areas.

While the fire destroyed the business district it left the cities stockyards, most of the wharf, lumberyards and mills along the river untouched. This kept the city afloat in the period after the fire. The cities railway networks were undamaged and are key in the city's redevelopment .They also allowed aid to pour into the city in the weeks after the fire. These railway networks are also a huge factor in the settlement patterns and suburban settlements of the future city of Chicago. By the end of the 19th century the transit system had spread the city dwellers further away from the city centre, as the transit system allowed for an easy and rapid commute to the city. These railways also introduced settlements that would ship raw materials to the city such as brick and limestone which were in high demand after the fire. Stockyards and agricultural processing industries that had been built along the railroads began expanding. Satellite cities such as Aurora and Waukegan grew and became industrial centres.

With the devastation of the great Chicago fire of 1871, the city needed a revamp and a lot of redevelopment. It brought about the biggest building boom in the history of the nation. As the city developed and new streets and plots were planned, the city ordinance required them to be laid out with 8 streets to the mile in one direction and 16 in the other. The grid would provide regularity and have an efficient means to develop new real estate property. There are only a few diagonal streets within the city of

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[16] *The great fire of 1871, Karen Sawislak, encyclopaedia of Chicago, web publication ,authors entry special feature page,2005*

*Figure 15; Home Insurance Building c 1905*

Chicago which follow original Indian trails, (the land was originally occupied by native Indians)

Chicago itself adapted a clever way of laying out its buildings and streets. The city tends to have wider streets which has a positive effect, in that it alleviates the feeling of being engulfed by the city's numerous and towering skyscrapers, which will be discussed later in the chapter.

While industries and business were booming and the city was regaining its former glory leisure opportunities began to draw workers from their busy work lives to other areas on the out skirts of the city. Sunday excursions were now a common thing. Picnic groves, ballparks and music halls were a huge tradition in 19th century Chicago. The development of these picnic groves which provided areas for hiking biking and dancing, were jumping up all along rural and interurban areas, West Garfield Park for example had huge areas for biking and horse riding, drew many visitors.

Pavilions and camping attracted thousands of visitors during the warmer months. With the rapid changes in the transit system in the early 20th century the metropolis had access to the lake. This brought resorts and cabin communities to this area of Chicago. Day trips were also taken. Property developers sought to exploit this and built hotels to attract tourist, some of whom might be seeking to buy a house in the area. Pavilions, dances, contests, food and all sorts were used to attract people to the area. Soon these places would evolve into suburban towns. Franklin Park is an example with good transport lines and a huge influx of people, large apartments were constructed. This in turn lead to denser living which in turn caused the property values to soar.

Another major concern that came about in the aftermath of the fire, was the sanitation system in Chicago. During the fire the river egnited and spread the fire to the other side of the city. The city water was filled with pollutants. In 1889 the Sanitary District of Chicago was created. That same year was the Annexation of Chicago, which tripled the area of the city. Many suburban settlements where erected and were vast areas of undeveloped land were taken over. This also pushed the need for a great water supply and sanitation. The Sanitary District by 1900 had opened the sanitation and ship canal. They suggested it was cheaper to build a new one then make the other one bigger. But with the cities rapid growth there was huge pressure on the system and 2 more were needed , by 1910 they had begun experimenting with sewage treatment work.

In terms of construction a new technique was badly needed, prior to the fire timber framed building were the quickest and cheapest way to construct a building. They did have many faults but with the cities rapid growth in the period from the 1840s to the fire, it was the swiftest and easiest way to keep up with the cities expansion. However, toward the end of the 19th century the city was one of the world's leading centres of steel and iron production. The city was home to 3 major processing steel companies, of which combined to over 30% of the U.S's outputs in steel. With this great production of steel, came about opportunity for architects, engineers and industries to create new buildings with innovative designs and construction techniques. Famous architects such as Louis Sullivan, Daniel Burnham and Frank Lloyd Wright produced work within Chicago that influenced many other leading architects around the world. The creation of the skyscrapers within Chicago was also a huge factor in the shaping of the city. Carol Willis in her book "form follows finance" Argues that the central achievement in

the development of Chicago (and New York) was the creative responses to the shifting constraints of the regulations with regard to the skyscrapers buildings that developed at the time.

*"The invention of the skyscraper in the late 1800s made possible the concentration of the business and services that have in turn made Chicago the great metropolis of the interior United States"*[17]

William De Baron Jenney (1832-1907) an architect and engineer was a huge influence on the younger generation of architects and was the founder of the Chicago school. De Baron Jenney's home insurance building 1885-1931 is known as the world's first skyscraper, it utilized a metal frame and was the first stepping stone in the advancement of the city. The first skyscrapers often took on older styles but as the technology advanced the buildings became more expressive and glass soon replaced most of the stone and brick on the façade. Other advancements in these construction methods include a new method of construction for foundations. Frederick Baumann had an idea that all the vertical elements in the building should have separate foundations ending in a broad pad that would distribute its weight over the marshy ground. This method was used in the Burnham and root Montauk block but could only go up to a max of 10 stories. However in 1894, Adlert and Sullivan developed a type of caisson construction for the buildings and this quickly became the standard for the new development. The creation of this new type of foundation the float foundation and also the horizontal elongated window were among some of the advancements. This achieved a new form of construction that had *"overwhelming advantages"*[18], they were almost fireproof the interior had more rental space and the construction of new floors was easily done. The façades now had more of glass and allowed more natural light into the buildings. The development of electrical lighting was advancing in this era therefore construction didn't have to stop in the winter months.

Architects were faced with many problems, firstly there was a huge demand for high rise buildings, as *"low building constructed just after the fire were seen as an inefficient use of valuable space"*[19]. Secondly Chicago is built on very swampy landscape, and thirdly the population was expanding rapidly by 1890 the population had increased to more than a million people. The Chicago school was among the most influential at the time.

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[17] *Form Follows Finance, Carol Willis, Princeton Architectural Press, 1 Nov 1995.*

[18] *Architecture: The First Chicago School, David Garrard Lowe, encyclopaedia of Chicago, web publication ,authors entry,2005*

[19] *Architecture: The First Chicago School,David Garrard Lowe, encyclopaedia of Chicago, web publication ,authors entry,2005*

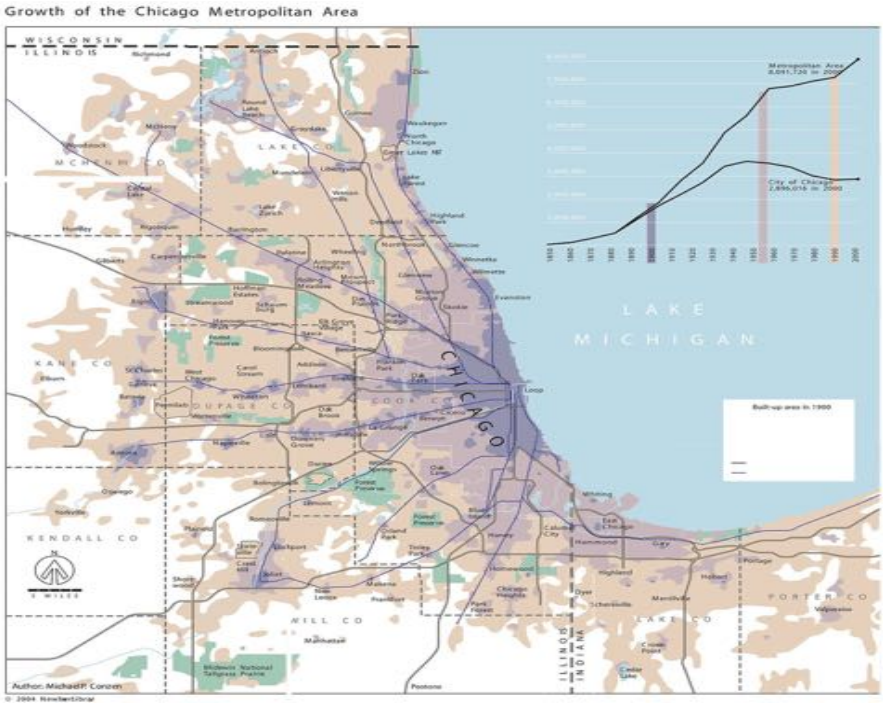


*Figure 16; Growth of Chicago metropolitan area.*

*"The architecture of the Chicago school show with astonishing clarity the urge to use constructional discoveries expressively"*[20]

The spirit of the school according to Sigfried Giedion in "*Space Time and Architecture*", was to impose the simplest and most self-evident solutions for the problems of the city. Soon they dominated the Chicago loop, their works sprung up one beside the other. There was a huge demand for office building especially after the fire :

*"Block after block mounted up into the clouds overhanging the city from every street and avenue"* [21]

Business blocks were in huge demand at the time which brought about the influx of people into the city. Many immigrants came to the city in search of jobs in the ever expanding city. This brought about a huge increase in the city's population. The city's fabric had begun a rapid change and redevelopment and had moved one step closer to its modern day metropolis.

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[20] *Space, Time and Architecture, Sigfried Giedion, Harvard University Press 1967.*

[21] *Space, Time and Architecture, Sigfried Giedion, Harvard University Press 1967.*

# *Urbanisation*

*Figure 17; Aerial view of Chicago modern day,*

A simple definition of urbanisation is the movement of people from a rural to an urban society. It can be the outcome of social, economic and political developments, which lead to the growth and expansion of cities.

Modern day Chicago, often referred to as the 'windy city', is a booming city of world renowned commerce and industry. The city is the most populated city in the state of Illinois and is 3rd most in the U.S. It has a population of about 2.7 million residents. Its metropolitan area is the 3rd largest in the U.S; it extends into Indiana and Wisconsin and has population of about 9.8 million people. Chicago is located in the north-eastern part of Illinois on the south-western shores of the freshwater lake, Lake Michigan. The city lies between this lake and two rivers the Chicago River, located downtown, and the Mississippi in the industrial part of the south-side. The city is divided up into four sections downtown, the north side, the south side and the west side. The city lies within the humid continental climate zone providing the city with

