

# Made for People

Exploring the artistic element in urban  
planning and design in relation to mental  
well-being

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Made for People: Exploring the artistic element  
in urban planning and design in relation to  
mental well-being

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## ABSTRACT

The city, made for people, is a harmful environment to human well-being. What are the underlying causes and how the problem could be remedied in light of the ever-growing urban population?

This work explores the measures that can help planning and design professionals to remedy the situation. The premise is that both nature and art are proven means for mental health and well-being enhancement and therapy. While nature is accepted as an essential and integral part of the process, art has been left out, thus impacting the city and the state of well-being of its dwellers.

The link between architecture and contemporary art, since the end of the 1800s is reviewed through the concept of the 'ideal city'. Since early 1900s the 'artistic element' in urban design has been misunderstood, mistreated and misused.

The effects of nature and of art on well-being and mental health are reviewed. Current art in the urban environment is examined and the design of public places—reassigned locations, rebuild in historical sites, expansion, and rehabilitation of marginal and run-down locations—is considered, with particular emphasis on people and their well-being.

Planning and design elements and processes are examined and discussed: needs, 'soft systems', 'human scale', proportions, climate, colours, variety, history and identity, etc., and responsibility for the process.

The conclusion reached is that the artistic element, essential to well-being and mental health, it is to be found by approaching urban design and planning as the creation of a dynamic and ever-evolving work of art, with people as its central element.

Key words: people, city, well-being, nature, art, artistic element, soft systems, human scale



Lahden ammattikorkeakoulu  
Ympäristötekniikan koulutusohjelma

MYLLYS, SHARON: Tehty ihmisille: Tarkastelu kaupunkiympäristön suunnittelun ja muotoilun taiteellisen tekijän merkityksestä ja sen yhteydet hyvinvointiin ja mielenterveyteen

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## TIIVISTELMÄ

Ihmislle tehdyn kaupungin vaikutus on haitallinen hyvinvoinnille. Mitkä ovat syyt tähän ja kuinka voi ratkaista ongelman ottaen huomioon jatkuvasti kasvavan urbaaniväestön?

Tämä työ tutkii keinoja, joiden avulla suunnittelu- ja muotoiluammattilaiset voivat korjata tilannetta. Premissi on että sekä luonto että taide ovat todettuja mielenterveyden terapian ja hyvinvoinnin edistämiskeinoja. Vaikka luonto on otettu prosessin olennaiseksi osaksi, taide on jäänyt sen ulkopuolelle. Tämän vaikutus näkyy kaupungissa ja sen asukaiden hyvinvoinnissa.

Yhteyttä arkkitehtuuriin ja sen ajan taiteen välillä on tutkittu 1800-luvun lopusta lähtien ideaalikaupungin käsitteen avulla. Taiteellista tekijää kaupungin suunnittelussa on väärinymmärretty, kaltoinkohdeltu ja väärinkäytetty 1900-luvun alkuvuosista lähtien.

Luonnon ja taiteen vaikutusta hyvinvointiin ja mielenterveyteen on tarkasteltu. Nykytaidetta kaupunkiympäristössä on tutkittu ja julkisten paikkojen – jälleenkaavoitus, jälleenrakennus historiaalisissa kohteissa, laajennus ja hylättyjen sekä huonokuntoisten kohteiden korjaus ja jälleenelävöinti – muotoilua on tarkasteltu, varsinkin koskien ihmisiä ja heidän hyvinvointiaan.

Diskurssiossa käsiteltiin suunnittelun ja muotoilun periaatteita ja prosesseja: tarpeet, 'pehmeät systeemit' ja 'ihmismittakaava', mittasuhteet, ilmasto, värit, variaatio, historia, identiteetti, yms., ja vastuu prosessista.

Työn johtopäätös on, että taiteellinen tekijä, joka on olennainen kaupungin asukkaiden hyvinvoinnille ja terveydelle, löytyy kun ja jos suhtaudutaan ja lähestytään kaupungin suunnittelua ja muotoilua kuin luomistyöhön, josta syntyy dynaaminen ja jatkuvasti muuttuva taidetyö, jonka ytimessä ja sydämessä ovat ihmiset kaupungissa.

Asiasanat: ihmiset, kaupunki, hyvinvointi, luonto, taide, taiteellinen tekijä, pehmeät systeemit, ihmismittakaava

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## 1 INTRODUCTION

In-as-much as this work has been an attempt at exploring the artistic element in urban planning and design in relation to the mental well-being of people, it has also been my personal self-exploratory journey into what lies at the root of modern landscape architecture, urban design and planning, which led me to acquire knowledge and skills invaluable to any work I may do in the future in the field of planning, design or art. It has taught me to see 'the place', and understand the role of planning, design and art in a new light, and finally given me a deeper understanding of myself, as a future planner, designer and artist.

Art and nature have always been close to my heart. I have always been interested in, studied and practiced art in various forms. When I considered a suitable subject for my graduation paper, memories and experiences from way back in my childhood awoke. As a child I was fascinated by works of art in the environment, streets, parks and gardens. Later on I got interested in urbanism and society.

The journey started in gardens, parks and works of art. The garden or park, being a well-defined area is easier to study, I thought. I could even plan and design one as part of this investigation of mine. The garden could be the background for works of art placed in it, related to them, or not, and it could be the work of art itself. So I set about reviewing gardens and parks around the world. The more I explored, getting close to the target, the broader the horizon became and the clearer the picture, they all were part of their greater environment, physical, cultural and social.

No garden or any other public space exists without being related to its environment, as even those planned without consideration paid to their surroundings, end up in some 'dialogue' with other elements in it – contradiction, imbalance, dissonance, disharmony. And so my focus was shifted from the limited park to the larger frame of reference, that of the urban canvas it was part of. Looking at the urban street view I sensed that

something was missing from the larger picture. It somehow felt out of balance causing a sensation of anxiety and stress.

At this point I realised that the real focus of this work was in the overlooked and marginalised element of the urban environment, the one that should in fact be at the heart of it all – people.

Bearing in mind the fact that a significant proportion of people nowadays spend their life in an urban environment, and that this will surely only increase in the future, I decided to investigate the ways in which city life was affecting people's well-being, the reasons that brought the urban environment of our day to this state, and how this could be mended. Having both nature and art in mind, I wanted to know how these two factors could mitigate the negative effect of urban life on people's well-being and how they could even make them better.

Now that this stage of my studies and this paper are reaching completion, I better understand that I have always intuitively looked for art in the street view. By that I do not mean just a work of art placed in a designated place or space, be it in the square, street, park or a public building, or the public area of a residential building, but art in the comprehensive meaning of the word. The organisation of the public space, the elements that create it, such as buildings, roads, yards, the use of plants, street furnishings, the scale, the shape, the colours, and relations of the different elements that shape our experience of a place and how we use it, the emotions invoked by it, consciously and subconsciously alike. Above all, the way in which it affects our well-being.



## 2 THE QUESTIONS AND THE METHOD OF INVESTIGATION

Around the Globe, there is a striking similarity between urban spaces, as if built by a common plan. Forms, materials, colours, style, structure and organisation are being repeated over and over again in different parts of the world, especially those parts that were built from the earlier years of the 20<sup>th</sup> century onwards. If there were no place names attached, it would have been impossible to differentiate between them.

The centres of larger cities can often be distinguished by special features, specific structures in locations that are unique, that is, old sections or historical buildings of importance or wealth which were preserved, and others, more recently built, which gained recognition. But once the observer moves out of those central locations, it becomes difficult to identify a place with ease and certainty, especially in sections where the building stock is relatively young.

The underlying assumption is that especially in the modern era, all cities share similar characteristics and features, and that people of all cultures are share similar psychological ones. For this reason we can approach the questions of this study on a global level and the reference material used irrespective of location, culture or language.

### 2.1 The Questions

The initial questions of this study underwent fine-tuning as the body of data grew and as my own knowledge expanded and deepened.

Additionally, a host of interrelated sub-questions developed as new aspects of these issues got explored. And yet, the core question sustained: ***The role of the artistic element in urban design and planning – How could the urban environment be made a better place to live in.***

For practical reasons, it needed to be split into sub-questions:

- ❖ How does the urban environment affect people's well-being
- ❖ How has the urban environment got to its current form and manner of function
- ❖ Can problems in the current urban environment be mitigated, can art and nature help us undo the wrong?
  - ❖ The assumption:

IF  
*nature* is beneficial to *health* and *well-being*  
 AND  
*art* is beneficial to *health* and *well-being*  
 THEN  
 in-as-much as *nature* is nowadays introduced into the  
*urban canvas* to *improve* it, so should *art* be

- \* It is proven that nature is beneficial to health and well-being.
  - \* It is proven that art is suitable and is often used for therapeutic purposes.
  - \* It is proven that nature in the urban setting is beneficial to health and well-being.
  - \* Art is seldom, if any, made an integral part of the urban environment (in the same way nature nowadays is).  
 Whatever art there is in the urban setting, it is in the form of works of art that are mostly not inherent to the location it is set in.
- ❖ How could the ARTistic element be employed to mitigate the harmful impact of the urban environment on people

## 2.2 The Method

This is mostly a theoretical work, qualitative in nature, and includes a review of a relatively large body of published and photographic material.

In part it offers a summary of existing literature – but is not limited to being a compilation of material. I attempted to integrate ideas and make them discuss and debate the issues examined as the various sources were

juxtaposed and compared. In the process of exploration and integration, I also attempted to form independent ideas and draw conclusions.

A qualitative theoretical work, it strives to gain understanding of the larger picture through the investigation and arrangement of its elements, at different levels. It attempts to define the problem, provide an insight into the underlying causes, arrive at possible conclusions and explore possible directions for further investigation.

I started exploring my subject by brain-storming and mind-mapping my subject area, attempting to draw actual linking lines between the elements placed on a large pin-board. I used different colour notes in different shapes to help me categorise the elements involved.

Material was collected, selected, reviewed, its relevance assessed, reselected and processed. There were several rounds of material handling in this way, which followed the route of development taken by the work. Many discussions were held, various ideas tested and routes explored.

The arrangement of elements on the board kept changing as the work advanced and as I learnt more about the various elements. Some moved around, some were removed and others added. I was trying to figure the larger picture and the elements within it – and the relationships between them.

Several core points emerged, and I tried to explore the relationships between them and to organise the secondary points in clusters in relation to those cores. A good deal of time was spent on this stage, because I needed to go beyond the initial question and break it down to its elements, figure how they could possibly relate to one another, and which were relevant to the search of possible answers to my questions.

The study uses a large body of published material. Selecting it happened in stages which followed the development of the work, each time a new link or idea was formed. New sources were also located within the reference material of publications reviewed.

I used books (borrowed, obtained, owned, and those available on on-line databases), academic and professional publications, both on and off line, TV programs and lectures, articles in newspapers and journals, and photographic material available on-line. Google Earth and Street View were a useful vehicle for many exciting trips around the Globe.

### 3 THE EFFECT OF THE URBAN ENVIRONMENT ON WELL-BEING AND MENTAL HEALTH – SOME OBSERVATIONS

Wherever we are, our environment, physical (whether natural or built-up) and social, affects us in various ways. As a rule, we strive to be in a state of balance, both within and without, and to avoid excessive stress. The environment impacts our senses, emotions, physiology and psychology in many ways. We know it intuitively and this intuitive knowledge is further supported by research.

#### 3.1 The Notion of 'Home'

Home, we often say, is where the heart is, and the heart seems to be where one feels safe and comfortable. 'Home' is a psychological notion that keeps developing, the particulars of which depend on one's culture, tradition and personality traits (Kopec 2006, 125); and where we are, we tend to 'make our nest'.

The 'identity' of the 'home' (and its dwellers), can be deduced by observing its architecture, landscaping and interior décor. (Kopec 2006, 128.) Even if modern buildings are not any longer decorated in details and manners that used in the past to indicate the social status of the owners and dwellers, modern architectural design has its own means and 'language' of doing just that; and naming property (if the possibility is made available to the owner) serves as means for branding and marketing that identity. (Kopec 2006, 125.)

To be a 'home', a location needs to provide the highest level of stability, sense of safety and emotional support – to cater not only to the physical needs that support physical health, but also to the emotional and psychological ones that promote well-being and sound mental health. Meaning, such as 'home', attributed to a place, changes over time as a result of personality, experiences and interactions with the social and physical environment. (Kopec 2006, 131.)

According to Popay et al. three broad elements influence people to become attached to places and affect their well-being, (a) personal characteristics and behaviours, (b) availability of facilities, opportunities and resources, and (c) a sense of belonging. They note that “Homes are not merely physical places where people live. Homes are created by how people think about and interact within them. A home plays a significant role in shaping a person’s life and identity”. (Popay et al., 2003, in Kopec 2006, 130.)

The sense of security ‘a home’ gives is directly related to one’s level of control of the immediate environment, physical and social, and the ability to regulate it. (Kopec 2006, 131.) Interpreted according to Maslow’s ‘hierarchy of needs’, lack of control of the immediate environment means that our ability to satisfy our essential needs and actions are determined by others and their intentions. Lack of control over the environment and the inability to satisfy one’s needs are known factors of poor psychological health. (Kopec 2006, 12.)

The relationship people have with the place (of any order) they call ‘home’, works both ways. While the place, which people form a bond with, sustains them, both physically and psychologically, they too are interested in maintaining the ‘well-being’ of the place and easily assume common responsibility for the maintenance and security of both physical place and community. (Kopec 2006, 131.)

### 3.2 Our Relationship with the Immediate Environment

We need our environment and depend on it for our physiological health and mental well-being. People are territorial beings and strive to control their environment. Territories, as personal spaces, are divided into primary (such as the home), secondary (such as the work place), and tertiary (such as a park) spaces, and are said to satisfy different personal and social needs. (Kopec 2006, 65.) The better we control our environment, the better we can satisfy our needs and maintain an emotional equilibrium.

Environments that satisfy our various needs are said to be supportive of psychological health, while poor psychological health appears to be sustained by poor possibility for personal control. (Kopec 2006, 74.)

People tend to develop an emotional bond to their 'home turf'—from the immediate one to the largest physical and/or social one—especially if that environment is supportive at least to some extent, and satisfies our needs, and attribute to it a 'meaning'. (Kopec 2006, 74.) This meaning, (the various emotions by which it is defined within our thought) is, in fact, the way in which we see ourselves in relation to others and to the particular environment (physical, social, cultural). These emotions are the way in which we incorporate 'the place' and make it a part of our identity; the feeling we associate with the place and the level of attachment we feel to the physical and/or social environment. (Kopec 2006, 61-62.) Lacking such a reference 'home' is a source of emotional difficulties.

The type of impact a place has on our identity depends on the experiences we go through in that 'place', which in turn are responsible for the feelings a place evokes in us. If experiences are positive, the feelings we associate with the place are those of safety and comfort. Such a place will reinforce our identity and self-esteem, sense of individuality and/or sense of belonging, and is often integrated with both our personal and cultural identity. All these translate into a sense of attachment to the place. This 'place' is considered as a restorative environment – a 'home-port', a place to anchor at, as it provides psychological security. Vision, touch and smells all evoke memories of such a place. (Kopec 2006, 61-62.)

Place attachment is said to be especially important for the development of children. (Kopec 2006, 62.) According to Low and Altman, place attachment is a complex phenomenon that has various features, which are interrelated and therefore inseparable. Emotions, especially those of security and well-being, which stem from positive experiences, as well as cognition (thought, knowledge and belief) and active behaviour, are considered to be central elements in the formation of place attachment.

Culture is involved in the creation of this notion, and place attachment is linked to the transmission of culture and to its conceptual construction. (Low and Altman, in Low and Altman ed. 1992, 4.) A culturally linked attachment is seldom exclusive to the individual and is often shared with others belonging to the reference group, so that it also plays part in the definition of the group itself. This makes the place, whether the immediate, private territory or the expanded one into an integral part of one's personal identity. (Low and Altman, in Low and Altman ed. 1992, 4-7.) Such bonds are strong, and if forcibly severed, the experience most often has negative outcomes. The notion of belonging and having a cultural identity in terms of learning experiences acquired within a reference cultural group is essential for the healthy cognitive and emotional development of children. (Feuerstein 2015, p 34-35.)

### 3.3 The urban environment

According to the World Health Organization, the urban population accounted in 2014 for 54% of the total global population (up from 47% in the year 2000), and this trend is expected only to continue. More than 90% of urban growth is taking place in cities of the less developed countries, and the UN prospects are that by the year 2050 about 66% of the world population will live in urban centres (WHO, data 2014), and that already by 2017 the majority of the population of the less developed countries will do so (WHO, GHO data 2014).

Just some decades ago the majority of the world's largest urban centres were located in the more developed regions. Yet, nowadays, the large urban centres are concentrated in the southern part of the Globe. About half of the urban population nowadays resides in 'relatively small' (less than 500,000 inhabitants) urban settlements. Currently there are 28 mega-cities (more than 10-million inhabitants) in the world, but only 12.5% of the urban population live in them. By 2030 it is expected that there will be 41 mega-cities. (WHO, data 2014; UN, dept. Economic & Social Affairs 2014, 1.)



In the last few centuries cities grew rapidly as a result of population mobility following technological and economic changes (in other words, people moved to urban centres following employment opportunities, just as many still do today). Many of the city planners and architects that will be mentioned in later chapters were involved in attempts to solve housing issues in growing cities. Solutions were varied. They included tenements (which provided inadequate living conditions and neighbourhoods), ever sprawling suburbs of single, or semidetached or terrace family houses, blocks of flats, some short, and some extremely long with many sections and entrances (in Finland, often in a forest or semi-forest setting). The more comprehensive solutions have tended to lean towards utopian thought, and as such were mostly realised only in small portions. All these solutions have been related to debates of philosophical approaches and social theories, mutually linked to political processes, and each has had its array of related problems, structural, functional, economic, cultural and social. After all, seldom is a city built from scratch and always will a city involve 'the human element'.