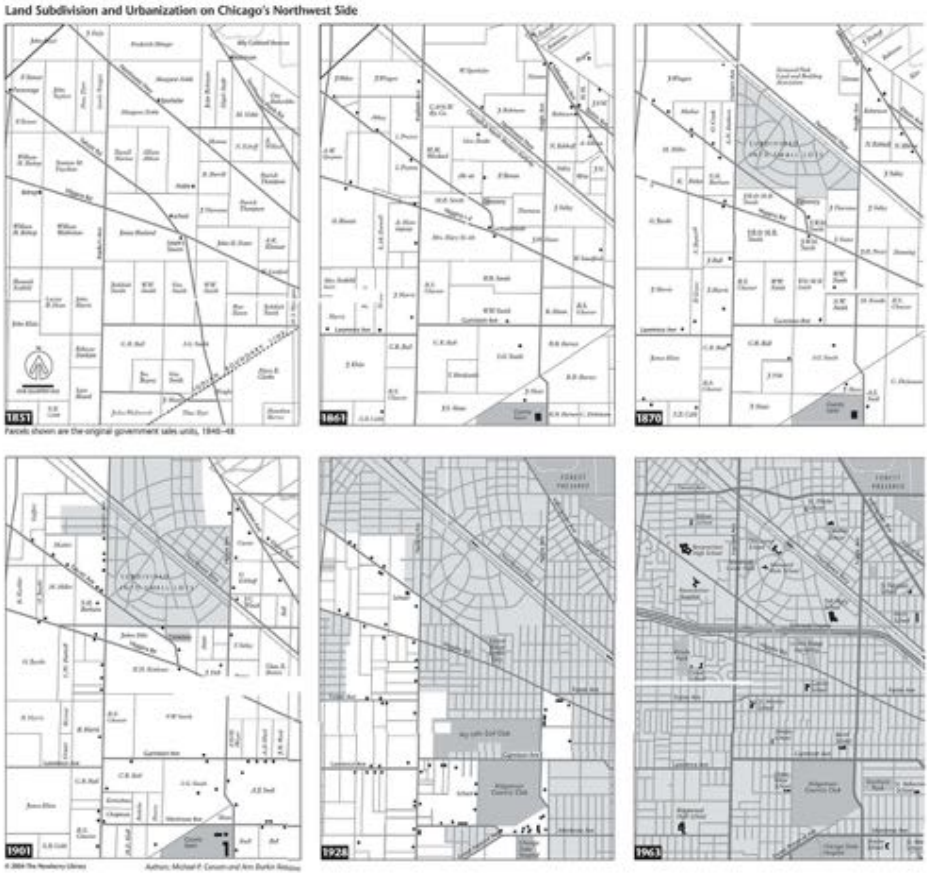


*Figure 18, Land divisions and urbanisation on Chicago's northwest side.*

hot humid summers and cold snowy and windy winters. Chicago rarely experiences extreme weather but often has a number of days with continuous extreme heat or snow. The modern city is an international hub for finance, transportation, commerce, industry and telecommunications. What makes this city so internationally renowned? How did it become one of the central hubs of America? What makes this city? How did this city recover and redevelop so immensely after the devastation of the great Chicago fire?

Figure above is an example of an area within Chicago, Norwood Park and its development over the years. It starts in 1851 where the first landowners have settled. The influence of the native America tribes is imprinted on the

*Figure 19, Chicago Skyline*

settlement patterns. The national land survey prescribed a gridded system that was intersected by the original trials of the native tribes. The 2nd image in 1861 shows the beginning of the influence that the railway system had on the city of Chicago, as described in previous chapters. The railway lines allowed for a huge expansion within the city. This figure highlights how farmlands were being turned into huge productive farms that serviced the city through the extension of the transit system.

The next image highlights how, through the use of the railway network and other influences, the people began to commute to the city. Suburban neighbourhoods began to spring up all around Chicago. At this stage agriculture still had a huge effect on the city.1901; here we see how the farmlands have decreased. There are more residential houses appearing along the main roads and commuter tracks. There is also a bigger influence on open spaces and areas that people would visit.

1928, shows a huge change. The grid has influenced much of the layout. Norwood Park was now becoming more of an urban neighbourhood. Open spaces such as golf courses and nature preserves were plentiful. By 1963 the area in question had become fully built up and the Kennedy express highway

cuts through the community. The golf course had now become redeveloped with residential housing.

The city of Chicago has developed into an internationally renowned city. This modern day metropolis is an international hub for finance, transportation, commerce industry and telecommunications. In Michael Sorkin article "*The Politics of Propinquity*", he questions the core of what makes a city and what influences a rapid change in a city's fabric. Within Chicago the transit system had a enormous effect on the city, as did its location within the overall country. The fire played a huge role in the change and redevelopment of the city. While it was a huge and devastating event in the city's history , it allowed for the redevelopment of the city, the development of new construction techniques and methods which allowed for advancements in buildings structure propose and the overall skyline of Chicago.

This brought about opportunity for architects engineers and industries to create new buildings with innovative designs and construction techniques. Famous architects such as Louis Sullivan, Daniel Burnham and Frank Lloyd Wright produced work within Chicago and had a huge effect in shaping the city. The first Chicago school of architecture also played a huge role in the redevelopment of the city. The creation of jobs and opportunities brought many immigrants to the city both native and foreign which in turn demanded a need for expansion and development.

Chicago was once a swampy, flat landscape with a small collection of cabins scattered around its land.

*"The land is still flat, but the landscape no longer is"* [22]

Chicago has developed into its modern day metropolis.

[22]*Chicago Architecture ,1885 to today ,Edward Keegan, foreword by Lynn J. Osmond ,The Chicago Architecture foundation May 27 2008*

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# Transforming Olympic Cities

*Alex Griffin*

# Contents

# Introduction

The number of reasons for a city or country not to host the Olympic Games probably exceed the number of reasons to do so in this day and age. The main attraction as to why these cities and countries therefore decide to make a bid is that the Olympics – the biggest sporting event in the world – can provide a large window of opportunity for a city to improve or reinvent itself by focusing on spatial and social agendas that will outlast the event itself. 'Legacy'[1] seems to have become the term by which cities judge the worth of staging the Olympics. It also seems to be a term which is thrown around lightly as we have seen some Olympic 'legacies' have quite an opposite effect on a city than was intended, looking at Athens 2004 and Beijing 2008 in particular. The issue of sustainability entered the frame during the 1990's and the International Olympic Committee made the decision to make 'environment' part of its core philosophy alongside 'sport' and 'culture'.[2]

Throughout this dissertation, I will look at a number of different host cities of the Olympics as examples however I will be mainly focusing on the overwhelming success of Barcelona 1992 and the most recent host of the Games which was of course London in 2012.

*One of the many 'White Elephants' left abandoned from Athens 2004.*

The fact that the 'Barcelona Model' is still known for providing the blueprint for other cities bidding for Summer Games should be somewhat concerning should it not? Does this not suggest that a host city has not surpassed or even equalled the successes of Barcelona over the last twenty years? Each host city seems to have brought successful aspects to the table but many of them have been overshadowed by the failures and consequences of poor decisions. Has London followed Barcelona and taken a giant leap forward? Has it learned from previous host's failures? Early suggestions would say yes but perhaps it is far too soon to heap praise on the English capital. And what lies in store for future hosts? Rio de Janeiro is already behind schedule on preparations for the 2016 Games but the majority of people are excited at the prospect of the Olympics in South America and the opportunity it gives to Brazil, which is still classed as a 'developing country'.

Barcelona 1992 used the Games for urban redevelopment and improvement of the infrastructure which supplied a model that set a benchmark for prospective Olympic Cities. Barcelona's bid claimed that over 80 per cent of the necessary facilities for the Games were already available. The Olympic Stadium was a renovated stadium from the 1929 International Exhibition. The bid emphasised that only fifteen new venues would be required for the Games, with the lion's share of investment devoted to urban improvements. The city had used the Games as part of a long-term development strategy that was in place long before the nomination stages and one that continued long afterwards.

With the 'White Elephant' syndrome just one of the notable issues plaguing the aftermath of Sydney 2000, Athens 2004 and Beijing 2008, London 2012 has so far been a relative success. Although Sydney was the first city to host an environmentally responsible Games, London's relentless pursuit of sustainability sets it apart from any other Olympics host. Plans for the London Games grew out of the original vision to regenerate a whole area of east London, defined by new permanent structures which would create a legacy. London is also the first Host City to prepare a legacy masterplan prior to its bid being successful.[3]

# Barcelona '92 – Olympic Opportunity

It is widespread opinion that the true success of the Barcelona Olympic Games was the transformation experienced by the city, a transformation that would normally have taken decades but which occurred over a period of just 6 years. Barcelona's successful bid for the 1992 Games not only provided the opportunity to launch the city into international attention, but it also provided the city with a chance for a leap in the scale of urban improvements which were on-going throughout the 1980's. It was a chance to tackle major infrastructural issues and reorient the city to prominent topographic features, such as Montjuic and the coastline, an area which had been generally ignored or shunned in the past.

*Moll de la Fusta - part of the remodelling of the Barcelona seafront. The Cinturó del Litoral is seen here running between the old city and the sea*

For many people, the Olympic Games in Barcelona were more concerned about bringing an urban rejuvenation than about the Games as a sporting event. A talented local technical team was put in place under Mayor Pasqual Maragall to take on the challenge. Maragall claimed that:

*"An Olympic city is neither invented nor created by decree: it is built up slowly on the underpinnings of an essential vocation. Then, gradually the city learns to be Olympic."*[4]

The urban transformation in Barcelona began in the 1980's, where Oriol Bohigas had proven to be the most influential figure on the subject of planning and urban design in Barcelona. He believed that there was the potential for positive spreading influence through discrete physical urban interventions, and also in education, by guiding Barcelona's younger generation of design talent. Development focused on a series of schemes that sought to recover the public spaces – the squares and streets - of the historic city. Mayor Maragall seemed to echo Bohigas' notion of the spread of positive effects from well-gauged urban projects, and believed that this was the ideal opportunity for revitalising and restoring a *"sense of dignity"* to Barcelona's urban landscape.[5] He is quoted as saying:

> *"It is critical to understand that improving public spaces is relevant to solving social and economic problems."*[6]

There were a number of key features in the Barcelona 'model' which other countries have subsequently attempted to replicate. The most significant aspect of the model was its focus on long-term strategic visioning and planning, with regard to urban regeneration, as opposed to focusing on area-specific interventions which many previous Olympic hosts had done. The planning project for the Games took shape with three simple aims:

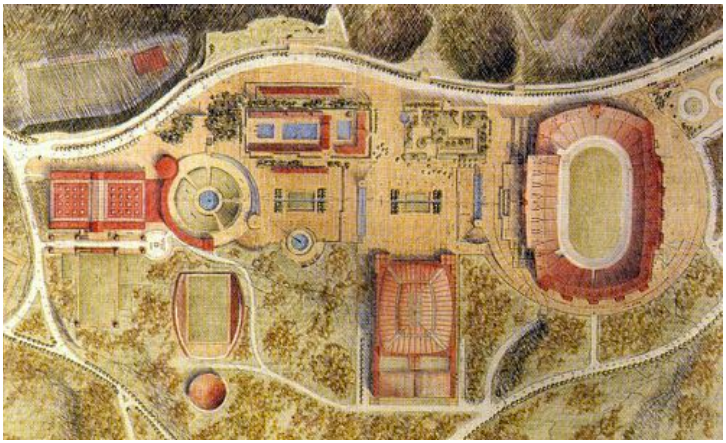
- Open the city to the sea.
- Distribute spatially the improvements and re-equip the city's sporting facilities.
- Promote communication infrastructures, especially the road network.

These objectives expressed the will that the city as a whole should take a great leap forward. There were four principal sites for the Olympic Games on the edges of the city centre, connected by a large ring-road improvement – the Cinturón de Ronda.[7] This was a huge

physical step beyond the discrete urban interventions of previous years, reorganising the overall urban form of the city at a metropolitan scale. The programme planned was a very compact one, with the four central areas located in a circle with a radius of just five kilometres. This new Cinturón de Ronda would essentially encircle what was mainly known as Barcelona, with the four Olympic Games sites completing development in under-used zones within this encirclement. The main Olympic Ring was planned in the Montjuïc Mountain, to the south-west of the old town. The second Olympic area was that of 'Valle de Hebrón', to the north-west among the hillsides, which was planned in a semi-developed area where the wish for urban regeneration was clearly shown. In addition to these two areas, a third was planned around the most prestigious route of the city – the 'Diagonal' – and finally, the Olympic Village and Port in Poblenou, was located on the waterfront with the objective of its regeneration and of 'opening of the city to the sea'.

# Barcelona - Olympic & Urban Projects

The intention for introducing four separate 'areas' was to avoid packing all the sports facilities into one single place, which would have proved useful for the sixteen days of the Olympics, but would have subsequently been of little social value afterwards. Spreading the venues throughout the city would also help to avoid transport problems for Olympic spectators.



*The Olympic Ring on Montjuic, showing the clear axial arrangement of Correa and Milá's masterplan.*

The Olympic Ring, on the upper slopes of Montjuïc, sits immediately behind the pavilions of the 1929 International Exhibition. Federico Correa and Alfonso Milà won a limited competition to serve as master planners. The development of the mountain plateau took the form of four large sports buildings organised into a compact, east-west axial arrangement of plazas and buildings. Public space was the main priority but in my opinion, there does not appear to be enough building mass to hold the conceptual intention of the main axis together. Perhaps Correa and Milà may not have been given sufficient control over the overall plan, considering the number of different architects and parties involved.

The Olympic Stadium was in fact a remodelling of the old building which was built for the Peoples' Olympics in 1936, before the event was transferred to Berlin due to pressure from Hitler's government.[8] Here the city chose to be faithful to its history by proposing to use the same stadium as a tribute to 1936. It also seems to bring a sense of architectural coherence and interesting combination of old and new to the complex. Arata Isozaki's Paulau Sant Jordi enclosed sports pavilion is probably the most striking installation on Montjuïc. At the time, the roof was the largest space-framed dome in Europe. The swimming pools originally constructed for the 1970 European Swimming Championships were reconstructed and expanded for the Games. Television audiences around the world were captivated by images from the outdoor pool, showing divers performing against the magical panoramic backdrop of the city beyond. Ricardo Bofill's neo-classical post-modern National Institute of Physical Education appears to compliment the classicism of the main stadium however it seems slightly out of sync with most of the modernistic architecture being produced elsewhere in the city. Santiago Calatrava's communication tower caused controversy with many of Barcelona's architectural community objecting to the unusually expressive form which was intended to represent a sundial.[9] It is visible from most parts of the city rising some 125 metres.

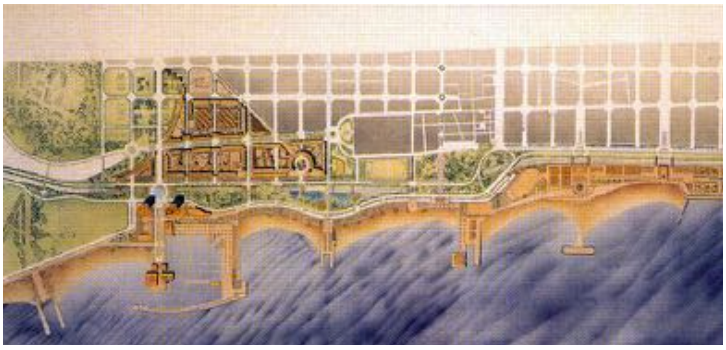
*A view through the Olympic Park looking down towards Ricardo Bofill's National Institute pf Physical Education of Catalonia, with Santiago Calatrava's controversial communications tower on the left.*

A different approach was taken for the Vall d'Hebron area by contrast to the axial, neo-classical arrangement on Montjuïc. Located on a hillside, it is edged by the Ronda de Dalt, part of the new ring-road improvement, as it passes around the north-west side of the city. The challenge here was to create public space out of an abundance of open space. Eduard Bru wanted to put the emphasis on the topography of the area. Using simple infrastructure in the form of platforms and edges to define the sites terrain, he sought to bring both spatial order and opportunity to the area. 'Essentially, broad platforms were sculptured from the site as a sequence of interlinked tiers down the hillside, each platform more or less accommodating a specific Olympic or other facility. The edges of the platforms were then given rigorous definition by well-made landscape elements, linear parks, viewing platforms, street furniture, roadways, and paved access areas.'[10] These public spaces all provided an inviting outlook of the city below. It from this hillside where Esteve Bonell's Horta Velodrom and Enric Miralles' Archery Range were constructed. Unfortunately, since 1992, the predominantly public areas of the Vall d'Hebron site have become forlorn, dilapidated and covered with graffiti. Obviously this is an issue in many cities around the world and not unique to Barcelona but perhaps there may have been too much unprogrammed public space which, even though well designed, led to extensive areas with blank walls.

The Diagonal Area represented the organising and planning of the surrounding spaces of the city's large private sports amenities (Barcelona FC stadium, Turó Tennis Club, University facilities, etc.) incorporating open space.[11]

Of the four Olympic zones, the most ambitious and innovative urban project was the regeneration of the 'seafront', where the Olympic Village and port is located. The aim here was to provoke a radical reshaping of the city's entire seafront, hence opening the city to the sea. Like many other Olympic installations, it was primarily seen as an opportunity to rebuild on abandoned industrial land which was effectively cutting the city off from the Mediterranean. Some five kilometres of beach were recreated with an urban front open to the Mediterranean.[12]

Nearly half of the site was dedicated to parks, the majority of which were immediately behind the beach, along the coastline. The Ronda del Litoral, part of the ring road improvement, was 'partially buried behind the beaches or sunken in trenches crossed by pedestrian bridges',[13] in order to maximise the connection between the city and the sea.



*The remodelling of the Barcelona seafront, recovering 5km of beaches with the Olympic Port to the left and the Olympic Village behind.*

The seafront was the area of Barcelona that underwent the greatest change as a result of hosting the Olympic Games. More than 100 hectares of industrial land were recovered for residential use and public facilities. Some 38 architectural firms participated in the overall project. Obviously with that came quite a wide variety of architecture. Oriol Bohigas was heavily involved in the master planning and it was decided that the residential area was to follow the grid of streets in the Exiample, something which would thereby allow 'the Diagonal to be extended as far as the sea, integrating the Olympic Village into the fabric of the city'.[14] 2,400 housing units were constructed to house more than 15,000 people during the games. Rather than completely accepting the Exiample grid structure, Bohigas and his planners decided to also superimpose a second grid, by combining smaller blocks which leaves minor streets to pass through, often under segments of building. This plan was also more suited to traffic circumstances. The public space of the Olympic Village also represents the historic tradition of Barcelona. There are boulevards, urban gardens, sculptures and street furniture which can be found elsewhere throughout the city.

Two high rise 44 storey towers were erected at the end of the Carrer Marina, in front of a plaza. One tower was an office building with a vertical arrangement of horizontal bands making up the façade, designed by Iñigo Ortiz Díez and Enrique de León, while the other was a hotel by Bruce Graham covered in criss-cross structural bracing. Frank Gehry's famous 'fish' sculpture floated below the towers. In my opinion, the matter of the towers may be questioned. They are considerably taller than any of the surrounding buildings, and while they may provide a landmark quality and extraordinary views of the Mediterranean and Barcelona, I wonder, whether they were absolutely necessary? They seem like just another two tower blocks which were common in many other parts of the world. I'm not sure if it is relevant or not, but the towers also align with the spires of the Sagrada Família at the other end of the Carrer Marina. Perhaps this is simply a representation of the update in Barcelona's new urban fabric.

*The two 44 storey towers at the end of the Carrer Marina accompanying Frank Gehry's 'Fish' floating below.*

In the immediate aftermath of the Olympics, Barcelona went through what is known as a 'Post-Games Hangover'. This was an expected slump in economic terms as obviously there was much more

employment opportunities during the Games and of course in the construction industry prior to the Games. However, in the long-term, Barcelona 92 has proved a major success in catalysing plans and projects and stimulating the urban economy. 'The project for 'Greater Barcelona' – thought about for decades but developed during the 1980's – became a reality in the 1990's.'[15]

*The image which captivated so many television viewers around the world - divers performing against the magical panoramic backdrop of Barcelona beyond.*

# From Barcelona to London

*'The Catalonian capital re-invented itself throughout the 1980's and 1990's with a series of urban design initiatives that improved the quality of the public space in the city and radically enhanced its infrastructure. Under Mayor Pasqual Maragall and architect Oriol Bohigas, the city created 150 new public squares at the heart of urban communities. The city succeeded in winning its bid for the 1992 Olympics and coupled this with a strategy of urban regeneration that has paid long-term dividends to the citizens of Barcelona, rather than making a short-term profit for event organisers.'* [16]

In sharp contrast to the extraordinary transformations in Barcelona, Atlanta 1996 unfortunately returned to the same model of Los Angeles 1984, focusing mainly on the sporting facilities rather than the city as a whole.[17] The politics of image building displaced neighbourhood regeneration, as well as the needs and dreams of the Atlanta city residents.

Both Sydney 2000 and Athens 2004 provided decent examples of attempts to follow the model of regeneration through hosting the Olympics that proved so successful in Barcelona, however, both cities failed to live up to promises made prior to winning their bids. Sydney decided to promote the idea of the "Green Games" which included a series of innovative designs for the Olympic Village, however, many of these ideas were dropped from the preparations after the bid was won, and the much talked about eco-village was never built. The Olympic park in Homebush Bay, 'designed to be Sydney's showcase venue after the Games and the heart of significant and lasting urban transformation, closely resembles a 'ghost town' with little of the planned post-Games construction completed.'[18] Sydney opted to satisfy the demands of global partners rather than addressing the concerns of local communities.

Similar uncertainties surrounded the legacy of Athens 2004.The transformation of the city centre, with pedestrian links between the major

historical sites, helped to boost its tourism industry, however, as with Sydney, further questions regarding sustainability emerged. Despite some thirty architecturally sophisticated buildings, the Olympic Sports Complexes at Maroussi, Faliro and Helleniki remain heavily underused. All have huge maintenance debts and have struggled to find alternative uses. The potential for regeneration in Athens was badly affected by delays in construction. The 'green' construction technologies that were promised to be employed were largely absent. Greenpeace conducted an environmental audit of the Games and argued that practically all environmental recommendations were ignored. Use of solar energy, product recycling and energy conservation were also dropped from the final plans. A spokesperson claimed:

*"Instead of moving forward, the Athens 2004 Games have gone way back as far as environmental issues are concerned. The international Olympic Committee has called the environment the third pillar of the Olympics, behind sport and culture. Right now, it seems all but invisible."* [19]

*The iconic 'Bird's Nest' in Beijing which was the centerpiece of the 2008 Games designed by Herzog & de Meuron.*

It would be quite hard not to be impressed with the scale and sheer majesty of the Beijing Olympics in 2008. In most respects, Beijing was a Games for the television audiences. Of its 37 venues, 14 were

new, 14 were renovations and nine were temporary. The famous 'Bird's Nest' stadium designed by Herzog and de Meuron and 'Water Cube' by PTW Architects quickly became two of the most iconic structures ever produced for an Olympic Games, however, their post-game uses have been sparse enough to join the 'white elephant' category like many other Olympic stadia in both Sydney and Athens. China's emphasis on impressing the world with spectacular venues and its growing economic prowess meant that any other concerns were sidelined, such as how the Bird's Nest, the Water Cube and other venues might be used after the Games. The iconic buildings are a draw for tourists, but the Olympic Park in Beijing has yet to be fully integrated with the surrounding city.[20] Beijing's Olympic Park also entailed the demolition of neighbourhoods to make way for the Games. 1.5 million people were relocated from such areas out to the high-rise residential suburbs.[21] The main concern with Beijing is that although the Olympics have succeeded in transforming the city, they have done so at a considerable cost by following a model which emphasises development for the rich that have simply served to impoverish the public life of the city. On a global scale the Beijing Games may have proved to be a success; however it is almost impossible to quantify the impact of the Games on the city's overall development.