Although much of the urban growth is said to be taking place nowadays in the southern part of the Globe, large urban centres in the Western and Developed World too keep growing, and find themselves run out of unbuilt areas within their jurisdiction. They too are faced with questions related to optimal areal expansion (where feasible), carbon-footprint, infrastructure development, commuting and the transportation of goods, provision of services, and more. The solution of choice nowadays is often area reassignment, towers, and in-fill building. New urban fabric emerges as building climb higher (anew or on top of existing structures) and open spaces within the urban area get built up.

The direct result of such measures is an increase in population density, and in turn, an increase in the demands and pressure put onto infrastructure and service systems. Although such density may not necessarily create crowding in the newer and better build, population density gets higher and crowding is inevitable. Even when technology

allows relatively good insulation of dwellings from their surroundings, the sense of crowding will 'enter' the home indirectly, as views change from green open spaces to built-up areas and roads and busy traffic, and with them, an impact on light, air-flow, noise, etc. Insulation brings a form of isolation together with an impact on life-style, which is also affected by changes in the structure of the neighbourhood, facilities, social composition and function, atmosphere, and so forth.

Is intensive urbanisation a positive development? Can the city secure and provide suitable housing and services for all city-dwellers? What are the social impacts of such a massive demographic change, and above all, does it support health in the broader sense – not only providing treatment for the ill, but promoting healthier life in all its aspects and contributing to preventing the development of physical and mental disease altogether?

### 3.3.1 Negative Ambient Properties of the Physical Urban Environment

Ambient properties are affecting the city dwellers in the street, the workplace and as they penetrate the home. Cooper et al., list the following negative ambient properties of the physical urban environment: noise, dampness, mould, temperature and pollution, crowding and density (Cooper et al. 2009 974-975). Of these relevant to our discussion are those factors which are not limited to one's home.

Noise from neighbours and from roads, near the dwelling and far (especially at the dead of the night), passing air-traffic, proximity to airports, railways, high-ways, public traffic systems, public services, such as garbage collection, emergency vehicles, and so forth, are all major sources of annoyance and have a negative impact on quality of life. (Evans and Cohen 1987; Goldstein 1990 in Cooper et al. 2009, p 975.) Noise especially affect children. It impairs the development of their reading skills (Cohen et al., 1987 in Cooper et al. 2009, 975), and may easily cause deficit in mental well-being. Chronic exposure to noise is known to

produce adverse stress reactions, especially in children (Evans et al. 1995 in Cooper et al. 2009, p 975).

The actual built-up area materials and structure as well as human activity and pollution produced all affect temperature, level of relative humidity, wind, rainfall, cloud cover, fog and smog. These in turn have their effect on people's lives and health and well-being. Pollution affects the quality of water, earth, air and all surfaces. Urban area air quality is affecting people suffering from chronic lung and heart disease, and allergy. Chronic disease in turn impacts one's physical as well as emotional well-being. Cities are known to produce heat islands, where the temperature is higher compared to the surrounding area, which in turn affect human health and energy consumption. Not only they are warmer, the heat released at night from the absorbing surfaces does not allow the city to cool down. This overheating is a source of major health issues, and kills more people than any other weather event (Urban Heat Islands, The weather Channel). City skies are covered with more clouds than its surroundings. That together with smog hides the sun and creates grey skies. The larger the city the more polluted is the light of day. The higher temperature causes convection currents pulling particles into the air which condense moisture into clouds. Tall buildings affect wind direction and intensity and long streets with tall buildings along the sides cause a canyon-like effect and wind-tunnels. (Advanced level Geography.)

Over-crowding and high population density, whether in the home or the residential neighbourhood, has negative impact on well-being. Crowding has substantial negative effects on social relations (Baum and Paulus 1987 in Cooper et al. 2009, 975) and psychological health (Gove and Hughes 1983; Baum and Paulus 1987; Gabe and Williams 1983; Evans et al. 1989; in Cooper et al. 2009, p 975). People living in areas of high density were reported to have higher levels of psychophysiological symptoms (Social and Community planning Research 1978 cited by Halpern 1995; in Cooper et al. 2009, p 976) including stress, anxiety (Brain 1984; Freeman 1984; Tarnopolsky and Clarck 1984; in Cooper et al. 2009,

p 976), aggression and increased sense of physical and emotional vulnerability (Brain 1984; Freeman 1984: in Cooper et al. 2009, p 976). Baldassare's study (1975) found that "the higher the neighbourhood density, the less well people knew each other". He assumed a limit in the number of qualitative contacts which people could have in their environment, and concluded that when people were overburdened by social input, the reduction in quality of contacts allowed for a few, yet more rewarding friendships. (Baldassare in Pipkin et al., Eds. 1983, 150-151.)

What these studies by Baldassare point at the fact that although statistically the data on highly dense urban and affluent suburban locations indicated higher incidence of problems related to emotional well-being, the causal factors for these conditions are likely to be intermediary factors caused by the crowding. Namely, the 'excess' of interactions and the overbearing proximity on one hand, which may contribute to excessively diminished personal territory (physical or social), and further to reduced sense of control.

Studies on 'accessibility' are said to be mostly limited to old-age issues and indicate that accessibility at home is essential for life satisfaction for the elderly, and especially people of significantly high age. (Cooper et al. 2009, p 976.) Cooper et al., do not discuss accessibility issues outside the home, but we can conclude that lack of accessibility limits the ability to function independently both for older or otherwise disabled people, thus diminishing their level of control of their situation.

'Fear of crime' and 'safety' issues are a significant source for stress. Cooper et al. also refer to Health Canada (1997, as cited in Butterworth 2000) which indicated that socioeconomic factors and the physical environment factors, such as empty lots, poorly lit locations or ones that are obscured by vegetation, contributed to fear. (Cooper et al. 2009, p 976). Feeling safe at home and when moving around in the neighbourhood, as well as feeling connected with the community, all contribute to good mental health. (Zirsch et al. 2005; Sampson et al. 1997;

Ross and Jang 2000; Cho et al. 2005; Rose 2000, in Cooper et al. 2009, p 977.) On the other hand, individuals, especially women and the elderly who perceived their community as unsafe, were found to be most likely to suffer from high levels of psychological distress – the higher the fear the greater the distress. (Ziersch et al. 2005; Phongsavan et al. 2006; in Cooper et al. 2009, p 977.)

### 3.3.2 The Urban Environment Impact on Well-Being and Mental Health

Irrespective of the growing wave of people flocking to cities, mostly for economic reasons, humans are said to respond more positively to the content of natural environments than to that of urban ones (Chang and Chen, 2005, 1358). As a matter of fact, research indicates that urban centres are unhealthy places, and can permanently impact the human brain.

The built-up environment affects mental health. This takes place both at home and in the environment as a whole. People in the urban environment tend to spend much of their time indoors. This makes the quality of our homes and other structures highly important for our mental well-being. Housing, crowding, noise, air quality and light have a direct effect while altered psychosocial processes have an indirect effect on mental health (Evans 2003, 536). The functional structure of the urban environment affects people's actions, what they do, where and with whom, as well as the type of communication they have and the quality of their supportive social networks. The way the elements making the built-up environment is arranged also affects on our mind, in a way much similar to that we experience indoors, dimensions and scale, light, sound and noise, colours, smells, materials, temperature, etc.

Contact is a basic human need. Loneliness and isolation, or deprivation of human contact, result in mental health issues. Social isolation is associated with health risks, and although the city may be densely

populated, people in the city can in fact experience isolation at any age and stage in life. Certain groups may be more vulnerable to isolation than others, because their options to create and maintain such connections may be limited in availability or hindered by other conditions.

Any contact is better than total isolation. “Even looking out of the window now and then, if one is fortunate enough to have something to look at, can be rewarding” (Gehl 2011, 17). Jan Gehl refers to forms of contact by their degree of intensity, from passive contacts (hearing and seeing without direct communication), through chance contacts with strangers, meeting acquaintances, friends and up to close friendships. (Gehl 2011, 15.)

Especially with the increasing tendency to build vertically, it is worth paying attention to the fact that vertical buildings, said to be the solution for expanding carbon-footprint, are counterproductive in psychosocial terms on several levels. Their scale does not meet human sensory dimensions and they hinder communication and interaction, which are essential for mental well-being. Communication with the surrounding from the first two floors of a tall building is potentially excellent, one can see gestures and hear voices clearly – be seen and be heard, and it is feasible from the third up to the fifth floor, where one can at least follow the life outdoors and notice some level of detail. Yet, “above five storeys the situation changes dramatically. Details cannot be seen, people on the ground can neither be recognized nor contacted. Above the fifth floor, offices and housing should logically be the province of the air-traffic authorities. At any rate, they no longer belong to the city.” (Gehl 2010, 42.) Communication between the floors is virtually impossible unless taking place through technological means or in ‘neutral zones’, whether intended for this activity or otherwise. In any case, the structure of such ‘upright communities’ irrespective of how luxurious, even green-roofed and terraced, is in no way supportive of the kind of communication and activity that takes regularly place on ground-level, and which is essential to community life that promotes well-being.

Research has identified a range of indicators of social isolation related to health risks, including living alone, a limited or small social network, infrequent participation in social activities, and feelings of loneliness (York Cornwell and Waite, 2009, 31). Set to assess two multiple aspects of social isolation: social disconnectedness and perceived isolation, and their distinct association with physical and mental health among older adults, York Cornwell and Waite conclude that not only the two forms of social isolation are, as expected, associated with worse physical and mental health, but that they are not interchangeable and each has a distinct association with physical and mental health issues. While disconnectedness has a direct effect on physical health, perceived isolation, especially the sense of loneliness seems to act as a connecting factor between social disconnectedness and mental health. (York Cornwell and Waite, 2009, 42-43.)

Decline in social connectedness leads to increase in the vulnerability to mental illness, major depression and addiction. McPherson, Smith-Lowin and Brashears published in 2006 their findings regarding an increase in social isolation in the 20 previous years. They found a major decrease in the size of social networks, and a significant increase of people that reported having no close confidant to share important matters with, from among one's relative or others. The greater reduction was among the non-kin confidants, i.e., those acquired through voluntary association. (McPherson et al. 2006, 353.) By the criteria set by Fischer (Fischer 1982, in McPherson et al. 2006, 371), who defined people that had only one or no ties to people with whom they could discuss personal matters, which are important to them as having marginal or inadequate counselling support, McPherson et al. have found that "we have gone from a quarter of the American population being isolated ... to almost half of the population falling into the category...The largest losses, however, have come from the ties that bind us to community and neighbourhood." (McPherson et al. 2006, 371.)

Various studies indicate that high-rise housing was found to be harmful to the psychological well-being of women with young children and to the children themselves, particularly those of low-income families. As possible reasons for these, Evans lists social isolation and restricted play opportunities, which are further intensified by poor allocation of resources to spaces that allow for the development and maintenance of social networks. (Evans 2003, p. 537.)

By their structure and function, high-rise buildings strongly limit the possibility for casual inter-personal communication, because they do not allow for the kind of out-of-dwelling activities which low buildings allow for, and the type of communication, whether of high or low intensity, with neighbours and passers-by, which the latter facilitate. Low intensity contacts, from which other forms of contact can develop, are a prerequisite for further friendships to be formed. Frequent meetings in connection with daily activities increase chances of developing contacts with neighbours. These processes are rather similar to those one can see when watching children in play. Play does not need to be arranged. The only prerequisite is that the interested parties are present in the same space. (Gehl 2011, 19.) Once the players are there, assuming common interest in play, they start with low intensity exchange of communication and continue into more intensive ones as they learn to know one another and time passes. The next time they will get together they can continue building the play and their friendship.

High-rise dwellings and the heavy reliance on motorised travel instead of walking and meeting people in places that allow for interaction, creates an abnormal state because people have less opportunity to enter into the lower and middle level type of contacts and communication. People are then left facing a strange situation, because they are expected to start social interactions from the highest level of intensity, which requires intimate familiarity. Yet, not having a possibility to go through the preliminary stages, such familiarity and type of communication required at this level cannot be achieved instantly, and therefore intimate contacts



cannot develop. A setting that does not promote possibilities for interactions to develop naturally with gradually growing intensity, becomes a place that promotes loneliness.

Both quality of housing and quality of neighbourhood are said to impact mental well-being. Poor quality housing is mostly located in poor quality neighbourhoods, and more often than not, it is difficult to separate the impact of these factors. (Evans 2003, 538.)

Poor housing quality is often associated with an increased psychological distress and mental health issues. It is often a reason for anxiety, a sense of insecurity, which may intensify further when living in rental accommodations, and possibly facing a need for repetitive change of residence (Evans 2003, 538). A setting of poor quality housing combined with a family unit that possibly experiences functional difficulties, cannot offer an adequate level of comfort, sense of security and a restorative environment. Differently put, a housing solution which is not an adequate 'home' is reflected in problems related to identity and emotional well-being. Frequent change of residence is disruptive, not only to the emotional bond one creates with the physical place, be it a room, an apartment, a house or neighbourhood, but it also entails severing social networks formed locally, and the need to remap both social settings as well as physical ones. When moving often, one may avoid creating close relationships altogether for the fear of going through severing processes again and again.

The association between poor housing quality and mental health is further supported by the improvement in the mental health of people that moved out of poorly maintained dwellings and neighbourhoods and moved into middle-income ones, as compared to those who stayed on (Johnson et al. 2002; Dalgard and Tambs 1997 in Evans 2003, 538).

Neighbourhood quality (physical, structural and social characteristics) impacts the mental health of children and their families (Wandersman and Nation 1998; Leventhal and Brooks-Gunn 2000, in Evans 2003, p 538). Discussing factors that contribute to the development and perpetuation of

various problems such as child abuse, domestic violence, poor parental care, risky adolescent behaviours, delinquency and substance abuse, Nation and Wandersman remind us that individual therapy alone cannot solve the problem and that the focus in these issues needs to be on their prevention. The important factors they point at are community problems (including poverty, dilapidated housing and social isolation) that are at the basis of such 'individual' problems. The environmental variables such as family, school, neighbourhood and community affect the behaviour and healthy development of the individual (Bronfenbrenner 1979, in Nation and Wandersman 2001, 2) and that there is "little doubt that a community's social, physical, political and economic qualities play important roles in producing healthy individuals, who in turn, create a healthy, vibrant community life" (Gephart 1997; Wandersman and Nation 1998 in Nation and Wandersman, 2001, p 2).

A study by Kruger, Reischl and Gee found that neighbourhood level structural deterioration was indirectly associated with mental health symptoms of stress and depression, and that this was best explained as mediated by neighbourhood perceptions and social behaviours (social contacts). According to their explaining model, deterioration of residential and commercial property was directly associated with reduced social contacts in the neighbourhood, which in turn intensified fear of neighbourhood crime. Fear of crime was associated with lower neighbourhood satisfaction, stress and depressive symptoms. A key consequence of neighbourhood deterioration was decreased contact with one's neighbours and increased concerns with safety. (Kruger et al. 2007, p 268-269.)

James Wilson and George Kelling demonstrated that evidence of decay over time caused people to become fearful, withdrawn and unwilling to intervene, attempt to maintain social order or amend physical degradation, which in turn contributes to the escalation of harassment, vandalism, violence and other crimes. (Kopec 2006, p 111.) "Social psychologists and police officers tend to agree that if a window in a building is broken and is

left unrepaired, all the rest of the windows will soon be broken... one unrepaired broken window is a signal that no one cares, and so breaking more windows costs nothing" (Kelling and Wilson 1982 in McLaughlin et al. 2003, 402).

The 'broken window theory' by Wilson and Kelling formulated in their article published in 1982 in *The Atlantic monthly*, supports the notion that 'grime causes crime' – when the environment is not maintained, it conveys a message that it is not 'owned' by the people living there. This in turn promotes an atmosphere of accepted physical deterioration, often associated with disorderly behaviour, which leads to further decay and crime. It also causes people who live and/or work in the area to be fearful, withdrawn and in order to avoid confrontation and keep away from the situation they are reluctant to reclaim the area by intervening and correcting the physical damage. (Kopec 2006, 111.) On the other hand, the Defensible Space Theory published by Oscar Newman in 1972 states that "the degree to which crimes occur in a given environment correlates directly with the level of the occupants' defence of that space" (Kopec 2006, 111). The idea is that the residents of a location would reclaim and become curators of portions of the public space. The territorial control gained this way will limit the possibility of criminal activity and the fear of crime sensed by the residents. (Defensiblespace.com/book, 2009; Kopec 2006, 111.)

Less control over one's environment, whether at home or out of home, also means less ability to regulate one's social interaction. The ability to regulate one's social interactions is an important factor of mental well-being. It has been shown that the manner in which the elements in the immediate environment were arranged had an impact on the behaviour of psychiatric patients. An arrangement that promoted social interaction contributed to a significant reduction in isolated and passive behaviour and an increase in active interaction, which in turn had a positive effect on the condition of these patients. (Holahan 1972; Holahan et al. 1972; Osmonf 1957; Sommer 1969; Timko 1996 in Evans 2003, 539.) The same can be

said about public spaces in the city and residential areas. The elements in the space, the street, the square, the housing project, can be arranged in a manner that will invite and facilitate interactive behaviour, or it can be arranged in a manner that will not promote or even allow easy and comfortable interaction. Jan Gehl is one of the more prominent current voices on this subject. Although not stating the improving of 'mental health' specifically as his point of departure, his entire work is geared towards the improvement of conditions in the urban environment which promote well-being and mental health. "If life between buildings is given favourable conditions through sensible planning of cities and housing areas alike, many costly and often stilted and strained attempts to make buildings 'interesting' and rich by using dramatic architectural effects can be spared. Life between buildings is both more relevant and more interesting to look at in the long-run, than are any combinations of coloured concrete and staggered building forms". (Gehl 2011, 22.)