London 2012 wishes to redefine what it means to stage the Olympic Games and has been driven from the outset by economic regeneration. The success of Barcelona 1992 in restructuring and regenerating the city's seafront offered London a perfect example in this regard. The crucial lesson to be learnt from Barcelona was the necessity to consider the Games and future uses simultaneously from the outset. London, like Barcelona, viewed the Olympics as having a long-term impact – a legacy. As well as being the first Olympic host to prepare a legacy masterplan prior to winning the bid, London set aside a specific 'transformation' budget and also a timeframe for adapting the Olympic Park for community use after the Games.

# London's Legacy

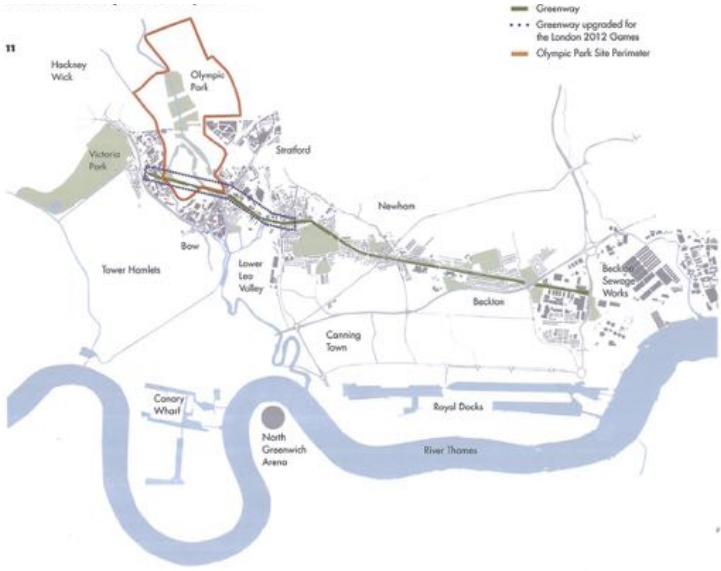
*"A golden Games to be followed by an incredible legacy."*[22]
*– Boris Johnson (Mayor of London)*

Similar to the development of the seafront in Barcelona, London chose the industrial area in the Lea Valley next to Stratford, in East London to house its Olympic Park. Earlier discussions about London hosting the Olympics had in fact considered the idea of a west London Games centred around Wembley Stadium, however, Mayor at the time, Ken Livingstone was adamant that if London's 2012 bid were to be successful, then the Games should be located in east London with urban regeneration at the core of development.[23] The 2012 Games are intended to redress London's long history of economic disparity between its east and west ends.

*The view of the legacy plan for the Olympic Park in the Lea Valley.*

The east end of London had suffered a serious decline during the second half of the twentieth century when the docks were closed, which

had been the primary source of employment in the area. According to government surveys, by the turn of the twenty-first century, the proposed Host Boroughs were amongst the most economically deprived local authority regions in England. The aim was to transform this part of the city from a contaminated industrial site into a new green area surrounded by employment centres, improved community facilities and affordable housing.




*The Greenway, which was updated for the Games, stretches 7km from the Olympic Park down to the Thames at Beckton.*

The Greenway is a linear park that runs along the southern boundary of the Olympic Park and stretches 7 kilometres down as far to the River Thames at Beckton. It serves as a footpath and cycleway along the elevated embankment of the Northern Outfall Sewer. As part of a long-term strategic investment in pedestrian links and cycleways to the Olympic Park, a 2.3 kilometre stretch of the Greenway was upgraded and includes seven new bridges. The Greenway and Olympic Park links both sides of the Lea Valley that 'for decades have been severed by waterways, and transport and utility infrastructure.'[24] As a piece of green infrastructure, the project ties into the East London Green Grid of open


*The 2030 Masterplan for the Olympic Park , London.*

spaces, a project organised by Design for London. 'The East London Green Grid initiative will improve East London's provision of open space and provide a range of formal and informal recreational uses and landscapes, promoting healthy living and amplifying the public enjoyment of the outdoors. It will also help East London adapt to climate change by reducing flood risk and enhancing surface water management. The project aims are to create, improve, manage and maintain high quality green infrastructure for people and wildlife.' [25]

The Olympic Park is designed to provide recreational open space for the area, while better connectivity will improve access to employment opportunities and community facilities for lowcal residents.[26] One of London's main objectives was that 100 per cent of spectators would travel to the Olympic Park using public transport, walking or cycling. £6.5 billion was invested in public transport. Stratford Station was trebled in capacity and is now a part of London which is extremely well linked.

London 2012's biggest environmental achievement is the transformation of the Olympic Park which can be easily adapted into a local urban park. Work is on-going at the moment to prepare the Park for community use. London is desperate to avoid the failures of some previous Host Cities, where the Olympic Parks sits empty with venues becoming White Elephants. Munich's Olympic Park for the 1972 Olympic Games, created on the site of an airfield on the city's edge, stands out as a spectacular example of what can be achieved. Additions have been made over the years to Munich's Olympiapark which now serves as a 'multifunctional recreational area with sports venues and regular annual events that attract both residents and visitors'.[27] London's Park connects 26km of the Lee Valley Regional Park in the north with river corridors and canal networks that link southwards, all the way to the Thames. New roads, bridges, paths and cycleways create new physical links between previously disconnected neighbourhoods. The Park is the largest new park since Victorian times and adds a new chapter to Britain's long tradition of urban landscaping.

*Munich's Olympic Park from the 1972 Games is a prime example of what is possible.*

The Park includes 31 new bridges, which cross the numerous waterways, rail lines and roads. Many of the bridges had temporary decks for extra width during the Games which have been removed. In terms of the connections across the valley, The Olympic Park will actually tie together four London boroughs: Newham and Waltham Forest to the east and Tower Hamlets and Hackney to the west.[28] Design for London has taken a central role on urban design initiatives throughout the Lea Valley's public realm, commissioning six Olympic Fringe Masterplans as early as 2006 to assess the patchwork of neighbourhoods around the Olympic Park.[29]

Comparable to Barcelona 1992, which focused on public space, but mainly in the form of hard landscape such as public squares and boulevards, London is also focusing on public space but in the form of wetland parks. This shows how different climates can have such a resounding effect on schemes that in some ways are similar.

In contrast to many recent Games, London seemed to play down the role of iconic architecture, only committing to building new permanent venues when a long-term use for that building could be guaranteed or justified.  For the Olympics, only five new permanent sporting ven-

ues were built. The main Olympic Stadium was conceived as largely a temporary structure from the outset. The Meccano-like structure uses approximately one quarter the amount of steel of the Beijing Stadium roof by Herzog and de Meuron.[30] Its capacity can also be reduced from 80,000 during the Games to 25,000 in the future. There are a number of bids for the lease of the stadium in the future, with West Ham United Football Club the most likely tenant. Other notable venues for the Games are the Aquatics Centre by Zaha Hadid and the Velodrome by Hopkins Architects. The Aquatic Centre is the architectural centrepiece of the Olympic Park. Its dramatic double curvature roof spans 160 metres in length and up to 80 metres in width and is supported on only three points. The Centre used temporary stands to be removed after the Games bringing the capacity from 17,500 to just 2,500 permanent seats. This makes it much more suitable for community use. The timber clad Velodrome is the stand-out building in the North End of the Park. Like the Aquatic's Centre its distinctive double curvature roof has all the makings of a memorable building.

*The Olympic Stadium in London was concieved as a temporary structure from the outset with the firm idea of 'less is more'.*

Some of the most impressive temporary structures were constructed for the London Olympics. The Basketball Arena designed by Wilkinson Eyre Architects had a capacity of 12,000 and the Water Polo Arena by David Morley Architects had a capacity of 5,000. Given these buildings short duration, the main criteria for selection of materials became reuse and recyclability.[31] The original idea was that they could be easily dismantled after the Games and shipped to Rio de Janeiro and used in 2016, however, whether or not that becomes a reality seems to be a different issue.

*A view across the Olympic Park, of the Velodrome in London, designed by Hopkins Architects.*

The story behind the Olympic Village is the most complex of the entire London 2012 project. In the years after the Games, it will be converted into a high-density community with 2,800 new homes with a 50-50 mix of private and affordable housing, which will benefit from the ideal proximity to public transport.[32] Courtyard housing blocks between 6 and 12 storeys in height would seem like a rather new housing typology for London. In fact Barcelona's successfully adapted Olympic Village on that city's seafront would spring to mind. Parks and open space with

major water features are the defining elements of the public realm. The Village contains more than 10 hectares of open space, public squares, parks, courtyards, communal gardens and roof gardens.[33]

*A digital interpretationo of Stratford City in the future, which served as the Olympic Village for the 2012 Games.*

London 2012 is about sustainability in its broadest sense. It is much more than an Olympic Park full of stunning new sporting venues. It is the creation of a new sustainable urban quarter for London with an ecological park at its heart. Only time will tell how successful the Games have been for London. Up until now it has proven many critics wrong and I for one certainly look forward to seeing if its 2030 Masterplan comes to fruition.

# Conclusion

Writing about an Olympic host city just one year after the Games took place, makes many assessments of the impact the 2012 Olympics had on London rather contingent and speculative. On paper London has presented us with a unique and brave Olympic legacy, which differs enormously from any previous host city, but whether London can live up to what they have proposed is another story in its own right. I am hopeful that London's Olympic Legacy will meet initial expectations and it has been the first host city to appear to have offered a genuine sustainable, eco-friendly Games.

Although I feel that London have already done a much better job than most previous Olympic Cities, I am still unsure whether they have done enough to surpass the success of Barcelona in 1992. However, I believe that this may not be London's fault. Barcelona's transformation will always be the pinnacle of Olympic success due to the circumstances of the city prior to the Olympics. Its improvements were at a much larger scale than London's. One should have in mind that London is already an international city, a global city, a mega city, whichever term you wish to use. Barcelona was a city with many problems prior to the Olympics, lacking a competent road network and cut off from the adjacent Mediterranean Sea which had obvious potential to create a booming tourist industry. It desperately wished to become a recognised international city.

Opening the city to the Mediterranean and recovering 5km of beaches was always going to have a monumental effect on Barcelona's global image and the city's economy. The ring road improvement was an enormous step towards improving the circulation, not just for the Games but for the city as a whole. The sizeable amount of change in Barcelona between the city before and after the Games is what has gained the Catalonian capital so much praise, but have other cities needed as much regeneration as Barcelona did in 1992? Taking nothing away from what Barcelona has achieved, but if we are to compare it to London 2012, the majority of infrastructure for London was already in place prior to pre-

paring for the Games. For that reason the regeneration in east London for the Olympics is much more compact than Barcelona, focusing purely on one area, where Barcelona focused on four. London's legacy aim is for the regeneration of east London to set the new benchmark when it comes to regeneration and using the environment as the number one priority. Design for London's aim is to carry the core strategy used in east London throughout the rest of London in the future, bit by bit.

At the same time, it is easy for me to say that the transformations which took place in Barcelona were obvious; however praise must be given for the approach Mayor Maragall, Oriol Bohigas and co. took, which was transforming the city through its public spaces, pursuing an ambitious yet pragmatic urban strategy and the highest standards of design. To recognise Barcelona's achievement, the Gold Medal of the Royal Institute of British Architects in 1999 was given not to a person but a whole city: to Barcelona, its government, its citizens and design professionals of all sorts.[34]

All in all, Barcelona has proved itself as a role model for other Olympic hosts and similarities can be drawn from the 1992 Games and the 2012 Games in London. As previously mentioned, only time will tell how successful London has been. They look to have certainly avoided any traces of White Elephants from the Olympics which have almost scarred the Games of Sydney, Athens and Beijing.

London 2012 may now join Barcelona 1992 as acting as a role model for Rio de Janeiro 2016, a city and state where social issues linked to the extreme poverty of the favelas and to law and order remain serious problems. They, like Barcelona have selected four main areas in the city to develop for the Games. They have been awarded with hosting the world's two major sporting mega-events in just two years (the FIFA World Cup 2014), a feat only achieved before by Mexico in 1968-1970 and I for one look towards Rio full of excitement and wish them the very best of luck.

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27. Op. cit. , 56
28. Op. cit. , 61
29. Op. cit. , 240
30. Op. cit. , 27
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# Table of Contents

# Introduction

The relentless, violent nature of capitalism swept across the industrialized world of the nineteenth century. The class divisions in society grew considerably. The poor became poorer, the working class becoming despondent upon the bourgeoisie for its livelihood. This situation, which, at worse, resembled slavery, prompted some of the most important political writings in modern history, including The Communist Manifesto written by Karl Marx and Friedrich Engels in 1948. The impact of Marx's manifesto on the modern world was immense, inspiring notably the creation of the first communist state, the United Soviet Socialist Republic.

The Russian revolution marks a key moment in world history leading to major changes in culture, society, politics and architecture. According to Hobsbawm, 'the October Revolution of 1917 has had the biggest influence on politics and culture since the Islamic conquests in the 1st century'.[1]

How did the Communist Manifesto change society and architecture? What influence on architectural ideology did it have? To what extent have architects moved away from the political and social stances adopted by early twentieth century Modernists? Where can architects go from here?

1. Eric Hobsbawm, *The Age of Extremes: The Short Twentieth Century 1914 to 1991,* 1994 Abacus London

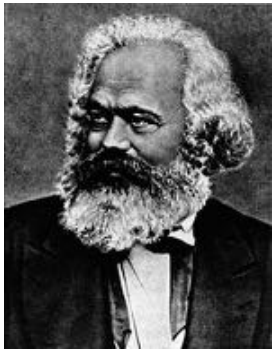

Fig. 1A: Friedrich Engels and Karl Marx

The Communist Manifesto was written by Karl Marx and Friedrich Engels (pictured above). It is a possible solution to the unjust society that was formed throughout history, through the exploitation of the weak and greed of the powerful. The manifesto intended to create an ideal society, a utopia, in which the individual became insignificant and the collective well being of society became the main priority. They aimed to create an alternative to capitalist society, a place where all are given the same opportunities, regardless of the circumstances of their birth. By liberating the common man and creating them equal to the elite, Marx felt he could create a utopian society. Marx believed that 'men would behave as the social forces determined thy should. The rich and powerful would always behave like the rich and powerful; the poor would always behave like the poor and ultimately the inhabitants of Utopia would always behave in a Utopian way.'[2]

In the Communist manifesto, Marx proposed a revolution of the proletariatt, a revolution that would overthrow the bourgeoisie and create a new, equal society. To do this, Marx proposed ten changes to the current societal norms. The abolition of private property, the

2. Karl Marx and Friedrich Engels, *The Communist Manifesto*, 1967, Penguin Books Ltd. (originally published in 1888)

restructuring of inheritance law, the removal of the right to own land or private property. A greater emphasis was placed on taxation, larger monies were taken from the people to support a new, progressive state. The centralization of credit in the hands of the state by means of a national bank with state capital. Education was to be free for all children in public schools. The dispossession of businesses and the establishment of organized 'industrial armies' with 'equal liability of all to labour' while combining agriculture with the manufacturing industries, leading to the 'gradual abolition of the distinction between town and country, by a more equitable distribution of the population over the country'[3].

These changes would be key stepping stones for the development of the new communist utopia. The changes proposed by the manifesto were strongly opposed by capitalist states of the western world.

Fig. 1B: Proletariat Revolution in Russia, 1917

3. Karl Marx and Friedrich Engels, The Communist Manifesto, 1967, Penguin Books Ltd. (originally published in 1888)

While the implementation of Marx's manifesto removed the imbalance throughout the social classes in Russia, unfortunately, Marx's vision of a perfect, communist utopia never truly reached its potential. The want and greed of man ensured it became a socialist dictatorship in which the people no longer worked for the greater good of society but for the greater good of the leaders of the state. The Proletariat had once again become slaves as the state descended from its high intention into the realm of human corruption.

To ensure the state's survival, Stalin's use of the KGB (Russian secret police) and the continuous 'purging' of the communist party created a fear that spread throughout society lasting right until his death in 1953.

The failure of the communist state to accommodate room for individual growth in society, had a damaging affect on the quality of labour. The lack of incentive to succeed in education, creativity and even in the manufacturing of goods caused the quality to be diminished. In the new 'equal' state to be an intellect one must dedicate his work to the party and be subjected to strict propaganda rules. Ultimately, greed and power, the same ingredients that created it created the failure of communism.

Much like politics and culture, the ideology of communism found in the manifesto also brought a change in architecture, and architectural thinking. The modern movement of the early twentieth century saw architects obtain a greater awareness to the underlying problems in society. They began concerning themselves with societal change and solving the existing problems and deficiencies. They held similar values to Marx's manifesto on, how society should behave, its productivity, its efficiency and human natures propensity to repeat itself.

Fig. 2A : Members of the Initial CIAM Congress, 1928

'Collectivism is any philosophic, political, religious, economic, or social outlook that emphasizes the interdependence of every human being in a society or civilization.'[4]

The ideological cross of communism and collectivism in modern architecture is apparent through the organization of the modern movement through the CIAM (Congrés Internationale d'Architecture Moderne) in 1928, which led to the publishing of eleven charters regarding urbanism, ranging from the functionality of the city to its inhabitation to minimum existence over a period of thirty-one years. Although many of the eleven charters held value towards Marxism and collectivism, the relevance of charters one through three, all had great influence from left wing Russian Constructivists directly influenced by Marxism. The declarations tackled the topics of economics, town planning, the minimum dwelling, rational land development and social and political interactions. The emphasis was put on building rather than architecture as "the elementary activity of man, intimately link with evolution and the development of human life"[5].

4. http://en.wikipedia.org/wiki/Collectivism

*5. Ulrich Conrads, Programs and Manifestos on 20th Century Architecture*, MIT

The initial CIAM declaration of La Sarraz was based around four standpoints and working methods;

1. General Economic System
2. Town Planning
3. Architecture and Public Opinion
4. Architecture and its relation with the State.

These methods of working and standpoints proposed in the declaration held significant similarities to many of the questions proposed by Marx on economics, equality, use and ownership of land and the efficiency of the new state, while adding their perceptions on where architecture would play a role in creating a new, more efficient and equal interdependent society.

"Town planning is the organization of the functions of collective life; it extends over both the urban agglomerations and the country-side."[6]

"The chaotic division of land, resulting from sales, speculations, inheritances, must be abolished by a collective and methodical land policy. This redistribution of land, the indispensable preliminary basis for any town planning, must include the just division between the owners and the community of the unearned increment resulting from the works of joint interest"[7].

"Removal of all connotations of despair from that word proletarian"[8] - Le Corbusier.

The ideas of the Charter of La Sarraz possessed one of the main societal changes proposed by Marx in his manifesto. The individual being insignificant and the need for

Press, Cambridge Massachusetts, 1971, Declaration of La Sarraz
6. Ulrich Conrads, *Programs and Manifestos on 20th Century Architecture,* MIT Press, Cambridge Massachusetts, 1971, Declaration of La Sarraz
7. Ulrich Conrads, *Programs and Manifestos on 20th Century Architecture,* MIT Press, Cambridge Massachusetts, 1971, Declaration of La Sarraz
8. Kenneth Frampton, *Modern Architecture: A Critical History*, Thames and Hudson Ltd London 1980

the "interdependence of every human being in a society or civilization"[9]

The impact of La Sarraz on the later declarations produced by the CIAM can be seen clearly in the Charter of Athens in 1933. Its relevance towards society was based on the functional design of the city to fit the needs of the human being. The CIAM felt that 'The city no longer serves its function, which is to shelter human beings, and shelter them well' and that the "inhumane and the ferocity of few private interests has given rise to the suffering of countless individuals"[10]. They applied themselves towards setting out guidelines towards city design. Through basing the design around human scale, the CIAM felt they could once again relate "back to society and the people rather than the mechanization and private interests"[11]. Arguing that cities attacked only one problem, traffic, leading to the "forming of islands of buildings whose utilization is left to haphazard private interests"[12]. Housing, work, recreation (during leisure) and traffic became the four key functions that they would base city design on.

Charter of Athens looked out for the greater good of human kind, its health, both mental and physical. By reducing the means at which the city has become mechanized they sought to bring about a greater quality of life within the city for all its inhabitants.

9. Ulrich Conrads, *Programs and Manifestos on 20th Century Architecture,* MIT Press, Cambridge Massachusetts, 1971, Declaration of La Sarraz
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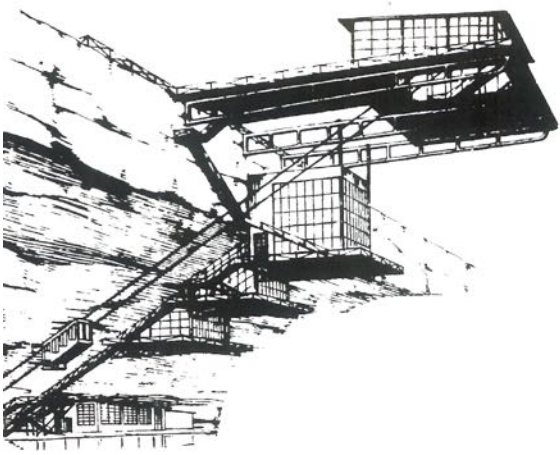

Fig. 3A: Simbirchev. Project for a suspended restaurant. 1922-1923

As Russia progressed from the autocratic culture, which had dominated the state for centuries, there was a movement away from the traditional methods of artistic and architectural ideology. The transformation of Russia as a peasant economy to a modern industrial organism, described by Frampton in 'Modern Architecture: A Critical History' as an "uphill struggle" in which the transformation began by "starting with the most primitive means"[13]. As a result the emergence of the Russian Constructivist movement led to a focus on the worshipping of the engineer and the "denial of architectural tradition" of the ornament.