Sharply observable borders of the completely private or public zones, as one finds in multi-story residence buildings, do not support and even prohibit interaction. Observing, one notices that their arrangement allows for many briefly lasting 'coming-and-going' activities, but for very little stationary activities which produce meaningful interactions. The outdoor areas of multi-story buildings often provide a play area for children, but there is little if any area for adults. In fact, youth too are badly provided for in that respect. What adults can do and how much (how often and for how long), in terms of outdoor activities in such environments, is highly limited. On the other hand, 'flexible borders', provided by transitional zones (neither all-private nor all-public), allow for flexible, physical and psychological movement, longer lasting and therefore easier and more meaningful interactions. For example, such soft zones are easily and effortlessly formed when people can see one another and communicate while being in their own yards or on their own porch. When outdoor stays create an opportunity for comfortable interaction, interaction will take place and will often develop to further levels. As we know, interaction, communication and being to an extent part of the group are essential in

securing people's sense of belonging and control, and thus their emotional well-being. (Gehl 2011, 113, 183-185.)

The manner in which people move in the city from location to location has an impact on communication patterns and possible interaction. Where cities are organised so that people need to commute for basic activities such as work, study, shopping, entertainment, all located away from their place of residence and beyond a moderate walking distance, and where specially safe roads for walking or cycling are not part of the road network, people are forced to use cars, and see the environment and the people in it through the windshield or windows at the speed of motorised traffic. No fruitful interaction or communication is possible in this setting, which, no doubt, only contributes to people's detachment and sense of loneliness.

Ever since the early years of the previous century, the rise of Modernism and the model of the American metropolis with its sprawling suburbs gaining popularity, urban planning has favoured motorised traffic and strived to cater to accommodate its growing volume. Robert Moses was the person most responsible for the fact that some 416 miles of parkways (highways) were built in New York City. (Barlow Rogers 2001, 425.) Such expressways are found in many large cities around the Globe, which took after the American model. Urban planners, following dominant planning ideologies, paid little attention to pedestrian needs. Market forces and architectural trends pushed planning to focus on isolated individual venues. Utopian, futuristic ideas supported the belief that technology was to supply solutions to all needs and that speed was the key for human society development. In fact, the idea that fast movement was the ideal solution was not limited to cars but included swift trains and urban air traffic.

The priority given to motorised traffic in urban planning has come at the expense of people treated poorly. Space allocated to pedestrians is limited and their way strewn with obstacles to movement. The air is polluted to the point that people need to use protective masks, endless noise throughout

the day, and the risk of being run over. This also limits space that promotes urban life. (Gehl 2010, 3-5.)

The excessive use of cars and the avoidance of walking and cycling have another unfortunate side-effect, namely, physical health problems caused by too little physical activity and exercise, by stress, and by pollution. For example, obesity (already at global epidemic proportions) is directly linked to type 2 diabetes, which currently affects at least 366 million people worldwide and expected to reach some 566 million by the year 2030. Over 99% of all cases of diabetes cases are Type 2, with most of them projected to occur in low- to middle-income countries. Recent evidences indicate that outdoor air pollution represents a critical link between urbanisation and the emergence of cardiometabolic disease, especially Type 2 Diabetes (Rajagopalan and Brook 2012, 3037). Physical activity and exercise are prescribed nowadays as first line measures to all DM2 patients, and especially to newly diagnosed border cases, where they can still reverse the situation and recover normal pancreatic function. Physical exercise is also currently recognised as equally effective measure to treat many mental health related conditions. The fact that those are not easily achieved in a more casual manner, and often require special arrangements (use of equipment, payment, and often travel by car to the special location) serves a blow to physical health and a double-blow to mental health – as it causes stress and anxiety, loneliness and other maladies, but does not allow for the more simple, natural and healthy measure of dealing with them, namely social contacts, interaction, casual communication and physical exercise.

### 3.3.3 Further data on Psychological & Physical Threats by the Urban Environment

The physical structure of densely built urban environment, which is mostly characterised by living units piled vertically in rising layers (whether to solve land scarcity issues, such as in Singapore, or to follow the utopian view of Le Corbusier on the way a town should be structured and

arranged), poorly allows for the development of socially supportive relationships and restricts possibilities for personal control and restoration, and thus increases psychological distress. Indirectly, the physical environment may influence mental health by altering psychological processes with known mental health sequelae.

Properties of the built environment affect the ability to control one's environment, maintain socially supportive relationships with others, and the pace and quality of restoration from the state of stress and fatigue (Evans 2003, 536).

The built-up environment presents people with a variety of physical and psychological threats.

'Stress' is defined here as a psychological or physiological response to a stimulus or stressor, whether social, physical or biological. (Kopec 2006, 101.) It is known to affect physical, mental and social well-being, and to derive from many environmental sources. Various ambient stressors, such as air, noise, organic and other matter, particles and odours can harm humans and cause health problems through both physiological and psychological reactions. Daily situations involve social, physical, biological and chemical elements, all of which elicit responses and produce stress to various levels. Human stress is caused by internal (interpersonal conflicts, violent situations, hectic schedules, etc.) or external (environmental factors such as noise, temperature, crowding, etc.) sources. Even short-lived acute stressors affect our responses and behaviour, while in the case of chronic, on-going or recurring stressors, stress builds over time and is manifested directly and indirectly as physical and psychological detrimental ailments. (Kopec 2006, 102-103.)

The effects of the built environment on health in general and on mental health in particular are both direct and indirect. Characteristics of the built environment, which include housing conditions, crowding, noise, air quality and light, can directly influence mental health. In addition, the built

environment can indirectly impact mental health by altering psychological processes with known mental health consequences. (Evans 2003, 536.)

The findings of the longitudinal study of the impact of urban environment on mental health conducted by Dalgard and Tambs support 'the environment stress hypothesis', which implies that the quality of a neighbourhood has an effect on mental health. The neighbourhood in which the study was conducted was an initially poorly functioning one and its residents had a record of poor mental health state. Once the area was developed and substantial improvements took place, there was an improvement in the social environment and a significant one in the mental health status of those residents who remained to live in the area. (Dalgard and Tambs 1997, BJP, abstract.)

The Foresight Mental Capital and Well-being Project (2008) conducted by The Government Office for Science in the UK. The objective of the extensive project was to consider how to achieve the best possible mental development and mental well-being for everyone in the UK in the future, and to suggest what government, individuals and businesses could do to meet the challenges ahead. (The Government Office for Science, UK, 2008.) It was published as a large book (1040 pages) in October 2009 by Wiley-Blackwell. The last chapter of the book, corresponding to State-of-Science Review SR-DR2 offers an extensive review of publications dealing with the effects of the physical environment on mental well-being. It provides scientific evidence demonstrating that the physical environment impact on mental well-being, and identifies possible near-future trends of development or change of people and cities. (The Government Office for Science, UK, 2008, SR-DR2, 31.)

Several of the publications reviewed besides the above project were also used by the respected authors of the review chapter of the above project, which is somewhat reflected in the following passages. Even where sources referenced are among my primary ones, due to the



comprehensive frame-of-reference formed by the respected authors, they may be listed here as secondary, or even tertiary ones.

Cooper et al., list environmentally related sensory stimulation factors (smell, touch, taste and hearing) as significantly contributing to 'mental capital' (defined as the totality of an individual's cognitive and emotional resources) and 'mental well-being' (a dynamic state in which the individual is able to develop one's potential, work productivity and creativity) and 'mental health' (a state of well-being, in which the individual realises one's abilities, can cope with normal stresses of life, work productively and able to make contributions to the community). Noise, light and the 'quality of the fabric of the built environment' are said to significantly affect human visual and tactile senses, and together with layout and wayfinding, impact our sense of safety and contentedness. (Cooper et al. 2009, 967-968.) According to Cooper et al., it is from the physical environment in which individuals live, that they gain knowledge about the world, and develop the emotional and cognitive means with which they manage life. (Cooper et al. 2009, 972.)

Many of the studies reviewed for the project supported the assumption that poorer quality of housing can lead to poorer mental health. (Freeman 1984, Halpern 1995 Evans et al. 2000, in Cooper et al. 2009, 973.) The presumption is that poor quality of housing enhanced the sense of isolation and depression, and that these elements further intensified worrying "Those living in housing in a 'poor state of repair' are four-times as likely to experience isolation, depression, and worries, than those in good housing". (Payne 1997, in Evans et al. 2003, 488; Cooper et al. 2009, 972.) According to Cooper et al. the quality of dwelling had received in various studies far more attention than any other physical environment in which individuals spend their time, presumably because of the cultural importance attached to dwellings and because people do spend a large amount of time in them. At the same time, they also note that there is need for more research that examines how mental well-being is impacted by various environments. (Cooper et al. 2009, 972.) Poor quality of housing

has many aspects and can be expressed in various manners. Welch and Lewis pointed that individuals that lived in dwellings that had structural problems were 1.4 times more likely to have mental disorders compared to those who lived in dwellings that did not have such problems (Welch and Lewis 1998, in Cooper et al. 2009, 972), and as pointed out by Wells and Harris, distress diminished when improvements were made and structural problems were solved (Wells and Harris 2007, in Cooper et al. 2009, 972). People suffering from depression were often found to live in significantly lower quality dwellings than ones who did not suffer from depression (Birtchnell et al. 1988; Hunt 1990; and Kasl et al. 1982, in Cooper et al. 2009, 972).

Cooper et al. noted that the quality of the neighbourhood where one lived was as important as that of one's dwellings. In support for this view they referenced a study by Michael Maxfield, who "found that objective measures of physical neighbourhood decay were related to higher fear levels in both the USA and the UK...". (Maxfield 1987, unpublished, in Perkins 1993, 31.) Such neighbourhoods, they say, are at high risk of turning into segregated 'welfare ghettos' both economically and socially, where the frequency of mental ill-health is high. (Kearns and Joseph 1993, in Cooper et al. 2009, p 973.)

As mentioned before, physical changes and improvements made on the neighbourhood level, dramatically improve the mental health state and well-being of the residents. (Dalgard and Tambs 1997, BJP, abstract.) Cooper et al. purport findings of several works according to which moving away to an environment of better physical quality has a pronounced positive impact on psychological well-being, social relationships with neighbours, performance in school, anxiety and depression, as well as self-efficacy. (Wilner et al. 1962, Elton and Parker 1987, and Rosenbaum et al. 2002, in Cooper et al. 2009, p 973.) Johnson, Ladd and Ludwig studied 'the costs and benefits of residential mobility programs for the poor', and wrote that the net effect of such programs was a positive one as shown by the evidence of a reduction in the receipt of welfare by families

in public housing that were assisted in moving to economically better-doing areas, improvement in school achievements of their children and reduction in behavioural problems. They also emphasised the substantial economic benefit of such programs to society. (Johnson et al. 2002, 125). Evans, referring to Johnson et al. (2002) as well as to the earlier-mentioned longitudinal study by Dalgard and Tambs (1997), indicates that "...relocating from low-income neighbourhoods to middle-income areas is associated with enhanced mental health for both adults and children" (Evans 2003, p. 538).

Several articles by Evans et al., provide an extensive review of research that dealt with the impacts of the type of dwelling on mental health and well-being, the focus being on the differences between high-rise and low buildings as well as between attached and detached ones. (Evans et al., 2000, 2002, 2003 in Cooper et al. 2009, p 973.) Cooper et al conclude on this point that "Generally, individuals living in high-rise buildings suffer significantly higher levels of mental health problems than those in low-rise developments" (Cooper et al. 2009, p 973-974). And referring to several studies, they write that these problems include alienation, feeling unhappy and unhealthy, a loneliness, social overload, diminished sense of control and safety, lack of social support and social relations, and lesser attachment to the community. (Amick and Kviz, 1974; Moore 1975; McCarthy and Seagert 1979, in Cooper et al. 2009, 973-974.) They also indicate that "...individuals living in detached dwellings had greater mental well-being than those in semidetached or multiple-unit homes...and individuals in single-family houses tended to express greater satisfaction with their dwellings" (Jagun et al. 1990; Bagley 1974 in Cooper et al. 2009, 974).

Studies, such as the longitudinal study of schizophrenia, depression, bipolar disorder and other psychiatric conditions, conducted between 1965 and 1997 in south-east London, indicate a large increase in schizophrenia, especially in young people, and thus support what has been known for several decades, namely, that people raised in cities are more prone to

mental disorders than those raised in the country-side (Boydell et al. 2003).

According to The Global Economic Burden of Non-communicable Diseases, a report by the World Economic Forum and the Harvard School of Public Health in September 2011, "Mental illness and cardiovascular diseases are the largest problems. By disease, mental illness will account for the largest share of the economic burden in both 2010 and 2030, just slightly greater than cardiovascular diseases (Table 16). They are followed by cancer, chronic respiratory disease and diabetes." (Bloom et al. 2011, 32.)

According to the report 'Burden of Depressive Disorders by Country, Sex, Age and Year: Findings from the Global Burden of Disease Study 2010', depressive disorders were identified as a leading cause of burden, the second-largest cause of disability and a major contributor to suicide and ischemic heart disease. (Ferrari et al 2013 in Souter-Brown, 2015, 2.)

The accepted view is that although the city may offer many advantages to people, mental health is negatively affected by life there. Mood and anxiety problems are more prevalent in city dwellers (Peen et al. 2010, in Lederbogen et al. 2011, 498), and the rate of schizophrenia among people born and raised in cities is strongly increased (Krabbendam & van Os, 2005; Mortensen et al. 1999; Pedersen & Mortensen 2001; van Os et al. 2004,, in Lederbogen et al. 2011, 498). According to prof. Meyer-Lindenberg schizophrenia is twice as common in city-born and raised people as in those from the countryside, and the bigger the city, the higher the risk (Abbot, 2011, 429). Specialists have mostly attributed these problems to the effect of the social environment, but three recent independent experiments using MRI (magnetic resonance imaging) by the research group of prof. Andreas Meyer-Lindenberg (Heidelberg's Central Institute of Mental Health in Mannheim, Germany) looking for possible differences in the brains of city-dwellers as compared to those living in the country, have now identified distinct neural mechanisms which clearly link

the urban environment to social stress processing, providing proof that both urban upbringing and city living, each have measurable, environmentally regional specific, impact on the brain. (Lederbogen et al. 2011, 498.) These studies show that “specific brain structures in people from the city and the countryside respond differently to social stress” (Abbot, 2011, 429) and are first steps towards better understanding how the urban environment affects brain biology in a way that increases the risk for mental illness and psychological disorders. Prof., Meyer-Lindenberg hopes that this type of project could provide scientific data that could help architects plan the city in a healthier way. (Abbot, 2011, 429; Abbott 2012, 162.)

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Today, more than ever, there are social, economic and ecological reasons for people to flock to the city. In general, it is considered that centralisation of population, production and services contributes and is essential to the reduction of carbon footprint. Yet, overcrowded cities are clearly harmful to human sound development and mental and physical health.

Considering the impact of life in the city on these people, the opening statement ‘the majority of the world population is expected to be living in urban areas by 2017’ (GHO data) could be rewritten as ‘by 2017 the majority of the world population will be exposed to increasing stress factors, show increasing symptoms of anxiety and increasing other mental health issues and their brains may possibly undergo structural changes that may make them further vulnerable to mental illnesses and psychological disorders’.

For as long as dense urban living is going to be on the increase, so would it continue to impact on people’s lives, and so will the need to alleviate the impact of the urban environment on people living in the city.

#### 4 HOW THE URBAN PLAN AND CITYSCAPE HAVE GOTTEN TO THEIR CURRENT STATE

We often speak of ‘townscape’ – a view of a town, the landscape or the scene of the urban environment, and its characteristics (Cityscape/Merriam Webster Dictionary). How should a city be viewed? Should it be viewed from a bird’s-eye view, on the planning desk, or an aerial photo, or from afar, as a panoramic picture, or should we get down to the ground level and look at the city through the eyes of the people within. Can a true full picture of the city be achieved unless we combined the many views within and the one above.

For the purpose of this work, I chose to separate the whole into its two major parts, and start with *urban planning, design and landscape architecture*, and only later to bring the *actual structures*, that are placed along these outdoor spaces and form their ‘walls’ into the equation. Yet, none of these elements could in fact be discussed separately without considering the other and to an extent this ‘transition between the parts’ is also found in my discussion. The picture of the built-up environment, which we have learnt to look at on the planning-table, from bird’s-eye-view, should actually be viewed as seen by its users – at eye level, and should include all the elements present – the human and physical; the built-up, grown, living, and the climate.

##### 4.1 Urban Planning and Design

Jan Gehl considers that although there is a noticeable variation of form between cities of different models and historical backgrounds, only two radical points in time, the *Renaissance* and the *Functionalism Movement (Modernism)*, are essential to the development of modern urban planning. According to Gehl, cities that developed until 1500 AD were not planned in the true sense. They developed where there was a need for them, and were shaped by their residents in a process that took many hundreds of years (Gehl 2011, 39-40).

*“The first radical change took place during the Renaissance and has direct relation to the transition from freely evolved to planned cities. A special group of professional planners assumed the work of building cities and developed theories and ideas about how cities ought to be.*

*The city was no longer merely a tool but became to a greater degree a work of art, conceived, perceived, and executed as a whole. No longer were the areas between buildings and the functions to be contained in them the major points of interest, but rather the spatial effects, the buildings, and the artists who had shaped them took precedence.*

*In this period it was primarily the appearance of the city and its buildings – the visual aspects – that were developed and transformed into criteria for good architecture and urban design.” (Gehl 2011, 41.)*

I find that these two points of culmination are located on a continuum and are linked by inter-steps that clearly lead from the point when planning climbed onto the drawing-board, to the point where modernism swept over planning boards to stay. Everything that came after modernism has been busy either in arguing with its ideas or in attempting to correct the obvious problems it has created.