In turn this led to many of the early constructivist architects failing to understand the significant changes of which had happened, accompanied by the failure to adjust. This led to a lack of practical architectural design, many of which were dynamic thrusts of the abstract forms ultimately leading to the projects never being realized.

13. Kenneth Frampton, *Modern Architecture: A Critical History*, Thames and Hudson Ltd London 1980

Most famously, Tatlin's Tower or The Monument of the Third International was one project that was never fully realized. A three hundred and three meter tower consisting of two intertwining steel lattice spirals supported by a steel frame angled at sixty degrees to match the earths axis which would signal 'Communist Evangelism'[14] to the world. Within the spiraling structure, the monument would house four rotating geometric volumes, each hosting a different function to aid the progression of the new state.

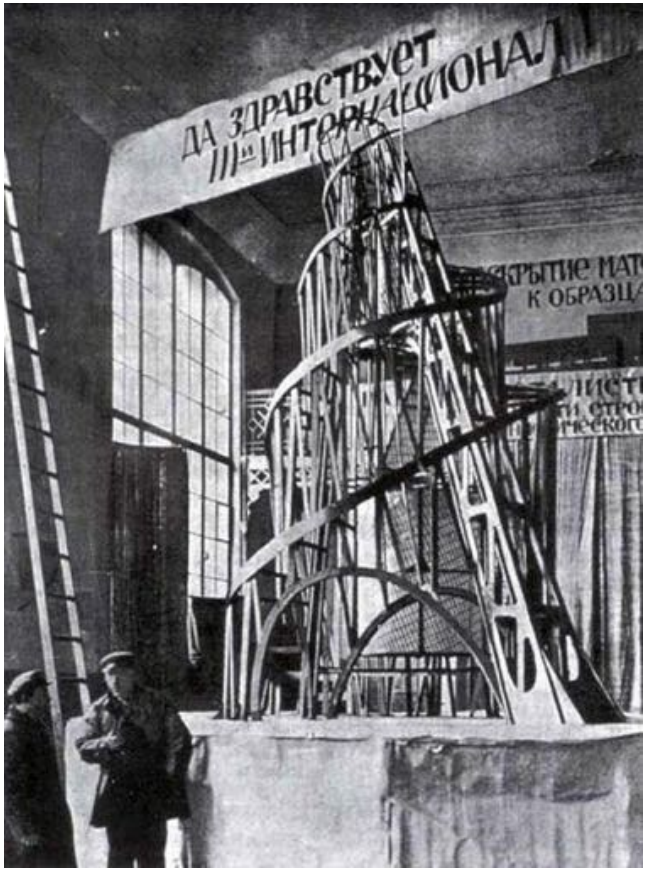


Fig. 3B: Model of Tatlin's Tower, 1919

14. Norbert Lynton, *Tatlin's Tower Monument to Revolution,* 2009, Yale University Press London and New Haven

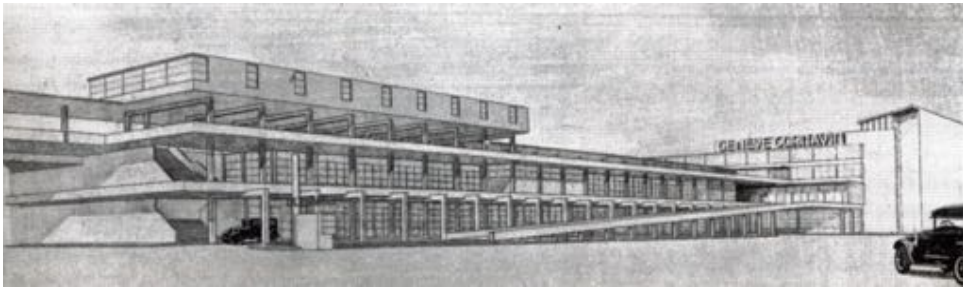

Fig. 4A: Mart Stam's Cornavim Project, Geneva

The real flair of Constructivism came as it spread into Europe with El Lissitzky. Both Vladimir Lenin and El Lissitzky saw architecture and art as an opportunity to culturally eclipse western culture with communist culture. El Lissitzky, along with Iiya Ehrenburg were sent to Berlin as an 'unofficial cultural ambassadors of the Soviet Union'. Their aim was to organize an exhibition for the Russian avant garde art movement and create a strong Pro-Soviet sentiment among Europe's educated elite. Both Lenin and El Lissitzky both felt that communism was too political, and the exhibition would be looked upon with the stigma associated with the international negativity that came with Communism. They used Constructivism as a more artistic alternative. They slowly worked their way into cultural propaganda through the editing magazines and demonstration of architectural ideas. The ideology of the new constructivist movement inspired young Swiss architects such as Mart Stam. Which in 1925 led to the formation of ABC. They were a group of young, left wing architects based in Switzerland who were frustrated with the Swiss government for their focus on the wants of the upper class and neglect of the poor. The ABC immediately dedicated themselves "to the design of socially relevant buildings in accordance to scientific principles"[15].

15. Kenneth Frampton, *Modern Architecture: A Critical History*, Thames and Hudson Ltd London 1980

ABC's first move was to create a magazine to spread their ideology on architecture. The first two issues of the magazine were based on Constructivism and applauded the work of El Lissitzky, the main influence of ABC. While El Lissitzky never was a member in the group, he acted as an advisor and editor to their magazine.


Fig. 4B: Issues of the ABC Magazines

Although ABC was highly influenced by Russian Constructivist movement, they took a more pragmatic approach than their counter parts in Russia. Many of ABC's early projects were never built, but this 'paper architecture' was due to their political orientation rather than their ability. Their alignment with Asnova and El Lissitzky led to them being branded as an extremist organization, by western clients. This limited their appeal. Ultimately it was the connection between ABC and El Lissitzky that was the problem. They then sought to engage in the European avant garde movement, after El Lissitzky moved back to Russia. ABC was then able to realize its original goal, which was to build functional Constructivist buildings.

ABC's design strategy put an emphasis on circulation throughout the buildings and standardization of materials. Tower blocks and stairwells were exposed and became part of the main design in the facade. Another main feature of ABC was the exposure of the structure,

which is clearly emphasized in Stam's 'Cornamvim Project' in Geneva. Here, Stam put an emphasis on the 'primary role' that construction had in the design of the project by pulling the portal frames outside the envelope of the building.

ABC played a leading role in the development of the international constructivist movement, influencing and developing mass housing schemes during the late 1920's while also playing a role in the school of architecture in the Bauhaus after Walter Gropius' resignation.

## Hannes Meyer's Petersschule in Basel

In 1926, Meyer was asked to design a new Petersschule for girls in Basel. Although never built, the finished design offered the most exaggerated interpretation on ABC's design strategy, emphasizing the ABC preoccupation with precise calculation and social relevance. The re-functionalization of common perceptions of existing forms is where its primitive political and utopian character is revealed. The functionalist or utilitarian approach taken by Meyer did not adhere to the 'modernist notion of aesthetic autonomy' or 'modernist autotelic formal strategies'. It was Meyer's belief that the 'dislocation to the spectator' was fundamental in Marxist architecture and that aesthetics played no role in functionalist architecture. "For [the Marxist architect] architecture is not an aesthetic stimulus but a keen edged weapon in class struggle."[16]

For Meyer, the ability to standardize and reproduce materials and components of the building led to an insistence on "design as technique rather than inspired creation" and "the conception of architecture as an

16. K.Michael Hays, *Modernism And The Post-humanist Subject: the Architecture of Hannes Meyer and Ludwig Hilberseimer*, MIT Press, Cambridge, Massachusetts

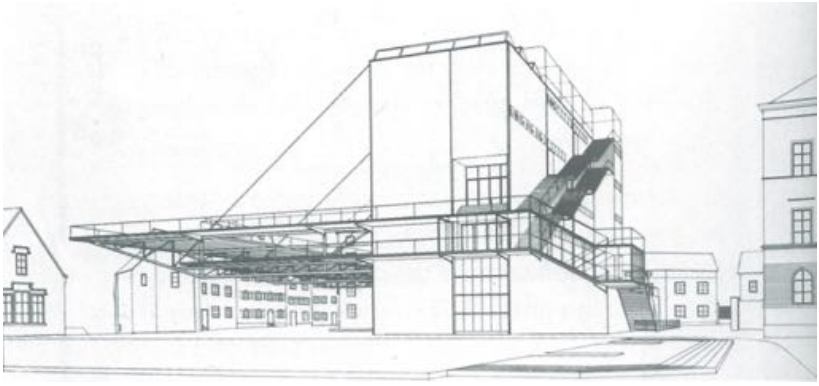

Fig. 5A : Perspective of the Petersschule

industrial product". This in turn removed artistic creation and "deconstructs the work of architecture into its material and social conditions of its making". This was fundamental in his design of the Petersschule.

The Petersschule isolated itself on the site and interrupted the physical and social context of the city. By locating it along one edge of the site and the use of suspended recreational platforms supported by the dead weight of the building, Meyer was able to free up more than half of the ground plane on the site for public circulation and parking. Only the kitchen, swimming pool and gymnasium were located on the ground floor. Through this the social relevance to the interruption of the immediate context becomes clear.

The school was designed to gain maximum efficiency and functionality through the use of natural light and fresh air, which, in relation to the site was not possible without the school being raised as far as possible from the ground. The use of skylights would give an unimpeded light source to classrooms, offices and the gymnasium, which were also lit using large ribbon windows on the East facade. Much like earlier ABC projects, an emphasis was put on stressing the prominence of circulation in the building. The circulation was removed from the internal shell of the building and situated along the western facade.

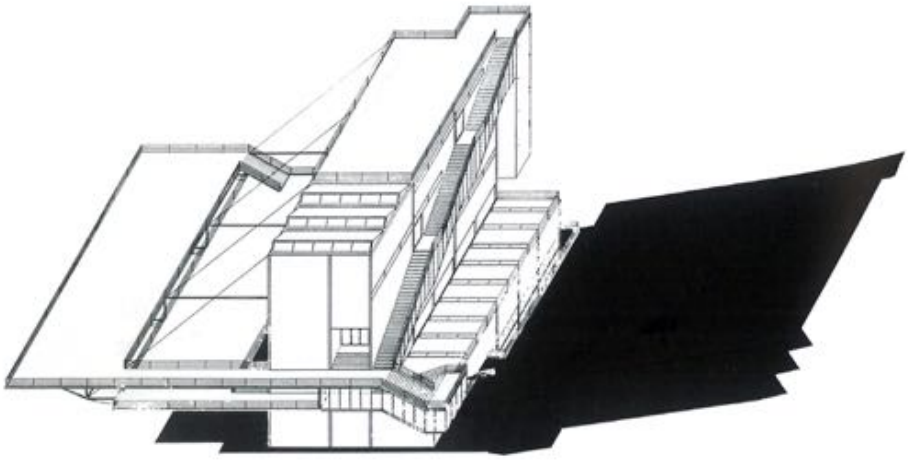

Fig. 5B: Bird's eye perspective of Petersschule

Meyer provided a series of suspended platforms and flat roof decks on which provided "1250 square meters of sunny space away from the old town"[17] on which would be used for recreation. Each classroom had access to its own "play-deck". The gymnasium was free to open up onto the ground level 'empty space' while the first and second floors had access to the suspended platforms through gangways. The third floor opened up directly onto the lower roof terrace while the fourth floor was connected by an external staircase to the upper roof deck. The suspended decks were placed away from the edge of the building by a dimension determined by "the angle of light penetrating the gymnasium and playground"[18].

By maximizing light and outdoor recreation, Meyer sought to improve efficiency the inhabitants and the functionality of the building.

17. K.Michael Hays, *Modernism And The Post-humanist Subject: the Architecture of Hannes Meyer and Ludwig Hilberseimer*, MIT Press, Cambridge, Massachusetts
18. K.Michael Hays, *Modernism And The Post-humanist Subject: the Architecture of Hannes Meyer and Ludwig Hilberseimer*, MIT Press, Cambridge, Massachusetts

Meyer's Petersschule although unbuilt played a huge role in the development of the constructivist movement and followed the principles of ABC "to the design of socially relevant buildings in accordance to scientific principles"[19]. This is evident in its design which sought function, standardization and efficiency to where it gained social relevance.

19. Kenneth Frampton, *Modern Architecture: A Critical History*, Thames and Hudson Ltd London 1980

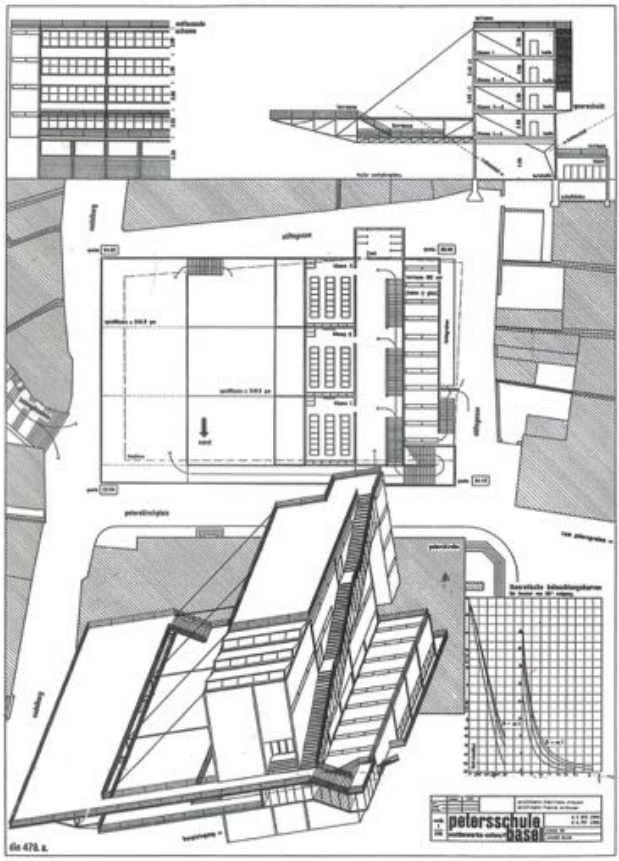


Fig. 5C: Presentation Sheet for Petersschule Competition

Fig. 6A: Stam's Weissenhof Apartments Circulation to first floor

When the opportunity to design mass housing schemes arose in the late 1920's, ABC jumped at the chance to get involved. ABC's influence throughout both the German and Swiss Werkbunds led to a new economic use of standardized materials and space. The social and political relevance of the work is evident through the consistent emphasis put on economic feasibility and the efficient use of space and materials, the standardization of housing and its construction along with the well being of the inhabitants. While ABC received commissions for private residences during this period, the merit of the social and political relevance is better demonstrated in the mass housing schemes produced.

In the late 1920's, the German and Swiss Werkbunds took a new stance on modernism. This launched a new interest in ABC and led to their affiliation with both Werkbunds as they sought to build functional, constructivist buildings. Given the left wing political stance of the Weimar Republic, commissions were predominantly handed out to radical leftist architects like ABC. An agency was set up to monitor the development of new and low-cost housing programs and the establishment of new

international standards in architecture. This was called the Reichsforschungsgesellschaft fur Wirtschaftlichkeit im Bau und Wohnungswesen (RFG).

With the German Werkbund seeking new international standards in architecture, they invited radical leftists including members of ABC to partake in the design of interiors within a Mies Van Der Rohe building on the Weissenhof campus.

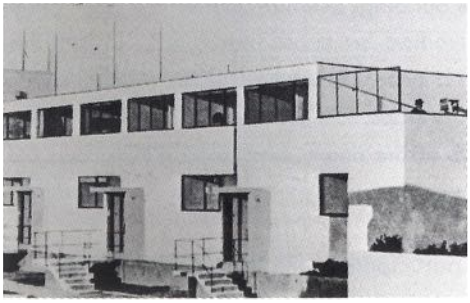

Fig. 6B. Stam's Weissenhof Apartments

Mart Stam took part in the Weissenhof along with ABC although he was asked to design a block of three apartments. Stam recognized this as an opportunity to create a precedent to ABC's mass housing design. His design used mass produced economic materials to which he designed a "large rectangular volume whose bare facades were punctuated by standardized windows and doors"[20].

By externalizing circulatory parts in a 'novel' and economic way, Stam was able to emphasize the structure through select members becoming metal railings. This externalized circulation as described by Ingberman, the "entry into any of his Weissenhof apartments from the street requires one to ascend a raw staircase of undisguised poured concrete and spartan industrial metal railing. Then one must make a right-angled turn onto a narrow bridge section before the front door can be reached. More is in store at the rear of the house. Direct entry to

20. Sima Ingberman, *ABC: International Constructivist Architecture, 1922-1939*, MIT Press, Cambridge, Massachusetts 1995

the second floor from the ground requires one to climb a spiral metal staircase that leads to a bridge. This bridge is longer, made of metal and utilizes the same open railing as one on the first floor"[21] is a feature of 'mainstream' ABC Constructivism. The use of glass in earlier projects to enclose externalized functions was uneconomic and Stam's use of the 'external room' as an extension to the house much like Meyer's use of the externalized elements in the Petersschule proved a noteworthy replacement.

The plan of Stam's Weissenhof apartments relied on the economic use of space. The structure and use of non load bearing walls allowed the "maximum volumetric effect" as windows were set flush against the exterior. The ground floor was open plan featuring a living and dining space. The arrangement of bedrooms on the upper floor was strategic to allow for maximum efficiency. Stam's plan was applauded by members of ABC and widely adopted in later housing projects.

Weissenhof was the first project by ABC to feature colour. Colour played a huge role in Soviet Constructivist architecture in Russia, most notably by the ASNOVA group. It was used for 'theatrical or allegorical purposes'. For Weissenhof, the use of a light shade of blue was striking, setting them apart from their neighbors.

The influence of Stam's three low budget apartments echoed throughout ABC for years as the plans and structural system used were adopted by its members. The main expression of ABC's work in Weissenhof remained unchanged. The emphasizing of expressing internal functions externally, was sought through different means. Rather than covering it in a glass facade, colour, industrial imagery, exterior rooms, and spartan interiors all became key components in what became a vital precedent in the development of ABC.

21. Sima Ingberman, *ABC: International Constructivist Architecture, 1922-1939*, MIT Press, Cambridge, Massachusetts 1995

Fig. 6C: Weissenhof Apartments showing blue colour

## The Nuebühl Colony

In 1929 the Swiss Werkbund held a more expansive housing exhibition, Wohnung Genossenschaft Ausstellung (WOBA) Eglisee. ABC's approach to architecture had a direct influence on the outlook of the competition as those invited were asked to design low budget housing using mass produced standardized parts. Designs were reductive and straightforward with a purpose of promoting avant garde architecture. Many of the resulting projects are still in use today like the Nuebühl Colony in Switzerland.

As result, WOBA Eglisee sought to design a more expansive colony of Werkbund houses. The permanent large scale development was based three miles outside Zurich on mountainous slopes. ABC were granted the commission as they were the most influential members to attend WOBA. Designed and built between 1930 and 1932, the Nuebühl Colony provided several standardized housing types, within a 'functional scheme that best accommodated traffic patterns, land contours, and maximal exposure to light and air"[22]

Fig. 7A Arial view of the Nuebühl Colony

22. Sima Ingberman, *ABC: International Constructivist Architecture, 1922-1939*, MIT Press, Cambridge, Massachusetts 1995

The Nuebühl Colony consisted of 195 housing units, ranging from one to six room arrangements. Each housing unit was connected by an internal system of streets placed at right angles to each unit, which later connected with Zurich's existing road network. Each row of houses were laid out parallel to the next, as Emil Roth believed "such a scheme permitted maximal exposure to light and unobstructed views of the lake"[23].

The constructional systems used in the Nuebühl colony was detailed previously by Hans Schmidt for his Colnaghi house and was described in an article called "Technische und Wirtschaftliche Resultate eines Wohnhausbaues" published in the ABC magazine: "a steel skeleton with exterior walls of concrete block sheathed in an outer layer of concrete"[24]. True to the ABC precedent, some Nuebühl housing types highlighted stairwell sections and terraces.

Fig. 7B Arial view of the Nuebühl Colony

23. Sima Ingberman, *ABC: International Constructivist Architecture, 1922-1939*, MIT Press, Cambridge, Massachusetts 1995
24. Sima Ingberman, *ABC: International Constructivist Architecture, 1922-1939*, MIT Press, Cambridge, Massachusetts 1995

The Nuebühl Colony has become one of the architecturally significant mass housing schemes in Switzerland of the last century.Its design offered unanticipated rewards for their 'sculptural quality' evident in the varying roof levels. "In these rows each unit was treated as part of a larger serial progression whose cuboid planes and volumes pushed and pulled in a manner reminiscent of cubist sculpture or De Stijl constructions" [25].