As a matter of fact, medieval towns did not develop without any plan, yet, the notion of town planning was very different from what the term means today. According to Koter and Kulesza, most Polish medieval towns developed where a fortified seat of the local sovereign, craftsmen and a developing market place existed. In most cases, chartered towns (from the 13<sup>th</sup> century on) incorporated in their plans elements of irregular layout of existing settlements. Few towns were founded on previously undeveloped sites (Koter and Kulesza 1999, 63, 65). It is most likely correct to assume the same to apply to all medieval towns.

Norman Pounds differentiates between planned and unplanned medieval towns. The ‘planned town’ followed either the plans of originally Greek and Roman towns, yet distorted them as buildings intruded into the streets, forcing them to form a detour, existing blocks were cleared for market squares, and so forth, or they followed the plans of the king or baron that

founded it. An 'unplanned town' did not develop randomly either, as every town once had a core – a natural feature, such as a river crossing, or a castle, or a church, that defined its purpose. The streets probably followed the paths that lead to the central point and thus radiated from it, or the ways that lead to the surrounding fields. "They built in whatever way suited their needs" (Pounds 2005, 22-23).

#### 4.1.1 The Search for the 'Ideal City'

When investigating the history of urban planning, a red-thread seems to go through the works of the most imminent planners, those who left the prints of their fingers everywhere, and those whose work never materialised – namely, the search for the Ideal City.

"The idea of an ideal town or city, which has been around since ancient times, is based on the idea of fulfilling all the material and aesthetic requirements of a city" (Gympel 2013, p. 63). The notion can be found in works of art, literature, philosophy and architecture. The notion of the '*Ideal City*' has been around well before the Renaissance, although from our point of examination, the Renaissance was indeed a turning point, probably the first in a chain with which we are still dealing today. The notion takes different forms depending on the definition criteria of the term 'ideal'. Whether the 'Ideal City' is ideal for what it symbolizes, for its structure, its cityscape, or functioning, all depends on the point of view taken; and yet, any attempt at planning a city and designing it is in fact always an act that strives to create a place for a community to thrive in.

Indeed, we keep shifting the angle from which the city is viewed; we sometimes look for total solutions, and at others look at particular parts or aspects. The angle we select seems to depend on social thought and values, and is impacted by the economic situation. Yet, in the end, as a whole or in parts, we are looking for an 'ideal city'. The historical trail this search has left behind reveals how its focus shifted with time from the visual to the idealist, to the social, and to the functional, while leaving out



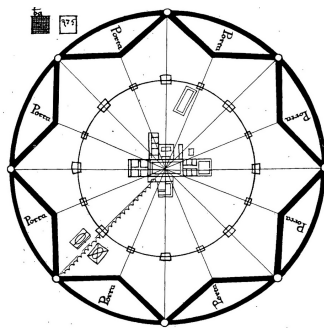
the one that should have been in the heart of the matter, the human aspect.

#### 4.1.1.1 The Renaissance Town-Plan

The Renaissance, it is said, put the town-plan 'onto the planning table'. "Professional planning as it is known today, in which experts design the city on paper and in models, to build and deliver it later complete to the clients, has its historical origins in the Renaissance" (Gehl 2011, 39). Humanism, which emerged at the end of the Gothic period, opened the door to the distinction between faith and knowledge, and encouraged the attempt to discover the beauty and harmony of the world and "to understand the laws of nature as a way of understanding the harmony behind it" (Gympel, 2013, p 42). Harmony and beauty in art were considered to result from the application of specific rules. The ancient Greek and Roman cultures were rediscovered and studied. The writings of the Roman 'multi-talent' Vitruvius (the only literary source on architecture of his time) are said to have laid down the basis for landscape architecture – and one cannot help but be reminded of Leonardo da Vinci's Vitruvian man's 'ideal proportions' as well as the much later modern application, Modulor, by Le Corbusier. Town planning was among his many subjects of interest and chapters 4–7 of his first (out 10) books deal with the selection of the proper site for a fortified city, the city walls, the direction of the streets in relation to the climate, and the sites for public buildings. (Vitruvius 1;4 in *The Garden Landscape Guide*; Gympel, 2013, p42-43.) How different would the modern world have looked if the great library at Alexandria had not burnt?

Renaissance architecture started in Florence following the breakthrough of the construction of the Florence cathedral dome, by Filippo Brunelleschi. He is said to be the one that created the precedence of freedom for artistic self-expression by the architect. The circle was considered a symbol of perfect harmony and balance, and the expression of the essence of God and his creation. Renaissance artists attempted to link religious,

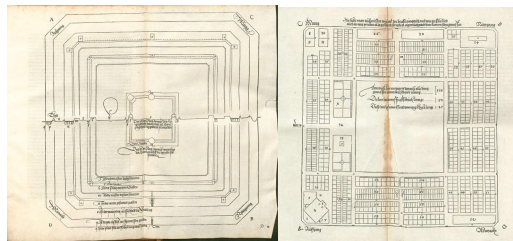
philosophical and aesthetics ideas and many showed interest in town planning. (Gympel 2013, 43.)



**IMAGE 1**  
Filarete's ground plan for the city of Sforzinda  
(M. Kuilman, 2011, 786)

Several names should be mentioned in connection with the idea of the 'Ideal City': Leon Batista Alberti, who was the most important Early Renaissance architect after Brunelleschi, and whose book, 'De re aedificatoria' (On the Art of Building) is said to be the 'founding statement' of the 'Ideal City' idea. Other important names in this context are the Italian artist and architect Antonio di

Pietro Averlino (Filarete) (c. 1400 – c. 1469) whose ground plan for the visionary ideal city Sforzinda was inspired by the octagon with eight towers



**IMAGE 2** **IMAGE 3**  
'Instruction on the Fortification of Cities, Castles, and Towns' Albrecht Dürer

and eight gates at the end of a radiating street pattern of sixteen streets. Several artists tried to produce ground plans and even perspective drawings of the 'Ideal City' that thereafter found its way e.g. to the English Sir (saint)

Thomas More's book 'Utopia', in which the 'island city' had a grid of 54 cities of identical outlay with the quadratic model city of Amaurotum right in the middle. (Kuilman 2011, 4-1-4-1.) Which brings to mind the structure of Howard's model of the Garden City.

The Nuremberg polymath artist and architect Albrecht Dürer produced several versions of the City in different forms in his book Etliche Unterricht, zur Befestigung der Städte, Schlösser und Flecken (Instruction on the Fortification of Cities, Castles, and Towns) published in 1527 (Kuilman 2011, 4-1-4-1).

Some built Renaissance cities retained their original layout, fortifications and many of their original buildings and features in full or to a great extent,



**IMAGE 4**  
Zamosc  
(Grzegorz Pastuszek  
Photography)

for example Zamosc (1579) in south-eastern Poland, founded by Chancellor Jan Zamoysky and planned by Bernardo Morando of Padua (Old City of Zamosc, UNESCO).

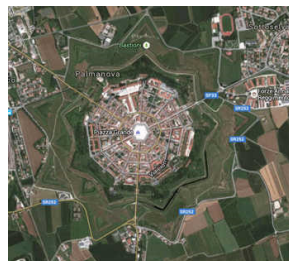
Zhovkva in western  
Ukraine, founded in 1594



**IMAGE 5**  
Zhovkva in the late 17<sup>th</sup> century  
(zhovkva-tour.info)

by the Polish commander Zolkiewski as one of the fortified towns to protect the Polish-Lithuanian

Commonwealth (Kuilman 2011, 4-1-4-1). Carefully reviewing maps of major European cities, one can often notice traces of their old Renaissance fortifications, if these were not demolished in the modern era.



**IMAGE 6**  
Palmanova  
(Google Earth)



**IMAGE 7**  
Palmanova, Engraving, ca 1598,  
in Braun & Hogenberg's  
'Civitates Orbis Terrarum'.  
(Wikimedia Commons)

Early planners of the period, were mostly interested in the geometric form of the town, but because priority had to be given to their defence, towns had to be fortified.

Plans of 'ideal cities' in books by Pietro Cataneo present fortified towns with no special preference to geometric form. The design of the garrison city of Palmanova (1593) in Italy by Scamozzi is considered iconic (Kuilman 2011, 4-1-4-1).

The idea of the perfect form, the circle, or other forms that can be further developed into it, which was the basis for the star formed layout, grew further into the star-shaped fort with bastions that was well suitable to the level of military technology of the time, namely artillery. The star shape of the fort was the answer to the shift from arrow shooting to the use of cannons, which badly damaged the medieval circular fortification walls. The star fortress had many triangular bastions that eliminated possible

blind-spots. The lower slanting walls, which created a lower profile, thus avoiding cannon ball hits were encircled by a moat or ditch to compensate for the loss of elevation and deter climbing over (Star Fort, Wikipedia.org; James McDonald, Castles and Manor Houses).

#### 4.1.1.2 The Impact of Baroque and Rococo on Town Layout

While the development of the Renaissance was influenced by the protestant reformation, the Baroque style (1600-1780) grew gradually (yet directly) from the Renaissance and was clearly influenced by the fierce counter-reformation (anti-Protestant) campaign which the then weakened Catholic Church launched in the mid-1500s (Gympel, 2013, p 52-53).

Baroque architecture set to represent the divine right of religious and secular absolute power using scale and dramatization. The central aim of the style was to confuse, deceive the eye and overpower. Contour lines were blurred and monumental structures were decorated and received pliable swirling forms (Gympel, 2013 p 53). The large variety of architectural possibilities was based on what later, in the early 1900s became known as the 'Gesamtkunstwerk' (a total work of art); "...impressive, overwhelmingly splendid, dynamic, pomp, and above all, absolutely symmetric" (Gympel, 2013 p 54).

The Baroque style consciously blurred the boundaries between architecture, sculpture and painting, and many Baroque artists were both architects and sculptors (Gympel, 2013 p 54). Similar principles applied to both internal walls and facades. With absolutism at its peak, palaces (secular buildings) received similar attention as was paid to churches, to reflect the importance of the absolute monarch. Unlike the Renaissance's 'introverted structure', the Baroque palace integrated the outdoor into the spatial effect (Gympel, 2013 p 56).

Baroque architects, it is said, were the first to approach town planning in practice. Their town layout-plans imitated those of the gardens of the era. They were concerned with making the city, like their buildings, beautiful, impressive and easy to rule, and organised the layout as a network of straight roads that radiated from a circus that contained a significant organisational node, a centre of power, such as a church, a palace, a monument, or a fountain (Collins, Baroque architecture, Urban Planning,



**IMAGE 8**  
Old map of Dresden 1800  
(The Hebrew University of Jerusalem and the Jewish National and University Library)



**IMAGE 9**  
Dresden  
(Google Earth)

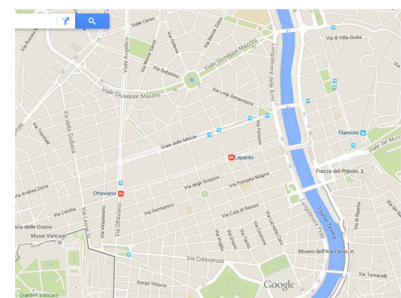
Encyclopedia of art history).  
Dresden's Baroque quarter (upper part) and the Altstadt (Old Town) below. Many buildings suffered heavily and were destroyed by the bombardments of the Allied Forces during World War II,

which left a large part of it, especially the centre, in ruin. Large restoration and restoration work carried

out after the war.

The plan of Dresden and organisation of the 'Baroque city' around interconnected central power nodes reflects "the preoccupations of the Baroque era with the expression of power, order and legitimacy through urban planning and architectural form" (Harrington, 2005, 1).

More than any other place, the renovation of Rome was meant to promote and give a badly needed boost to the Church's image. Several popes were involved in the process which gave Rome straight radial streets that, like rays, connected central points, marked by symbols of glory and power. Thanks



**IMAGE 10**  
Rome, (Google maps)

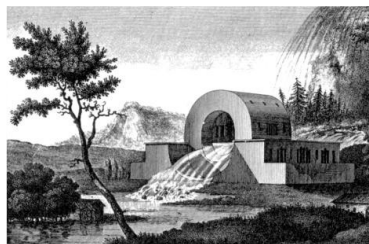
mainly to Pope Sixtus V's grand scheme, Rome finally changed. "In place of the limited, wall girded, star-shaped city. A new development of great importance was heralded during the five years' reign of Sixtus V. It was in

Rome that the lines of the traffic web of a modern city were first formulated...” (Giedion 1967, 75-76).

Rococo was in fact the last phase of the Baroque era. Following the death of Louis XIV in 1715 and the rise of Louis XV, court artists brought about a change in style. Architect Mansart and his assistants took a number of decisive moves from the style of the 1680s and 1690s towards the more intimate and delicate style of interior decoration we know as Rococo (Watkin 2005, 321). The main motifs of the style were seashells, flowers and vines crawling up architectural elements in naturalistic forms (Gympel, 2013, 60). Houses (of royalty and nobility) were now planned more for convenience than for display of power and rank. By the mid-18th century, the French Rococo was replaced by the Louis XVI far leaner and linear style (Gympel, 2013, 61).

#### 4.1.1.3 The Enlightenment and the Neo Classicism Era

The inability of the absolute rulers to solve social problems produced, in the later part of the 18<sup>th</sup> century, a move towards more democratic perceptions. The philosophers of the time (Locke, Rousseau and Montesquieu) discussed the ‘people’s state’ and ‘separation of power’. The belief that human reason would ultimately prevail and bring good had serious consequences such as democratic political views and secularism,



**IMAGE 11**  
The River Inspector's house, Chaux, France, by Ledoux, 1804  
(Wikimedia Commons)

and also affected architecture. (Gympel, 2013, 62-63.) Architecture no longer needed to serve the influence of the Church or the power of the absolute monarch, and became a tool for the modification of the built environment in a manner, based on reason and morality, that would influence the behaviour of people (Gympel, 2013, 63).

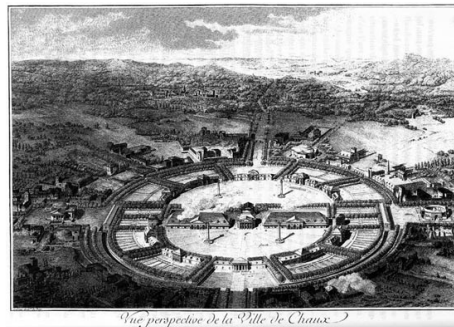




**IMAGE 12**  
Saline Royale, Ledoux, 1806  
Royal Salt Works at Arc-et-Senans  
(Google Earth)

The French, early neo-classical utopian architect and one of the renowned representatives of the Architecture Parlante (which brings to mind later sculptured architecture), Claude-Nicolas Ledoux, known for his unbuilt

design of the *River Inspector's house* (which brings to mind Wright's Fallingwater), produced in 1806 a plan for 'the ideal city of Chaux' and



**IMAGE 13**  
Proposed city at the Royal Salt Works at Arc-et-Senans by Ledoux, 1804.  
(Wikimedia Commons)

accompanying text, which was full of ideas for social reforms. "The idea of the ideal city was continued in the early 20<sup>th</sup> century by Bruno Taut and Le Corbusier" (Gympel, 2013 p 63).

Designing structures that were futuristic and could not necessarily be built in his time made the architecture of Ledoux revolutionary (Gympel, 2013 p 64).

#### 4.1.1.4 Reconstruction and Expansion Projects of Major European Cities in the 17<sup>th</sup> – 19<sup>th</sup> Centuries

There are several examples of cities that, following major destructive events, were rebuilt, renovated and rehabilitated. The solutions in those cases were different. In some cases, the old structure was preserved (the reasons varied between the wish to have a quick rebuilding to difficulties in reaching agreements, power struggles, and inclination of style) while in others a wholesome renewal and 'modernization' took place, mostly as a result of a powerful single decision maker, who wanted to have the city built anew to suit his ideas, ambitions and needs.



**IMAGE 14**  
London, area destroyed by 1666 fire  
(Museum of London)



**IMAGE 15**  
Wren's plan for reconstructing of London  
1666, (The British Library Board)



**IMAGE 16**  
Map of London 1676, by Robert Walton,  
(Museum of London)

As indicated in the maps, the 1666 great fire destroyed some 85% of medieval London (mostly within the walls), one third of the total area of London and made some 65,000 people homeless. Plans of rebuilding in the Baroque style by Christopher Wren, influenced by the style of Paris, and other plans suggested by other architects never materialised, because of the many interests involved and the desire of the City to get back on its feet as soon as possible. Nevertheless, in the actual rebuilding, some streets were widened and/or straightened, traffic bottlenecks eased and one new street, King Street was built through private properties. Yet, no efforts to create a new city, buildings and spaces ever materialised. The swift rebuilding was completed by 1676. Building height was restricted to

four storeys in the main streets and three in ordinary streets and alleys. All buildings had to be built in brick and were safer and lasted longer. Sanitation was improved, but otherwise these were the old medieval and Tudor houses covered by brick, and even the functions of the majority of the building matched their pre-fire one (Schofield, BBC 17.2.2011).

In comparison, after the 1755 Lisbon earthquake, King Joseph saw an opportunity to create new order and reshape the city according to new design standards. The prime-



**IMAGE 17**  
Lisbon before the 1755 earthquake  
Historic Cities Research Project)



**IMAGE 18**  
Lisbon map 1756 by Eugénio dos Santos and Carlos Mardel  
(Wikimedia Commons)



minister, the Marquis of Pombal, selected the concept of dos Santos out of 6 options (all by military engineers). He wanted to create a new city that would reflect new values and a society "...in which the citizen, the merchant and the bureaucrat took precedence over the crown, church and nobility". (Mullin 1992, 1.) The result was a new city with far less royal structures and although not a garrison city, the plan centred on the military (Mullin 1992, 15).

Like any large city of the industrialisation age, 18<sup>th</sup> century Paris experienced a rise in population numbers and density. Inadequate housing capacity led to overcrowding, poor living conditions and sanitation problems. There were various suggested plans to expand and develop squares in the neighbourhoods, build a wide street connecting the Louvre with the city hall, Hotel de Ville, and cutting new streets and wide avenues, but none had materialised, and the medieval heart of Paris, with its narrow and winding streets, remained mostly unchanged. (Haussmann's renovation of Paris, Wikipedia; Kirkman 2007.)



**IMAGE 19**  
Map of Paris 1800, Old Maps of Paris,  
(free of known copyright restrictions)

Napoleon III set about transforming the city into a modern urban centre and appointed Baron Georges-Eugène Haussmann as prefect of the Seine with whom he could collaborate on the project. The brief included



**IMAGE 20**  
New boulevards and streets built by Napoleon III and Haussmann  
during the Second Empire.  
(Dimitri Destugues, 2011)

the creation of new roads, fixing and expanding the sewage system, establishing parks, erecting public monuments and giving the city the look to suit the time. (Kirkman 2007.)

Neither Napoleon III nor Baron Haussmann had any training in the arts, but they had a common clear vision of the modern Paris they wanted to create. In 1853 Haussmann had begun the first phase of the project that included the creation of a west-to-east and north-to-south axes of traffic. Many buildings, medieval and more modern were demolished to make way for the wider streets. This phase also included developing the quarters around l'Opéra, annexing the suburbs and making them administratively parts of the city, and improving the sewage and water-supply systems. It was followed by a second phase that started in 1859 and dealt with the construction of a network of boulevards and the annexation of the suburbs that surrounded the city. The third phase started in 1869, but was never completed due to harsh criticism and political opposition. In 1870 Haussmann was finally forced to resign. (Kirkman 2007.)

Haussmann's plan brought symmetry to Paris and the wide new streets brought a relief in terms of public health and traffic, and allowed for higher buildings, which provided more room for people to live in (Kirkman 2007). Haussmann's new buildings lined his straight boulevards and gave the city a uniform look due to their similar facades (Jordan 2004, 89). Although Haussmann intended to turn the narrow and winding streets of the city into a geometric grid, "Turn off any number of his new streets and you will find old Paris", writes Jordan "the Avenue de l'Opéra or the Boulevard Saint-Germain are good examples" (Jordan 2004, 90). From the current point of view, represented by opinions strongly expressed by Jan Gehl and others, who see the city from a human-social perspective, these narrow streets that survived contribute greatly to the charm and atmosphere of a more human oriented, warm, colourful, vibrant and picturesque city.

The enormous cost of the project was paid in full only in 1929. Jordan also writes that Haussmann's work on Paris was one to last for many centuries. "He fixed the shape, the itineraries, the architecture, and in part the culture of Paris in ways that have shown surprising vitality for more than a century. His successors have added onto his work without obliterating it.

...The Third Republic embraced and continued his work, despite official denials. The most radical proposals for transforming Paris anew, those of Le Corbusier, were in fact *haussmannisme* raised to another level". (Jordan p 88.)

According to Gympel, Haussmann's plans for Paris showed little concern for public health and his main motive for the wide and straight new boulevards of Paris was to give the increasing traffic of the city wider and straighter roads and an appearance suitable for a major capital city. He also indicates (as did Haussmann's critics) that "the idea that the boulevards would make the building of barricades more difficult was also taken into account – a cautionary political measure following the revolution of 1848" (Gympel 2013, 74).

The fall of the walls of the old Gothic city of Barcelona in the 1850s opened the door to its expansion and to the annexation of Gracia and the environs. The plan by the Catalan engineer, Ildefons Cerdà, was selected by order from Madrid (although disliked by the council because it ignored the old centre). The area surrounds the borders of the old city and stretches up to Gracia. Cerdà based his plan on an in-depth socio-statistical study of the conditions in the old city, especially the cramped and unhealthy conditions of workers' housing in El Raval. (Barcelona Field Studies Centre S.L. 2013.)

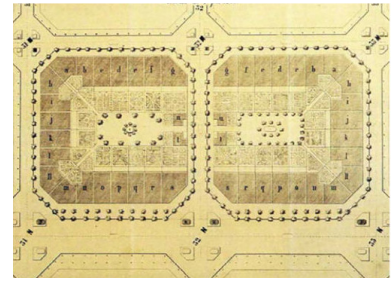


**IMAGE 21**  
Cerdà's original Eixample Master Plan 1859,  
(Wikimedia Commons)

Cerdà, who liked straight lines, was mostly concerned with the well-being of the population, and his intention was to solve social problems through rational housing conditions and services. His plan was based on the 'manzana' - a standardised quadrangle, which was meant to be

built to a limited height, on only two sides, with a shady square or garden. Houses were to be set in a manner that would guarantee maximum sun-

light and ventilation to all apartments. Each district of 20 blocks was to contain locally all community shops and services. Streets were 20 metres wide, Gan Via was 50 metres and Passeig de Gracia was to be 60 metres wide. Each corner of the blocks was to be truncated at 45 degrees to allow the turning radius of the steam tram. (Barcelona Field Studies Centre S.L. 2013.)



**IMAGE 22**

Three-sided manzanas with central public green space, as originally planned by Cerdà (Wikimedia Commons)

Cerdà's plan was revolutionary for his time because it included considerations for traffic and other infrastructural elements, such as gas supply lines, capacity rain sewers and effective waste disposal lines. Larger institutions such as hospitals, cemeteries, parks, plazas and



**IMAGE 23**

Cerdà's facility location pattern  
Source, Cerdà 1861,  
(Pallares-Barbera, Badia, Duch, 2011, 130)

industrial buildings were placed in even distances within each zone, to ensure access by the Eixample inhabitants. (Doerr 2014.) Cerdà's plan was motivated by the desire to create a modern, futuristic city, and an attempt at changing people's behaviour by modifying public space. He based the plan on a theory concerned with how people should live and a model of ideal urban planning, which he related to data on the conditions and needs of the population. Cerdà had an ideal city in mind, and as a result, part of his ideas were utopian and the elements too revolutionary to be implemented. (Pallares-Barbera, Badia, Duch, 2011, 133.)

The plan failed in many respects. The area did not develop as Cerda planned, as “what began as a utopian master-plan, championing publicly accessible green space, has today become an enclosed and privatized neighbourhood specifically



**IMAGE 24**  
L' Eixample from the air,  
(Google Earth)

lacking this publicly accessible green space” (Doerr 2014). One reason for this failure was that blocks were overbuilt and enclosed as private developers, who actually built the Eixample, ignored Cerdà’s restrictions, and thus very few of the inner gardens survived to this day. Many of the spaces in the North-Eastern side of the area, with its relatively affluent buildings, were turned into office and business spaces. The area layout is also blamed for being monotonous and lacking squares and gardens, and crossing the wide roads is made difficult by the busy and fast traffic. (Barcelona Field Studies Centre S.L. 2013.)

Recently the city, in cooperation with various public and business organisations, started an attempt to reinstate some of Cerdà’s ideas and green the courtyards of some of the blocks with an emphasis on the needs of the users, the elderly and children. The ultimate goal of which is to create one patio-garden for every nine blocks (ca 11% of the altogether 900 blocks). Unfortunately, these enclosed, private courtyard patio gardens contribute very little to the in public space. (Barcelona Field Studies Centre S.L. 2013; Doerr 2014.)

#### 4.1.1.5 Garden Cities

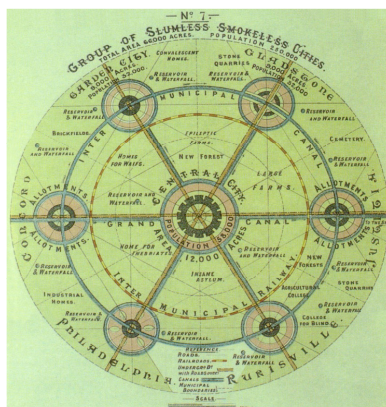
Existing towns and cities in the latter part of the 1800s and the early 1900s could no longer house and contain the rapidly growing population. As a result, and following social transformations, towns had to expand. It was believed that the new technology and industrial progress could support the development of wholesome housing alternatives, and help relieving



human misery. The fast development of railroad, and in the USA especially that of the automobile, influenced the expansion of the city and contributed to the development of rolling suburbs. (Barlow Rogers, 2001, p 402-403.)

Visionary reformers developed their ideas of optimal environments with the intention to correct social inequalities. The urban planners of the early 20<sup>th</sup> century took first steps towards zoning, moving residence and industrial areas into the newly accessible countryside. They can be roughly bundled into the 'modernists: Otto Wagner, Tony Garnier, and Le Corbusier, who were eager to transform the existing city and make it into a functional machine, and the 'urban theoreticians': Ebenezer Howard and his disciples, Unwin and Parker, and Camillo Sitte, who embraced new technology and industrialism, but tried to retain preindustrial architectural elements and spatial configurations. (Barlow Rogers, 2001, p 403.)

Howard, an English reformer and the father of the Garden City Movement, was preceded by British industrialist humanists, who opposed centralized planning and wished to improve the living conditions of their factory workers. Several of them built model communities and housed their workers in garden cottages, set in tree-lined streets and pedestrian paths. The town offered sports fields, community buildings, spacious greenery, curving streets, parks and schools, separated from the industrial districts. (Barlow Rogers, 2001, p 404.)

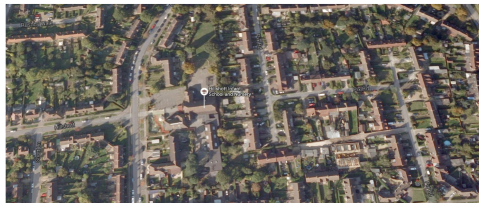


**IMAGE 25**  
*Garden Cities of To-morrow*, E. Howard, 1902  
 (Wikimedia Commons)

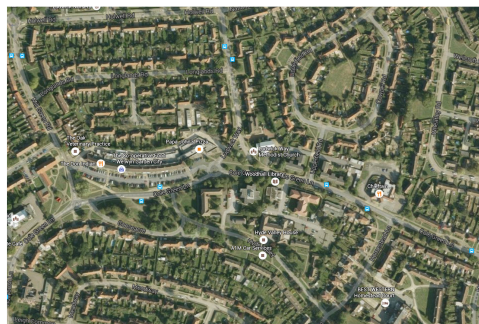
Ebenezer Howard published his book 'To-morrow a peaceful path to real reform' in 1898 and its better known second edition 'Garden cities of to-morrow' in 1902 in which he advocated a balance between the attracting elements of life in the town and in the country and how a balance combination of both would produce a more favourable solution and improve well-being. He detailed

his idea of the city and its manner of functioning, and presented his solution for the growth and expansion, so that a city, in which the population would reach 32,000 inhabitants, would expand by establishing another city some little distance away. According to Howard the network of garden cities (autonomous urban population centres, unlike suburbs, which are often confused with them) surrounded by green belts of rural space, set around a larger central city, would be linked by rail and road, and thanks to their location, form and mode of function will provide the advantages of both city and countryside. (Howard 1902, 20-27; 124-129.) Howard, a highly influential social thinker, “went to great pains to prove

that within the current capitalist system, both social benefit and sound economic return could be gained through community ownership of land” (Barlow Rogers, 2001, 405).



**IMAGE 26, 27**  
Letchford Garden City,  
(Google Earth and Google Street View)



**IMAGE 28, 29**  
Welwyn Garden City,  
(Google Earth and Google Street View)

In 1899 Howard founded the Garden City Association (still in existence), which fostered the building of Letchworth (1903) and Welwyn Garden City (1919). Letchworth was actually planned and adapted to the site by Howard’s devoted followers, Sir Barry Parker and Sir Raymond Unwin. In 1907 Unwin designed Hampstead Garden Suburb in London. Borrowing from local German and English traditions, he employed irregular and non-uniform street alignments and an Arts and Crafts architectural building-style to create a picturesque environment for the working and middle class small home leaseholder. Hampstead Garden Suburb is an

example for the British preference for living in low houses within the metropolitan area, unlike the high-rise apartment blocks typical of the continent. Unlike its original purpose, later on its attractiveness brought in the better-to-do instead of the working class. (Barlow Rogers, 2001, 405-406.)

Some impact of the ideas of Antonio di Pietro Averlino and especially those of Sir Thomas More on the form of Howard's Garden City model can be noticed.

The Garden City movement has proven successful and its principles



**IMAGE 30**  
Hellerau Garden City (Dresden, Germany)  
(Wikimedia Commons)

influenced a large number of developments in various locations around the Globe. In the conclusions, Linda Hall refers to these principles as “a social mission both to enable their clients to lead a more fulfilling form of life, and hereby to improve society itself”. (Hall 2013.) An impressive example is Hellerau Garden City, currently a suburb of Dresden,

Germany. It was founded in 1910 by Carl Schmidt (who also founded the *Dresden Workshops for Arts and Crafts, 1898*) with the financial support of the politician Friedrich Naumann. It is said that this settlement combined older German traditions and modern German reform initiatives. (German Historical Institute.)

The idea of the garden city was influential in Britain after the 2WW, after the New Town Act brought about the development of many new communities based on Howard's egalitarian idea. The list of projects influenced by this idea is long and includes many towns and neighbourhoods in the USA, Canada, Peru, Brazil, Argentina, Australia, South Africa, Italy, former Czechoslovakia, and others, and greatly influenced the design of colonial and post-colonial capitals during the early part of the 20<sup>th</sup> century, e.g., New Delhi (India), Canberra (Australia), and



Quezon City (Philippines). It is said that it even influenced Patrick Geddes' plan of Tel-Aviv in the 1920. (Waterford 2015, 82.)

Judging by photos alone, it is easy to confuse the Garden City with the Garden suburb, so prevalent around our large cities and even the centres of small country towns, but in fact, the two are very different.

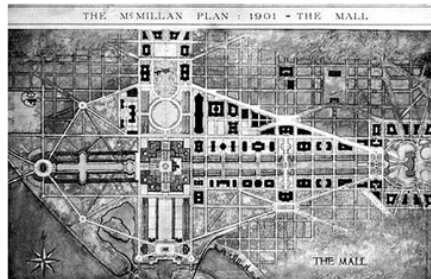
Garden cities should to be distinguished from garden suburbs,—that emerged in the late 18<sup>th</sup> century thanks to the newly available transportation—because unlike garden cities, which were and are still meant to produce relatively economically independent cities with short commute times and the preservation of the country side, garden suburbs, as Waterford points out (Waterford 2015, 84) do just the opposite. They are part of the city, built at its outskirts, depend on the city for work, goods and services and on transportation availability to commute to get to them. He also quotes Lewis Mumford (a disciple of Howard) who wrote that “the Garden City, as Howard defined it, is not a suburb but the antithesis of a suburb: not a rural retreat, but a more integrated foundation for an effective urban life”. (Mumford, introductory article; Howard 1965, 35.)

Garden suburbs, became prevalent in the United States. Waterford differentiates between the “garden village” and the “garden enclave” types – of which the “enclave” is strictly residential, and emphasizes natural and private space. Garden suburbs were not only opposite to Howard's idea, but were considered an obstacle to the development of a Garden City. Howard's intention was in fact to stop urban sprawl by means of the Garden City model. (Waterford 2015, 84.)

The Town and Country Planning Association, TCPA, founded in Britain 1899 to promote the idea of the Garden City is very much active these days and is the oldest charity concerned with planning, housing and the environment. (The Town and Country Planning Association, UK.)

#### 4.1.1.6 City Beautiful

Various factors, defence and safety, functionality, public health, well-being, and others drive architects and city planners and guide their solutions and



**IMAGE 31**  
The McMillan Plan (Daniel Burnham's 1901 plan for Washington, D.C.).  
(National Capital Planning Commission)

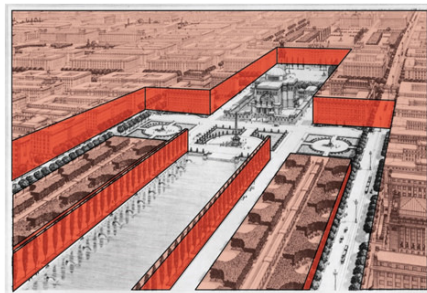
projects. The 'City Beautiful' notion is said to have developed on the grounds of social strife and potential unrest in the American cities of the late 19<sup>th</sup> and early 20<sup>th</sup> century. Led by middle and higher class thinkers, it dealt with the beautification of major urban centres, especially of national importance, through the reconstruction and further

development of centrally based monumental projects, such as that carried out in Washington D.C. The idea that a dignified looking centre would do good to the suffering poor (which were left to live in the urban centres by the middle and higher class people, that moved to the suburbs), had little to do with giving their life in the tenements the morality and civility they were presumed missing—even if that was one of the major reasons given to these projects—which, as expected, may have done a good deal to national pride and self-image, giving them a visual reinforcement through monumental grandeur, but very little, if any, to the urban poor. (Rose, 1996, 1-3.) The phenomenon was repeated in its own manner by Nazi Germany and The USSR and its satellites that favoured monumental buildings and borrowed historical aesthetics to boost the power of their leaders. It is not foreign nowadays either, especially in rising nations and cities that spend large sums on building grand and monumental public building and ensuring the attractive appearance of central public locations, to boost national pride and claim modernisation, while just some blocks away the less favoured population live in poverty in derelict neighbourhoods, lacking basic social services and amenities.