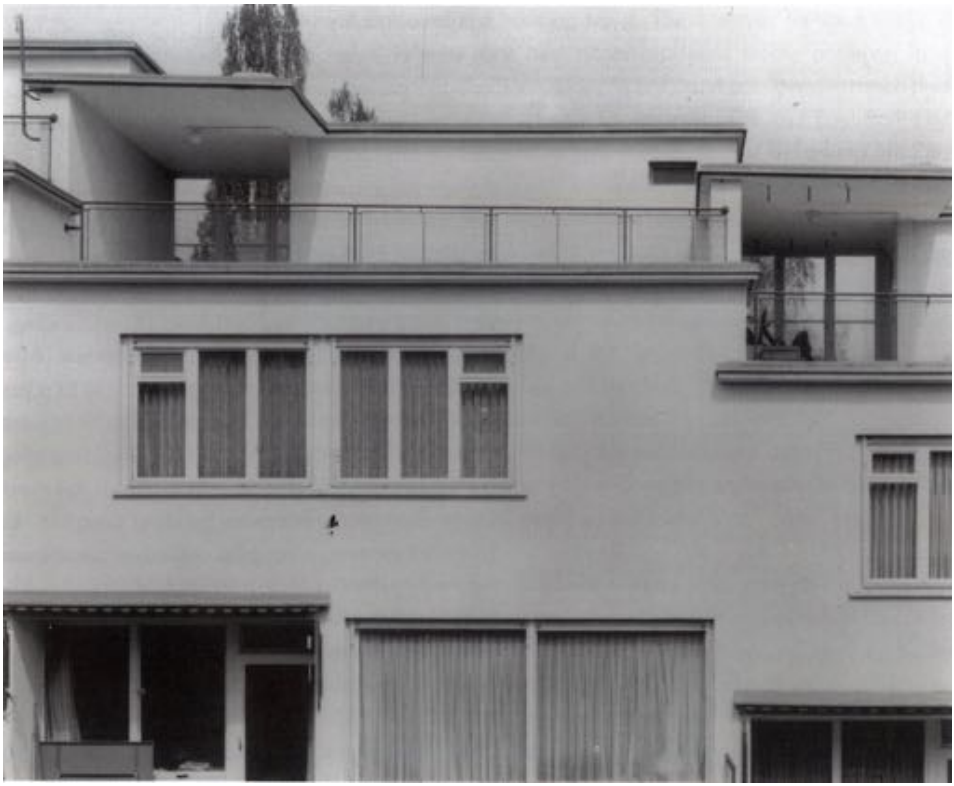

Fig. 7C: Elevation of some Nuebühl Colony apartments

25. Sima Ingberman, *ABC: International Constructivist Architecture, 1922-1939*, MIT Press, Cambridge, Massachusetts 1995

## Hannes Meyer and the Bauhaus

In 1926, seeking a platform to which he and ABC would gain international recognition, Meyer set his sights on the Bauhaus, the leading avant garde academy in Europe. Meyer was successful as he was later was invited to become head of the architecture school to which he implemented his ABC and "The New World" oriented teaching program based around "absolute functional, collectivist and constructivist lines"[26]. Meyer quickly sought after Stam and Wittwer to join his faculty and promote his program. The syllabus projects would be based around solving social problems and low cost standardized housing schemes.

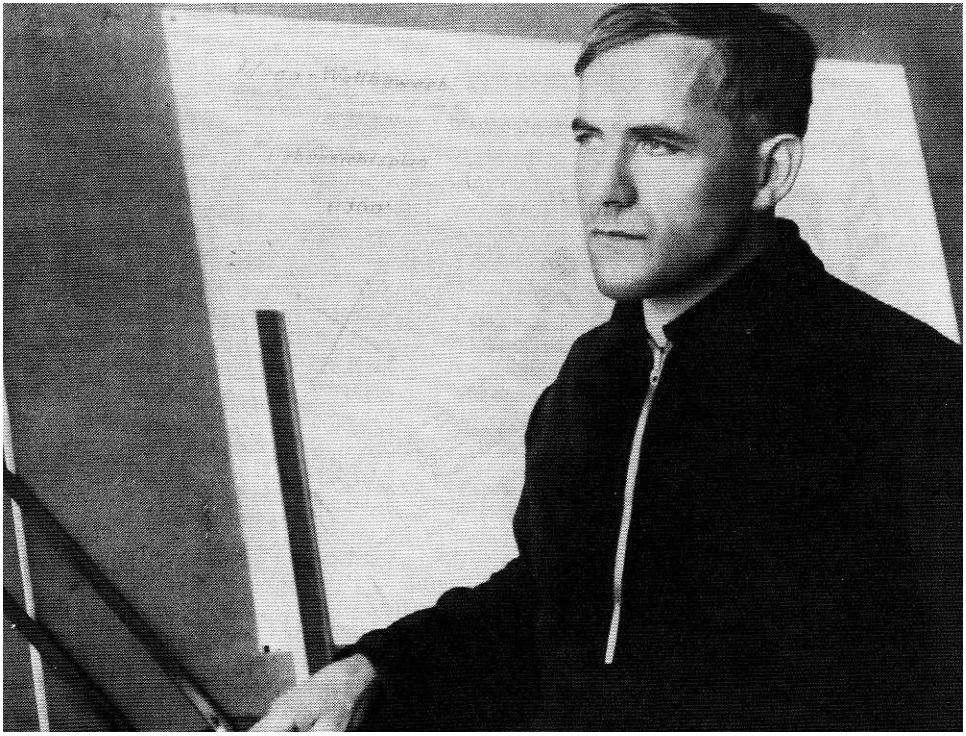

Fig. 8A: Portrait of Hannes Meyer

26. Andrew Saint, *The Image of the Architect*, Yale University Press, New Haven and London

In 1928 after the resignation of Walter Gropius as director of the Bauhaus. Meyer replaced him as director. Meyer immediately expanded the architecture department and further stressed the fundamentals of ABC's style and a pro Marxist position. A change to previous ideological position in the school. With his newly expanded school and the introduction of lectures on psychology, sociology and social economics, the school could now start to "address the needs of the proletariat, designing standard, mass produced products to be anonymously absorbed into everyday life"[27]. The new focal point of the school was collaborative design through three eight-hour workshops a week. Meyer sought to make the workshops self-supporting. Through marketing their designs through which low cost wallpapers were produced and sold throughout Germany. "The imposing exterior of the early Bauhaus was increasingly replaced by an internal strengthening in the collective sense. The Bauhaus today reflects an undeniable degree of proletarianization" [28]

"The work in the Bauhaus revealed an avowed materialist, a socialist and virulent foe of all types of artistic formalism."[29]

Meyer could not be saved from the political instability that ensued from 1929 as Hitler and the Social Workers Party took over Germany. Although the Bauhaus had always been attacked by the right wing, Meyer was now more vulnerable than Gropius ever was. As Nazism grew, a new political activism formed among the students at the Bauhaus. A small Marxist group formed and grew within the student body, ''allegedly under Meyer's

27. K.Michael Hays, *Modernism And The Post-humanist Subject: the Architecture of Hannes Meyer and Ludwig Hilberseimer*, MIT Press, Cambridge, Massachusetts
28. K.Michael Hays, *Modernism And The Post-humanist Subject: the Architecture of Hannes Meyer and Ludwig Hilberseimer*, MIT Press, Cambridge, Massachusetts
29. K.Michael Hays, *Modernism And The Post-humanist Subject: the Architecture of Hannes Meyer and Ludwig Hilberseimer*, MIT Press, Cambridge, Massachusetts

protection''[30]. In March 1930, Meyer was indirectly order to dissolve the 'communist cell at the Bauhaus'. However in July rumors of Marxism resurfaced and following a private donation to the International Workers Aid Fund in aid of the striking miners in Mansfeld led to Meyer's immediate dismissal.

Meyer's political and social influence on the Bauhaus as director is evident, not only in the work of the school which was based on the principles of ABC and Marx, but in the reaction of the students to this new political outlook, by the formation of Marxist 'cells' among students and the production of Constructivist ABC like buildings by some of the students. Political upheaval in Germany cut short Meyer's tenure at the Bauhaus, limiting how far his influence could grow, preventing his legacy from truly achieving his potential.

Fig. 8B: Collage of political agenda in German from Bauhaus

30. Andrew Saint, *The Image of the Architect*, Yale University Press, New Haven and London

## Collectivities and Architects

While the influence of Marx's manifesto led to a political and social nature that echoed throughout the early twentieth century through the work of ABC, Hannes Meyer and Asnova, but to what extent has architecture and architects taken a different stance on political and social architecture in the last few decades? Architecture has seemingly become another cog in the capitalist machine. In the last few decades with more and more architects being concerned with the notion of the 'art of architecture', and with each commission seemingly producing a new artistic building claiming to have a social relevance.

In the second half of the twentieth century, there was sudden change in stance towards the socio-political nature previously found in modern architecture. As society changed and became completely immersed in the private interests of capitalism, architects in the western world had to evolve, remove themselves from political activism in order to receive work. Those who continued to aspire to being political in architecture, were never truly politically active and their projects fell short.

## Tony Fretton: Influences and Work

In the late 1980's, with the growing frustration towards this capitalist architecture, the teachings of Tony Fretton at the AA sought to return architecture to the public arena. Fretton believed that a political and social agenda that existed in the early twentieth century needed to return to the forefront of architectural thinking and practice. For Fretton, Hannes Meyer held a strong political and social position in his architecture. Meyer possessed no formal interests and the complete social idea. Art to Meyer, was secondary if not completely out of focus. Fretton firmly believed that the movement of modern architecture had failed to say enough and although

not politically active, he felt the need to be politically motivated.

Fretton also found interested in the work of Peter Smithson. Although never politically and socially active like Meyer, Smithson held a strong sense as to where they fit into architectural history seeing himself as the third generation of modernist architects and represented the conscious of modernism. Smithson bore a strong ideas relating to the conception of the user and its inhabitation, and sought the fusion of architecture and inhabitation throughout his work. Much like Fretton the "true vocation" of architecture was to engage in society and look past the need for interesting figures and forms.

Even with the influence and strong beliefs in reviving modern architecture, Fretton never truly achieved this in his work. The commissions Fretton took during the peak of his career in the early 90's seemed to lean towards lacking a social relevance while playing a role in the development of the individual. It lacked the key component of social relevance found in the modern movement.

Fig. 10A: Smithson's Robin Hood Gardens Housing Complex

Fretton's Lisson Gallery of 1992, although holding modernist elements, it lacked a brave social intervention to change the lives of the masses. Catering to the needs of the individual and artist. Fretton's work held a frivolous and superficial engagement to the political and social stance to which Fretton applied himself, a shadow of the work of the modern movements intentions.

Fig. 10B: Fretton's Lisson Gallery

# Conclusion

Marx's manifesto had a huge impact on society, politics and architecture. As this is an architectural discussion, I am mainly concerned with the influence Marxism has had on the Collectivist movement throughout architecture. Architecture of the last few decades has removed itself from the functional and modernist approaches taken in the early twentieth century. Present trends, grew more focused on creating artistic forms. The work of Frank Gehry and Zaha Hadid being prime examples. I submit capitalist society has warped architectural duty by reducing architects to slaves of commission grubbing practices by omitting political and social relevance from their work. These commissions required a capitalist nature, serving the function of the individual and private interests.

The recent economic bust has resulted in capitalist architectural ideology to change dramatically. Bankrupt construction companies and businesses has left a bevy of dormant buildings, no longer playing any role in the development of the capitalist world. Architects have seen a reduced number of commissions and architecture has become bland, a cog in the capitalist machine in dire need of political and social engagement. However, artistic creativity is still held in high regard socially, too high to simply discard. A compromise must be found that bridges the gap between form, function, the individual and the whole. Through new thinking architecturally, combining art, politics and societal engagement, architecture could once again become a major contributor in social change.

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