#### 4.1.1.7 Camillo Sitte's and Otto Wagner's Ideas on Urban Planning

Camillo Sitte and Otto Wagner were two contemporary Austrian architects and town planners, who worked during the end of 19<sup>th</sup> and early 20<sup>th</sup> century. Their approach to the modernisation process, which Vienna of the time underwent, and town planning and design in general, were rather different. When considered from the perspective of time and historical development, it seems that they were wrongly judged.

Architect John Dutton (2012) considers that Wagner's work should be considered within the context of the replacement of the walls of the old city of Vienna with the Ringstrasse, i.e., in the context of modernisation. Instead of making the old city an integral part of the modern surroundings, the road created a permanent barrier that separated the historical centre from the rest of the city, being a prime example to Wagner's idea that the modern city had to be efficient and accommodate fast movement. (Dutton 2012.)



**IMAGE 32**  
Wagner's proposal for the twenty-second district of Vienna, Otto Wagner 1911, (J. Dutton 2012)

According to Dutton's analysis, Wagner's buildings and plans indicate that his monumental buildings, which were inserted into the urban fabric, paid homage to the streets, and that this monumentality was intended for the street itself. He calls Wagner "an incredibly adept sculptor of urban blocks" (Dutton,

2012) and considers that the urban blocks in Wagner's Großstadt model submitted to the competition for the general regulation of Vienna (1911) were units of aggregation, and that the open space between them (that of the street or of blocks removed) was "...geometrically subservient to the infinite expansion of the urban module". (Dutton, 2012.)



building or location of any historical importance and cleared them out before the new and modern aligned replacements which it created, (3) keeps insisting on strongly diverting from old-time, well-tested urban design models, those that were used to create the harmonious locations Sitte selected to study. Without getting into the discussion of what are the particular design elements that create “a harmonious” environment, I find the essence of his thought then most valid also today, in the idea that an urban environment that produces a harmonious sensation in people is a desired environment, and interpret this harmony as the same one created through interaction with nature and art, and through the creation of a sense of self-identity and belonging, what in other chapters of this paper was defined as ‘well-being’.

In the same introductory text to his book, Sitte also refers to the social function of public squares connected with public buildings, and draw attention to the change. Where in earlier days “public squares, or plazas, were (then) of prime necessity, for they were theatres for the principal scenes of public life, which *today* take place in enclosed halls...and how many other scenes of public life have totally disappeared?” (Sitte 1889 in LeGates and Stout, 2000, 468). And he continues several pages later “during the Middle-Ages and Renaissance public squares were often used for practical purposes, and that they formed an entirety with the buildings which enclosed them. Today they serve at best as places for stationing vehicles, and they have no relation to the buildings which dominate them.” (Sitte 1889 in LeGates and Stout, 2000, 473.). These words were first published more than a hundred years ago, and yet I can read in them the words of Martha Schwartz on her idea of the soft systems of sustainability, one of the central elements of which are the social and cultural operations of people and community. (Schwartz, in Waugh, 2011, 278-279.) The link between social interaction, culture, identity and well-being, and the urban space is extensively discussed in several chapters of this work. As to the political and economic systems being significant players in sustainability in the urban domain, one need to look no further than to the on-going argument on the future of the Alexanderplatz in Berlin. Jacobson

discusses the 1992 competition for the planning anew of Alexanderplatz right after the Wall was demolished and Berlin was reunited. Two plans with a distinctively different approaches caused a stir. One emphasised the human dimension of the Square and meant to create an active and lively public space, and the other was geared to the desires of investors, and included the building of 13 towers. The discussion which engulfed Germany, reflected the re-joining process the two 'Germanies', and the rising tension between a global and a local perception. The towers plan by Hans Kollhof won. The public criticism forced the decision makers to half the number of towers to six, but as a matter of fact, none has been built to date, 20 years after the competition. (Jaconson, Xnet, 2016).

Sitte's attempt to explore the qualities of old cities, which he felt were lost in the transformation of Vienna to a modern city (of the late 19<sup>th</sup> century), was often wrongly interpreted as a critical attack on the modern city planning of his time as such. In his review of Camillo Sitte's book 'City Planning According to Artistic Principles' (published first in 1889), Thomas Sydney (2012) writes that this was in fact "an attempt to define a unity between modern and artistic methods though the creation of a suitable public space" (Sydney 2012). In their editorial introduction, LeGates and Stout write that Sitte mourned the loss of the oddly shaped squares and narrow streets that had evolved over time, structures built to human scale and public spaces adorned with 'municipal art', like those of classical Greece and Rome, the Middle Ages and the Renaissance. (LeGates and Stout 2016, 554.)

Sitte set about to study the built environment of central European cities (of

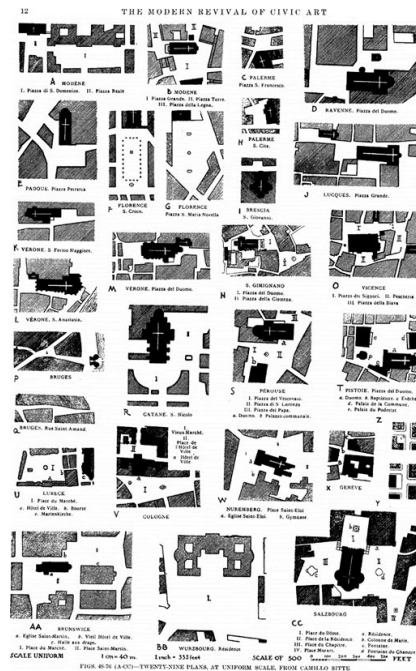


IMAGE 34

Studies of Medieval Plazas, by C. Sitte 1889, (Hegemann and Peets, 1922, 12)

his time). He wanted to explore the special qualities of those cities and to figure how they could be used in town planning and architecture of his time. To study these squares and plazas he used physical observation, and outlined cathedrals and public buildings and the location of monuments. "He thought about scale, building materials, views and elevations, the integration of ornamental features with functional buildings". (LeGates and Stout, 2016, 554.)

According to Thomas Sydney, Sitte's book is mainly concerned with the *increasingly*

*technical way* cities of his time were being designed "at the expense of traditional artistic methods" (Sydney 2012). Sitte, it is said, accepted the fact that modern city planning required modern techniques (especially such issues as the need for improved hygiene and motorised traffic), but was concerned that the impressive modern buildings of his time were built without attention and resources invested in their surroundings (Sydney 2012); and Dutton (2012) writes that "Sitte advocated for an informal, picturesque composition, as well as an approach that was 'artfully' choreographed" (Dutton 2012).

Unlike in Vienna, Sitte's work gained popularity and followers in Europe and the USA, and his book was published in various languages. In the interwar years, Sitte's approach of organic growth of the city fell victim to the enthusiasm of Le Corbusier and other young architects of the Congrès International d'Architecture Moderne that had strongly advocated the plans to raze and rebuild, what they considered obsolete and redundantly decorated cities. They called for the use of modern materials, building in monumental scale, and cubist designs cleaned of any decoration, which

were inspired by the industrial age. Le Corbusier dismissively named Sitte's idea of allowing cities to grow organically 'the pack-donkey's way', and Modernist design 'the man's way' of designing cities. (LeGates and Stout, 2016, 554.)

Thomas Sydney's review of Sitte's book lists plazas and squares as the key-elements of successful city planning. Public spaces are viewed as essential and providing both context and historical sense. Sitte indicated that such public places needed to be created correctly – enclosed, so that they would restrict the views out of the space and limit 'endless perspectives'. Sitte considered that buildings should be built 'into the walls' of the plaza and not in its centre, and that streets should follow the same principles of defining 'suitable space' and reduce 'endless perspective'. (Sydney 2012.)

There is no doubt that at his time, Sitte, facing forces of such magnitude as the monumental efficiency of Otto Wagner, and the zeal of Adolf Loos and Le Corbusier, had to deeply believe in the essential value of his ideas. Unlike many of his time, that seemingly followed the spirit of the era, Sitte dared to follow his intuition and avoided fashionable modernist utopism.

It is also obvious that Sitte's ideas influenced the approach adopted and ideas developed by Jan Gehl, and applied to issues of urban planning in his own studies, and the manner of his investigation of the space between buildings and the city on a human scale. Following the popularity and influence gained by Gehl's ideas on current trends in urban planning and rehabilitation, one may safely say that some of Sitte's ideas are seeing a partial revival by proxy.

#### 4.1.1.8 Sitte's impact on Finnish Town Architecture

Camillo Sitte's ideas influenced also town planning in Finland in the early years of the 1900s. Although in the end, the 'old-school' curtailed these with a heavy 'engineering hand', some of the ideas, which were eagerly adopted by younger Finnish architects, managed to get through and were



implemented in the planning of Töölö and Eira, in Helsinki. Riitta Nikula, whose doctoral dissertation focused on Sitte and the development of the Töölö section in Helsinki, tells about the introduction of Sitte's ideas to Finland via Sweden, through the lectures of Per Olof Hallman (who was a Sitte enthusiast and the leading authority in town planning in Sweden, at the time). Bertel Jung (who in 1908 became Helsinki's first town planning architect) was influenced by Fredrik Sundbärg's enthusiastic article on Sitte's book (1897), in which Sundbärg praised the architectural style of the previous periods while harshly criticising that of the 'modern, engineering era', which he said had "lost all arts, poetry, fantasy and nature". According to Sundbärg Sitte found a way to a better future in town planning. (Nikula 2006, 70.)

The story of the struggle between the opposing forces in architecture and town planning make especially interesting reading. In 1898 the young architect Lars Sonck published an article titled 'Modern Vandalism: The Helsinki Town Plan', in which he targeted the engineer-dominated town planning in Helsinki. (Nikula 2006, 70.) Sonck focused attention on Töölö and Eira – at the time rocky unbuilt areas near the historical centre of Helsinki. Sonck was hoping to have Sitte's ideas implemented and did his best to influence the decision makers to arrange a competition for the planning of Töölö (Nikula 2006, 71). The competition brief and the selecting committee were structured to prevent the success of excessively "romantic" entries. On one side were the older generation, Nyström and Norrmén (the former town engineer), and on the other the younger generation, Sonck, Jung and Thomé. The results were contested and the plan had to be revised several times. In the end, the result was a forced cooperation between the two parties - Nyström and Sonck, which produced a combination of Nyström's spacious streets filled here and there with Sonck's 'Sittesque' details. (Nikula 2006, 72-73.) Delayed by WWI and later modified still, the plan further diminished the Sittesque characteristics left, and "finally became the most uniform 1920s red brick dwelling area in Finland with just some corners to remind of Camillo Sitte's ideas which had started the whole process" (Nikula 2006, 77).

In the case of Eira, which was built mainly before WWI, the plan by Sonck, Jung and Lindgren, that combined the ideas of Sitte with the principles of the British garden city, was positively received and formed the basis for the plan prepared by the town engineer (Nikula 2006, 77).

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The desire to create the ideal city – the need to figure a form and arrangement that will create the ultimate place - seems to be the red thread that we find going through human thought. It is clearly linked to other central issues, regarding purpose, order, power, and function, the meaning and essence of things around us. In various periods one can clearly see how the prevailing world-view—the perception of what is around and beyond—religious as well as secular, influences the manner in which we organise our environment.

#### 4.1.2 Functionalism – European modernism

The search for the ideal city only intensified in the 20<sup>th</sup> century. If planning on the drawing board was the first important development in town-planning, the second one took place around 1930 and was named “Functionalism”. This development concerned town planning, building architecture, and was by all means also linked to social issues and major developments in the realm of art. Both architecture and art will receive due attention later on in the next chapter.

According to Jan Gehl, the ‘physical functions’ aspect of cities developed during the 1920s-1930s into a separate planning dimension, independent from aesthetics (Gehl 2011, 43). Medical knowledge, gained during the 19<sup>th</sup> and early 20<sup>th</sup> centuries, emerged in the 1930s to form the basis for a number of criteria for what was regarded as healthy and physiologically suitable architecture—namely, light, air, sun, ventilation, and access to open space. Intending to ensure healthy and equal quality of living, detached buildings were now built oriented towards the sun, not the street,

and commercial and industrial activity were separated from residential ones (Gehl 2011, 43).

The functionalist-modernist school of thought has had a major impact on and seem to have been highly attractive to many. The style is taken for granted by many people, as those born at its early days are in their 80s today. We easily treat design 'schools' of the early 20<sup>th</sup> century as "bygone" or even "antiquated", and yet, almost 100 years later on, the long tentacles of Modernism are still actively affecting our lives, even when its negative impact on planning, design, and above all on our well-being are known and recognised.

*"The functionalist made no mention of the psychological and social aspects of the design of buildings or public spaces. This lack of interest is also evident regarding the public spaces. That building design could influence play activities, contact patterns and meeting possibilities, to name a few examples, was not considered." (Gehl 2011, 45.)*

#### 4.1.2.1 Tony Garnier's Cité industrielle



**IMAGE 35**  
Une Cité Industrielle, Toni Garnier, 1917  
(Architekturmuseum der TU München)

Tony Garnier, the early modernist, takes the discussion back to the visionary plan for the 'Ideal city'. According to Barlow Rogers, Garnier's important contribution was the fact that compared to Wagner he showed "greater sensitivity to the texture of everyday life". (Barlow Rogers,

2001, 406.) Attracted to rising liberal thinking, in 1899 he came up with the master-plan for the 'Cité Industrielle', a modern industrial city based on economic and technical considerations, which he matched to fit the conditions of the area of his native Lyon. Barlow Rogers also indicates that Garnier's plan expressed his conviction that the past was 'morally bankrupt' and that historicising architecture was an affectation, an idea he

shared with other architects that tried to develop new (democratic) forms of buildings, radically different from past ones. (Barlow Rogers, 2001, 406.)

Garnier's future city, meant to serve an economically sound and liveable community, that was to gain its livelihood from industry, and was meant to house some 35,000 inhabitants. The layout was oriented to the topography of the imaginary site. "It was above all a socialist city, without walls or private property, without church or barracks, without police stations or law courts; a city where all the unbuilt surface was public parkland". (Frampton 2011, 102.) His zoning, based on intended land usage (of three tiers: industrial, in the plain beside the river and the railway line, residential and the town centre on a higher plateau, and the hospital still higher above), sanitary and traffic arrangements were innovative in his time. All buildings, relatively low and cube-like, occupying less than half of the site and made of reinforced concrete, were to be built shielded from the wind, and the systems of vehicles and pedestrians were to be separated. Garnier did not suggest to completely wipe out the old, but planned to have it as an open-air museum, together with other cultural sites and services. His planned ideal society in its ideal town was of course secular and pacifist (Barlow Rogers, 2001, 407-408); or as Frampton puts it "the vision of a Mediterranean socialist arcadia" (Frampton 2011, 103).

Garnier's ideas had a clear impact on Charles-Édouard Jeanneret-Gris, better known by his pseudonym Le Corbusier (Frampton 2011, 103). Le Corbusier met Garnier in Lyons in 1907, and according to Frampton, his utopian socialist sympathies certainly dates from this meeting (Frampton 2011, 150).

#### 4.1.2.2 Antonio Sant'Elia and Eugène Hénard

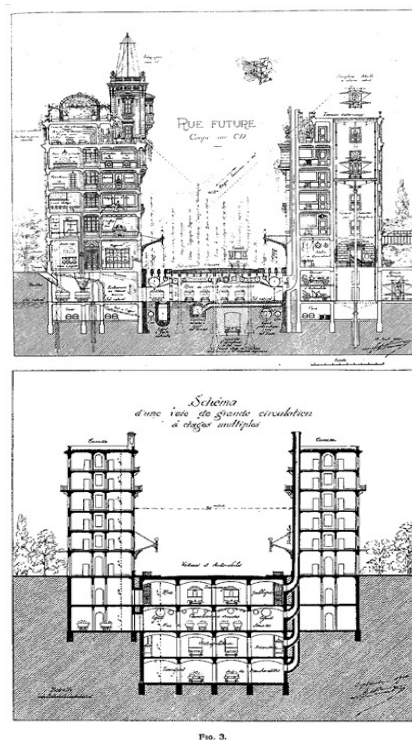
European Modernists, who romanticised the high-speed future enabled by machine, fervently attempted to create new human environments that

would better fit the new, industrial age (Barlow Rogers, 2001, 413). Since the end of the 19<sup>th</sup> century the ideas of ideal cities often presented themselves as proposals for futuristic cities. Antonio Sant'Elia (who died at the age of 28) left behind mostly ideas and sketches, such as those of the proposal he developed for the skyscraper city Città Nuova, in which transportation was separated from pedestrians and placed into multiple-level circulation corridors. To make room for this futuristic solution, all traces of the past were to be removed. The project was characterised by engineering rather than social concern. (Barlow Rogers, 2001, 413.)

In his paper 'The Cities of the Future' drafted for the 1910 London conference on town planning, Eugène Hénard, (who otherwise spent most of his time at the Paris office of Public Works studying traffic problems and

their solutions, including roundabouts and ring-roads), revealed his fascination with technology and futuristic ideas of private use of aircrafts (Hénard 1910, in Reps ed., 2002). Below are two illustrations (Image 36) by Hénard, who presented his idea for turning the street of his time into two levels or 'two streets', as he put it, "one above in the open air, solely intended for the passage of light vehicular and pedestrian traffic, and the other located below, on a level with the ground and underneath the former, which would serve as a conduit for all the pipe systems, the removal of house refuse, and the transport of heavy materials and goods" (Hénard 1910 in Reps, 2002).

The second of the illustrations presents an



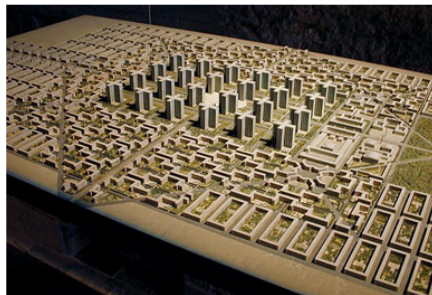
**IMAGE 36**  
Hénard's idea of 'two streets' and his expanded version of the same by Eugène Hénard 1910

expanded version of the idea.

*“The first platform would be for pedestrians and carriages, the second for the tramways, the third for the various mains and pipes required for the removal of refuse, and the fourth for the transport of goods, &c. We should thus have a many-storied street, as we have a many storied house; and the general problem of traffic could be solved, however heavy it might be” (Hénard 1910 in Reps, 2002).*

Hénard also proposed a stepped building arrangement in an angle to the street so as to allow maximum penetration of light (Eugène Hénard, Wikipedia). His vision strongly influenced of course other architects, especially Le Corbusier, who borrowed the concept of the elevated street and used it in his ‘Ville Pilotis’, the town built on piles, a theme he repeatedly used in his projects of buildings and town planning alike (Frampton 2011, 151, 152).

#### 4.1.2.3 ‘Le Corbusier’ (Charles-Édouard Jeanneret-Gris)

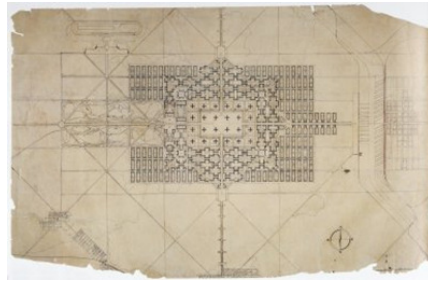


**IMAGE 37**

Ville Contemporaine, model, Le Corbusier  
Archdaily.com

The name that crops up every time Modernism and International School in architecture and town planning is mentioned, is ‘Le Corbusier’ (Charles-Édouard Jeanneret-Gris). He is best known for his architecture and utopian futuristic city designs and writings, and less for his art (which hints at his design

ideas). Although most of his utopistic grand urban plans never materialised, he left us with many of his ideas, which materialised by proxy through the work of many young architects, who got fascinated by the futuristic (almost anarchist) approach, calling for the replacement of existing architecture and society by visions that would fit science fiction better than everyday reality.



**IMAGE 38**  
 Ville Contemporaine  
 "The City of Tomorrow and Its Planning", Le  
 Corbusier, 1922, (FLC/ADAGP)

There are several projects of 'ideal, futuristic cities' by Le Corbusier, in which we find his basic elements being repeatedly rearranged and developed. Many get rather confused by them, as the layouts often resemble each other to a high degree.

In 1922 Le Corbusier presented a plan for a Contemporary City for three million people. The plan consisted of well-spaced rows of identical, geometrical skyscrapers laid out in a rigid grid pattern on a flat plane. It was intended for the Right Bank in Paris, which would have had its existing buildings raised to the ground. Le Corbusier called the plan the 'Contemporary City', because he considered that irrespective of its



**IMAGE 39**  
 Ville Contemporaine, the Contemporary City  
 for 3 million people, Le Corbusier  
 (FLC/ADAGP)

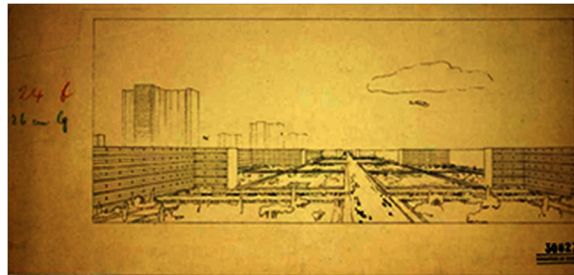
'futuristic' look, it was the 'City of Today' (LeGates and Stout in LeGates & Stout, eds. 2016, 379). In his collection of essays, published in 1923 *Vers une Architecture* (Towards a New Architecture) Le Corbusier discussed the idea of a new industrial and functionalist

architecture - Ville Contemporaine, the Contemporary City. Explaining his idea, Le Corbusier wrote, "My object was not to overcome the existing state of things, but by *constructing a theoretically water-tight formula, to arrive at the fundamental principles of modern town planning*. Such fundamental principles, if they are genuine, can serve as the skeleton of any system of modern town planning; being as it were the rules according to which development will take place" (Le Corbusier 1929 (2013), 164). His idea, as he explained it, was that his model could be applied to any place of any size. Le Corbusier went on to describe the existing planning and development work of any existing town of his time as a battle waged without awareness or a plan of action. His solution for 'taming the beast', (which he considered the great city to be), was to demolish the old and wipe it out before introducing his one-for-all ideal solution of what reminds



a modern viewer (from a bird's-eye-view) of electronic boards covered with components or familiar scenes of visionary science fiction movies (Le Corbusier 1929 (2013), 165).

Le Corbusier favoured total solutions, which of course, once the old was to be wiped and cleared out and the slate flattened, would be only easy to



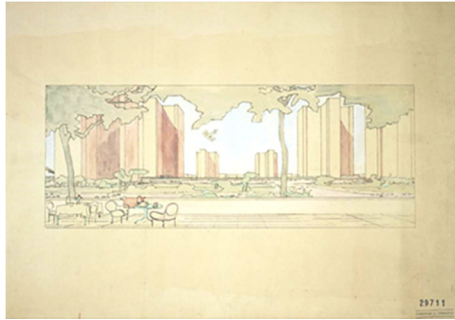
**IMAGE 40**  
Ville Contemporaine, the Contemporary City for 3 million people, by Le Corbusier (FLC/ADAGP)

arrange according to his Model of Strict Geometrical Repetitions – anywhere in the world. “The city of to-day” wrote Le Corbusier “is a dying thing because it is not constructed geometrically. To build on a clear site is to replace the

‘accidental’ layout of the ground, the only one that exists today, by the formal layout. Otherwise nothing can save us.” and he continues, “And the consequence of geometrical plans is Repetition and Mass production.” Finally he zealously concludes “And as a consequence of repetition, the *standard* is created, and so perfection (the creation of types).” (Le Corbusier 1929 (2013), 220.)

Frampton (2011) enlightens us further on what influenced Le Corbusier’s ideas commenting that he was equally influenced by the gridded skyscraper cities of the United States, on one hand, and Bruno Taut’s idea of the ‘city crown’ (Die Stadtkrone, 1919), on the other. “Le Corbusier projected the Ville Contemporaine as an élite capitalist city of administration and control, with garden cities for the workers being sited, along with industry, beyond the ‘security zone’ of the green belt encompassing the city”. (Frampton 2011, p 155.)





**IMAGE 41**  
Ville Contemporaine, the Contemporary City for 3 million people, by Le Corbusier (FLC/ADAGP)

According to Le Corbusier (1929), the Contemporary City, any city, of any size, anywhere on the Globe, should have the following characteristics: The site should ideally be level and flat to ease traffic solutions. A river, used as 'a liquid railway', should flow far away from the city. The population structure would be divided according to the sections of the

city; the citizens (those who work and live in the City, the centre), the suburban dwellers (those who work in the outer industrial zone), and those who work in the business zone, but live in the outer zone 'garden cities'.

Population density in city should be high to reduce the distances that need



**IMAGE 42**  
Ville Contemporaine, the Contemporary City for 3 million people, by Le Corbusier (FLC/ADAGP)

to be covered, and the centre would therefore need to be built vertically to ensure sufficient open spaces and fresh air. Streets with buildings built along them form noisy 'corridors', which are deprived of light. For this reason, buildings should be built away from the street, have no internal courtyards, and

windows should look onto large parks. The city should be built on a grid system with streets every ca 366 metres (directly borrowed from the American system). The street would be built in several storeys, to accommodate the supply of utilities (gas, water, electricity) in an accessible manner, and the moving of heavy goods (an idea directly taken from Hénard). Traffic would be directed onto 3 types of roads in superimposed storeys, according to type: heavy goods, lighter goods, fast traffic. Houses should be built on piles. The lower level would form space for traffic, loading and unloading heavy goods and the ground level would accommodate ordinary street traffic. North-South and East-West arterial roads would cross the city and serve one way fast traffic, and would have exits and entries from side roads. The current number of existing streets

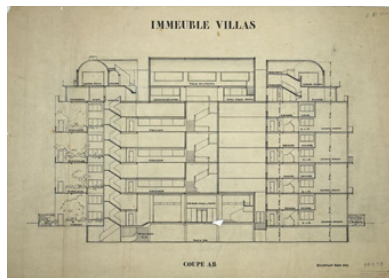
should diminish by two-thirds, and therefore there would also be less crossings and less congestion. The city would have only one subterranean railway-station located at its centre, and the roof of the station would serve as aerodrome for aero-taxi. Tube-lines would link the centre to the suburbs. The skyscrapers of the centre would house both the business



**IMAGE 43**  
Model of Maison Citrohan  
le Corbusier, 1920  
(FLC/ADAGP)

sector and its workers, the 'citizens'. These houses would have great open spaces around them occupied by gardens and parks. The 'citizens' (about 600,000) would dwell in skyscrapers housing some 10,000-50,000 people each. The City (centre) would have around it a protected zone of woods and green fields, which would separate it

from the 'garden cities', where residential blocks would house further half a million, and the cellular 'garden cities' beyond, would house some 2 million industry workers. Some 95% of the ground in the skyscraper area, 85% of the area in the set-back residential blocks, and 48% of the area of the cellular residential blocks will be open. (Le Corbusier 1929 (2013), 165-172.)



**IMAGE 44**  
Immeuble Villas, as part of the plans of  
Ville Contemporaine, le Corbusier  
(FLC/ADAGP)

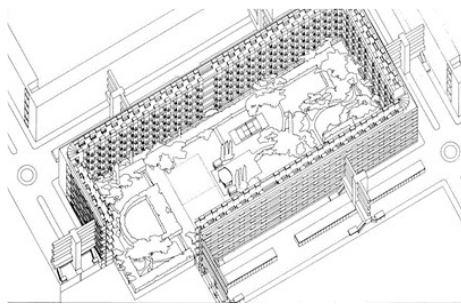
The manner in which Le Corbusier used the term 'City', includes both the Business centre and the city as a whole, and his use of 'Garden City', is similar to the idea of 'garden suburbs', so often confused with the original 'Garden City' coined by Howard.



**IMAGE 45**  
External view of the Immeuble-Villa  
units, le Corbusier  
(FLC/ADAGP)

The Garden Cities of Le Corbusier (and Jeanneret, his often forgotten partner and cousin) referred to the cellular blocks in the model, which consisted of units of the Immeuble-Villa (an adaptation of the Maison Citrohan) stacked-up on six double floors to form a high-rise, high-density living solution. Le Corbusier and Jeanneret gave these units

garden terraces, and on the ground level the units also opened to bounded rectangular green spaces. The courtyards and the peripheral area offered communal and recreation space (Frampton 2011, 154-156.)



**IMAGE 46**  
Cellular block of units in Ville Contemporaine,  
1922 by Le Corbusier and Jeanneret,  
(Frampton 2011, 156)

Ville Contemporaine, which Le Corbusier presented first in the Salon d'Automne in 1922, and later explained in his publication, was his ultimate demonstration of the urbanisation aspect of his work (Frampton 2011, 154). His later suggested the projects Plan Voisin

(1925), and Ville Radieuse (1933-1935), were both further refinements and adaptations of this original idea.

We should be thankful to the decision-makers that did not accept Le Corbusier's plan to demolish the very centre of Paris, parts which are today among the prettiest and architecturally most significant, and have it replaced by his

radical 'Plan Voisin' (1925), a 'mini version' of the Ville Contemporaine,



**IMAGE 47**  
Model of Plan Voisin, (Paris), Le Corbusier  
(FLC/ADAGP)

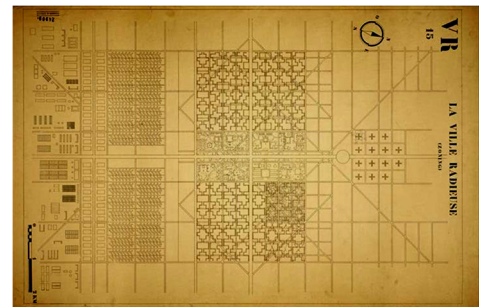
which included 18 cross-shaped office towers set in a grid, surrounded by vast green space, triple tier pedestrian ways and connected by highways and other traffic forms. This was meant to accommodate the world's business elite while the Palais Royal, Place des Vosges (the oldest planned square in Paris), and certain townhouses and churches would be preserved as museum pieces. (Lubin, 2013.)

"Paris of tomorrow could be magnificently equal to the march of events that is day by day bringing us ever nearer to the dawn of a new social contract," wrote Le Corbusier in 1925 (Fondation Le Corbussier, Paln Voisin).

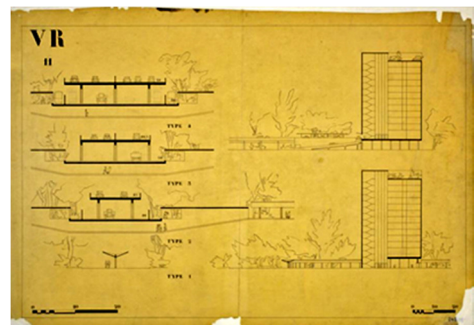
In 1930, Le Corbusier presented his plan for Ville Radieuse (the Radiant City) to the 3<sup>rd</sup> International Congress on Modern Architecture (CIAM) in Brussels, where the theme was "Rational Methods of Site Planning". It was a refinement of an idea conceived in response to Soviet officials that

wanted to reorganise Moscow. The plan is in fact a further refined and elaborated version of the Contemporary City of highly repetitive cellular structures imposed on a geometric grid. (Barlow Rogers 2001, 415.)

Gallagher writes that compared to his previous utopistic cities, the Ville Radieuse (1933-1935) was the more realistic of his projects, because the housing types were considerably cheaper than the Immeuble-villas which filled earlier plans (Gallagher, Open University 2001).



**IMAGE 48**  
Plans of Ville Radieuse, the Radiant City, Le Corbusier 1930  
(FLC/ADAGP)



**IMAGE 49**  
Plans of Ville Radieuse, the Radiant City, Le Corbusier 1930  
(FLC/ADAGP)



**IMAGE 50**  
Model of Ville Radieuse, the Radiant City, Le Corbusier 1930, (FLC/ADAGP)

Throughout the 1920s, 1930s, and 1940s, Le Corbusier kept moving between political extremes, seeking out potential patrons that would allow him to realise his grand urban plans – alas, without much success. These included the industrial capitalists of the Voisin automobile company, the communist rulers of the Soviet Union, the Nazi collaborative Vichy government of occupied France, and Benito

Mussolini (LeGates & Stout in LeGates & Stout eds. 2016, 379). Unless Le Corbusier indeed kept changing his political affiliation and sympathies, and especially in light of his original writings and in-depth study of city plans, one is easily left with the impression that he truly believed in his ‘utopian brain-child’ and was ready to cross many lines, including political ones, to see it realised. It remains unclear what motivated Le Corbusier to desire to make so many cities in the world, large and small, into the copy of the image of ideals. One may be glad that this was not the case, although current trends in urban planning and architecture, that follow both ideas advocated at the time by leading Modernists, do seem to make our cities, almost anywhere, to show-case elements that make them look alike.

In July 2015 the exhibition “Le Corbusier: The Measure of Man” (commemorating the 50th anniversary of his death) opened at the Pompidou Centre, and had on show both works of art and architecture by Le Corbusier. Several articles were published on this occasion which discussed Le Corbusier’s possible affiliation with fascism and sympathy with the Nazi regime. Just before the opening of the exhibition, Henry Samuel wrote in *The Telegraph* “France’s best-known 20th century architect, Le Corbusier, was a ‘militant fascist’ who was far more anti-Semitic and a fan of Hitler than previously thought, two new books reveal” (Samuel, *The Telegraph*, 2015). The exhibition, it was said, completely



failed to mention this controversial fact. Both book authors Xavier de Jarcy ("Le Corbusier, un fascisme français") and François Chaslin ("Un Corbusier") claim that Le Corbusier not only sympathised with fascist ideology, but embraced it full heartedly and collaborated with it, by publishing "Plans" and "Prelude" together with Pierre Winter, the head of France's Revolutionary Fascist Party. (Samuel, the Telegraph, 2015.) Rachel Donadio wrote in The New York Times, "Was the paradigm-changing architect known as Le Corbusier a fascist-leaning ideologue whose plans for garden cities were inspired by totalitarian ideals, or a humanist who wanted to improve people's living conditions — a political naïf who, like many architects, was eager to work with almost any regime that would let him build?" (Donadio, NYT, 2015). His involvement with the far right, his relocation to Vichy, and his connection with Mussolini are all well documented. Both journalist Xavier de Jarcy and architect and critic François Chaslin argue that "Le Corbusier's aesthetics cannot be separated from his politics, which leaned more to the right than the left, despite work he did in Moscow" (Donadio, NYT, 2015). Certainly his city plans, if not the style of his buildings, and especially the uncompromising requirement and desire for total standardisation of everything and anything, while dividing society into the better and the less good, and the demand for uniformity and strict regimentation, tend to support a hypotheses on his political inclinations and possibly personality traits. The design is not so much modernist as it is strict, oppressive, militant, and mechanical to the point of brutal.

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As LeGates and Stout indicate in their editor's introduction to the chapter on 'A Contemporary City',

*"Le Corbusier's impact came not from cities he designed and built himself but from cities that were built by others and from the widespread adoption of certain planning principles that he pioneered. Most notable among those was the notion of 'the skyscraper in the park', an idea that is today ubiquitous. Whether in relatively complete*

*examples like Brasilia (where the city was built from scratch), or in partial examples such as the skyscraper parks and the high-rise housing blocks that have been built in cities worldwide, the Le Corbusier vision has truly transformed the global urban environment” (LeGates & Stout, eds. 2016, 379).*

It is mostly Le Corbusier that we should thank for grand city plans one can see only from a bird’s-eye-view (which may partially explain the currently on-going competition for building the tallest building in the world, and the building of office and residential towers) when flying over and to the abundance of ‘béton brut’, or raw concrete, (decaying in a dirty and ugly, unartistic manner) we so well see all around us.

As central to modern architecture and town planning as Le Corbusier is considered, Le Corbusier left behind mostly buildings, wirings, furniture, works of art and plans. But for some partial and smaller projects, none of his “cities” ever materialised. Nevertheless, Le Corbusier wrote extensively and intensively, and his continuous strive to have his ideas and plans known, and above all, especially to give them an Avant-garde and futuristic aura, helped make them popular. Architects and people, then as today, either love or loath his ideas and works. No matter the position taken, we find that we are still relating to them, if we do not happen to live in or near a building influenced by them in some manner.

Coupled with the actual socio-political background unto which Le Corbusier’s ideas were projected, these radical ideas were easy to adopt, especially by those seeking change – mostly the younger and rising generation. Such ideas often become attractive less for their essence and more for their being different and revolutionary. The actual title ‘Modernism’, makes anything else less modern in the eyes of many.

#### 4.1.2.4 The Alton Estate, Roehampton



**IMAGE 51**  
Screenshot of the Alton Estate, Roehampton, South West London,  
(captured from 'Building Sights' series by the BBC)



**IMAGE 52**  
Screenshot of the Alton Estate, Roehampton, South West London,  
(captured from a film by ParrotChild Production)

The Alton Estate in Roehampton, London is a social housing project that was built in 1958. Its Alton East and Alton West parts are good examples to the debate in the 1950s Britain (and elsewhere) on building style, especially of publicly built residence projects. Both parts were situated in the Richmond Park greenery, but are clearly different in style. While the Alton East buildings were built according to the more 'humanist' lines of Swedish public housing architecture of the time, the buildings of the 'Alton West' part of the Estate are clearly Brutalist in style. The Alton West setting and buildings are said to be a direct

interpretation of Le Corbusier's Ville Radieuse. Both parts consist of a mixed assortment of building types, lower and high-rise blocks, "but unlike Alton East, Alton West attempted to import a version of Le Corbusier's recently completed Unité d'Habitation to Britain". (The Open University, Roehampton, Alton East & West Estates; Alton Estate, Wikipedia.)



#### 4.1.2.5 Chandigarh



**IMAGE 53**  
The Palace of Assembly, Chandigarh,  
India, Le Corbusier  
(Wikimedia Commons)

Ville Radieuse was also the influence for the plan of Chandigarh, the capital of the Punjab State in India. The city was originally laid-out as a picturesque “utopian suburbia” by American planner Albert Mayer, but the planning was handed over in 1949 to Le

Corbusier, in association with Jeanneret, Drew and Fry. They were given free hand to complete and turn the plan of the city, and rationalised it into an orthogonal road network.

(Frampton 2011, 230.) “A city designed for automobiles in a country where



**IMAGE 54**  
Palace of Justice, Chandigarh  
By Le Corbusier  
(Wikimedia Commons)

many as yet, still lack a bicycle” (Frampton 2011, 230). The modification of Mayer’s plan by Le Corbusier shows that his ‘ideal city’ was reduced and limited only to the government centre of the city (Frampton 2011, 183). It is said that he incorporated in his design of the



**IMAGE 55**  
The Secretariat Building, Chandigarh,  
Le Corbusier, (Sparrow Hawk, Slide  
Share)

buildings of the centre elements of local livestock and landscape in an

attempt to represent a free modern Indian identity. The buildings are made of concrete, which aged in an unattractive way, and are set at such distances that walking from the Secretariat to the High court takes some 20 minutes, which may have made the buildings monumental, but serves little the functionality of the administrative centre (Frampton 2011,



**IMAGE 56**  
Phaset Grain Market, Street view in  
Chandigarh  
Photo: Melissa K Smith

230). In the end, the city’s achievements were not those of planning but rather of architecture, the complex of monumental government buildings, which Le Corbusier designed around a vast pedestrian plaza (Barlow Rogers 2001, 416).

#### 4.1.2.6 Brasilia



**IMAGE 57**  
Brasilia, The aeroplane shape  
Photo source: Google Earth

The Eixo Monumental, formed by the 'fuselage' begins with the building of the National Congress.



**IMAGE 58**  
Brazil's National Congress Building  
(Wikimedia Common)

The city was divided into sectors for specific activities. The wings are the residential areas and the 'fuselage' is where the cultural, commercial and



**IMAGE 59**  
The view from the TV tower  
(Wikimedia Commons)

Brasilia (1957), the all newly built capital of Brazil, planned and designed by Oskar Niemeyer and Lúcio Costa (Roberto Burle Marx was the landscape designer), is considered the largest realisation of Le Corbusier's ideas. The concrete "drawing-board city" was intended to be built in the geographical centre of Brazil. The plan of the newly built artificial concrete world adopted Le Corbusier's ideas of division of

urban functions with separate transport and pedestrian areas. Oskar

Niemeyer gave the city-plan a symbolic form of an aeroplane, which can be noticed only when viewed from the air. The public buildings, along the 'fuselage' Monumental Axis were given an elegant modernist style and stand on vast empty spaces. (Gympel, 2013, 98.)

administrative districts are. The 'cockpit' houses 'the seat of power' – the presidential palace, the Supreme-court and Congress (Brasilia, Wikipedia; Robin Banerji, BBC World Service, 2012).

In his discussion of Brasilia and 'Modernismo' architecture, Frampton writes that Costa repeated in Brasilia the grave mistake made by Le Corbusier in Chandigarh. He calls it "the conceptual schism" between the isolated monumentality of the government centre and the rest of the city. Unlike Chandigarh, where the

original grid was preserved, the design of Brasilia, built from scratch, was based on a cross form (although the form holds 'super squares' within). This form is at the bottom of the accessibility problems which haunt Brasilia's residents. (Frampton 2011, 256.) It is said that from the start,



**IMAGE 60**

Aerial view of residential buildings in the "wings".  
(Google Earth)

Brasilia was in fact two cities. The 'upper city' of government agencies and big businesses, and the 'lower city', the city of Favelas, where those whose

work sustain the 'upper-city' live. Brasilia, like Chandigarh and the model Ville Radieuse of 1933, on which they were based, is a divided city, where the structure of the town supports the class structure and maintains inequality. (Frampton 2011, 256-257.)

Ricky Burdett, Professor of Urban Studies with the London School of Economics commented in 2010 to the BBC World Service on the question of whether Brasilia was a good or a bad city, that Brasilia was not really a city, lacking street life and the complexity of a real city. "It is a sort of office campus for a government...People run away on Thursday evenings and go to Sao Paulo and Rio to have fun"... once out of central Brasilia, "you get completely normal plazas and streets with kids playing and places open every hour of the day and night..." (Burdett, BBC, 2010). According to Lucy Jordan, a local journalist, the city is said to have a scale which is not designed for humans, which makes it difficult for pedestrians. The apartment blocks of the city house only the rich while the poor have been pushed to satellite cities and shanty towns (Banerji, BBC World Service, 2012).

As Elizabeth Barlow Rogers wrote, unlike the prestigious monumental architecture of the civic centres of Brasilia and Chandigarh the residential areas were planned without attention to the needs of the regular people, who as a result, have had to try and deal with much inconvenience in their everyday life, due to the great distances they had to cover in cities built for

motoring and the monotony of the built up residential environment and the windswept emptiness between them (Barlow Rogers 2001, 416).

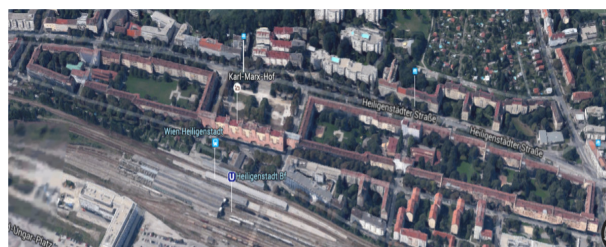
Le Corbusier's advocated idea of placing the houses in parallel rows, at right angle to the street, leaving space between them sufficient to allow maximum sunlight and air to enter the apartments, and to have grass and trees grow between them, became the norm. The examples of the application of the idea in various locations around the world, where this principle was applied well into the 1970s, are numerous.

#### 4.1.2.7 New Frankfurt and Karl-Marx-Hof



**IMAGE 61**  
Zickzackhausen in Siedlung Römerstadt  
Frankfurt, Germany. Architect: Carl-  
Hermann Rudloff, 1927-1929,  
(Christos Vittoratos in Wikimedia  
Commons)

In the 1920s the city architect Ernst May, with a team of progressive architects, ran the New Frankfurt development program in Frankfurt, Germany. It resulted in several 'garden-city' influenced, semi-independent, well equipped settlements, which were built from simplified, prefabricated elements (Gympel 2013, 89; Ernst May, Wikipedia; New Frankfurt, Wikipedia).



**IMAGE 62**  
Karl-Marx-Hof, Vienna  
Google Earth

Another solution for the setting of buildings for housing large number of people was the construction of super-long blocks along the road. An example for such a project is the

municipal tenement complex Karl-Marx-Hof in Vienna. It was built in 1927-1930 by Karl Ehn, and stretches on both sides of the courtyard for more than a kilometre. Matching the idea of the upright blocks of Le Corbusier (not yet built at the time) and the semi self-contained garden-cityesque settlements of Ernst May in Frankfurt, it includes amenities such as library,

laundromats, business space, medical offices, educational and culture services (Karl-Marx-Hof, Wikipedia; Gympel 2013, 90).

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Modernist architects got involved in planning urban dwellings, and advocated that these should be built on the basis of rational and scientific principles. A leading voice among those was Le Corbusier, whose grand utopistic ideas for all-new pre-organised large urban centres, arranged by zoning and class, were discussed earlier in this chapter. His attempt at building a standardised vertical settlement on pilotis is discussed in further detail in the chapter on architecture as only few of these elements of the Radiant City were ever built by him, each in a different location.

Although Gympel states that he, among others, were motivated in these plans by artistic and left-wing political inclination and socialist ideas (Gympel 2013, 90-91), reviewing Le Corbusier's active change of affiliation between extremes—from Soviet Russia to the Vichy government—one may say that at least some of these architects were less motivated by politics than by their career options, if not rather different political affiliations than those attributed to them.

#### 4.1.3 The Case of Finland

The name considered most synonymous with Finnish architecture is the architect, town-planner and designer, Alvar Aalto (1898-1976). Frampton describes two main trends in architectural development in Finland – one which painstakingly attempts to elaborate and inflect Aaltoesque Organicism, and a Constructivist one, that strives to get away from the influence of the Master (Frampton 2011, 331).

##### 4.1.3.1 Town Planning by Alvar Aalto

It seems that in the early 1930s, old towns and the depiction of life in them, lost their former appeal, as Alvar Aalto participated in the CIAM congress



in Brussels, where he presented a paper on The Construction of New Dwellings in Old Planned Areas. Like other architects of his time, Aalto found the new town-planning ideas of the time attractive, and he considered that there was no future for wooden historical towns, even in Finland. (Nikula, in Tuomi et al., 1998, 157.) In 1930 Aalto published in the *Domus* magazine an article titled 'Our Dwelling as a Problem' (*Asuntomme probleemina*), in which he emphasized the use of scientific research for problem solving in planning. The text also deals critically with town-planning issues: "The towns of our time, even when we refer to them as undergoing a process of modernisation, are only undergoing a clumsy and non-organic developmental phase... ...our town planning work is done under the influence of erroneous admiration of antiquity, which is based on emotional and aesthetic assumptions". (Aalto, 1930, in Nikula, in Tuomi et al., 1998, 158.) The shift in Aalto's thinking from pure European Modernism which focused on urbanism to a more organic-modernist direction may have its roots in Aalto's intensive connections with architecture in the United States, especially his life-long friendship with William W. Wurster (the dean of the UC Berkeley Architecture school), whose 'Bay Area style', clearly differed from that of the European Modernism inclined 'East Coast' style (Nikula, in Tuomi et al., 1998, 162). One cannot tell if and to what extent the anti-urban ideas of Frank Lloyd Wright influenced Aalto (for lack of access to necessary material), but it seems that Aalto possibly admired Frank Lloyd Wright's ability to design organic buildings that merged seamlessly with their environment, but Nikula comments that without access to the Aalto archives she could not comment on how Mumford influenced his town concept (Nikula, in Tuomi et al., 1998, 164). In his article 'The Traditions of American Architecture and its Current Trends' (*Amerikkalaisen rekennustaiteen traditiot ja sen nykyisyys*), published in 'Ateneum' in 1945, Aalto described the prevailing spirit in American architecture as significantly flexible and unrestricted. This, he wrote, was noticeable in buildings, parks, town-plans and interior design and, in turn served highly different styles of living. (Aalto, 1945, in Nikula, in Tuomi et al., 1998, 165.)

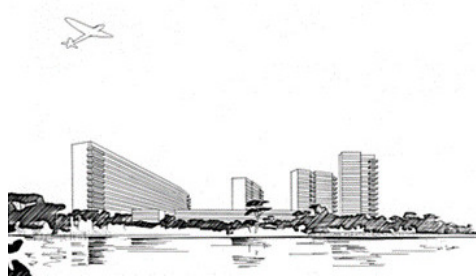
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Alvar Aalto built and designed extensively both in Finland and abroad, and the list of his creations is long and varied. His 'signature' of organic, elegant lines and his use of materials, especially in buildings and objects designed starting as of the late 1920s, is easily recognizable.

Alvar Aalto was also involved in area and town-planning (through both competitions and commissions), although many of those remained unrealised, and he is far better known for his designs and buildings. Most of his town-plans also included the planning and design of the buildings. The database of the Alvar Aalto Foundation offers very interesting information on this relatively less publicised aspect of his work. The database lists under "City" and "Planning" a long list of such plans, often presenting a plan for a civic centre. The following are samples of his plans from various times in his career that exemplify his ideas on town-planning. Buildings, designs and plans are tested through their actual use, so that as so many of his town-plans were never, or only partially realised, it is not possible to evaluate their actual impact.

Depending on the period, a review of his building plans (from the end of the 1920s on) reveals elements of Streamline-Moderne, Modernist-Functionalism, Monumentality and affinity to Organic forms in the Finnish inanimate nature. Several elements keep rising in his plans, for instance, 'the all-inclusive civic-centre and plaza', the 'town in the forest', and shapes such as 'the fan', 'the layered landscape', 'the cliff or mountain', 'the stream', and 'the body of water', to mention a few. The colour is predominantly pure (even austere) white, at times broken by brown or softened by wood.

**Munkkiniemi:** In the 1930s Aalto was interested in International Rationalism and produced a number of plans submitted to various competitions, and built several commissions. In 1934, he planned, by request of the Stenius Co., which owned large plots of land in the suburb of Munkkiniemi, four high-rise buildings in free fan formation, intended to



**IMAGE 63**

Perspective view from the sea over the planned Munkkiniemi area, 1934-1935  
(Alvar Aalto Foundation)

be built on the site above Kalastajatorppa. The free standing houses ranged from a narrow tower block to a 14 floors high and 200m long a lamella block, as well as terraced and semi-terraced houses along the shoreline. In 1939 he developed a master plan for the area,

but as the Stenius Company sold the land, none of these were ever realised. (Alvar Aalto Foundation database: Residential Area for M.G. Stenius Co.; and North Carolina Modernist Houses).

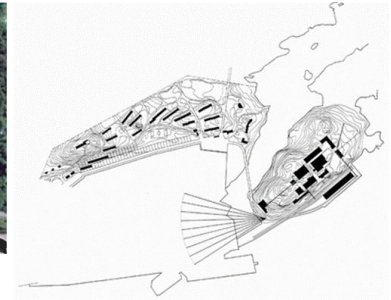
**Nedre Normalm:** Aalto's competition entry for the planning of Nedre Normalm in Stockholm in 1933 suggested that the original street network would be preserved but that "the 'commercial city' and traffic on ground level should form the low base for housing development consisting of high-rise blocks with 14-18 storeys separated entirely from the street system and oriented for maximum sunlight, air, and an unobstructed view" (Alvar Aalto Foundation database, Competition for renovation of the Nedre Norrmalm District), hinting at his acceptance of Le Corbusier's advocated concepts of modernist town planning. "Car traffic in the centre proper would only be permitted on streets running east to west, while the north-south streets and the shoreline near the City Hall and facing the palace would be reserved for pedestrian traffic." (Alvar Aalto Foundation database, Competition for renovation of the Nedre Norrmalm District.) His plan did not attract attention.

**Sunila:** The master plan for Sunila area in Kotka, 1936, of housing for the mill workers and management by Alvar Aalto, is said to be the first "Forest Town" – a combination of urban residential blocks and deep forest. It includes a house for the factory's director and blocks of flats of 2-4 storeys and several multi-storey row-houses in a large area of natural forest. (Alvar Aalto Foundation database, database, Master Plan for Sunila).





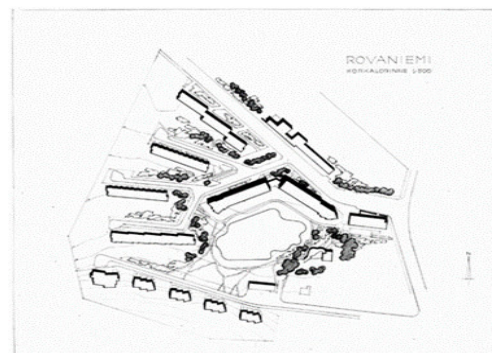
**IMAGE 64**  
Aerial view, Sunila, Kotka  
(Google Earth)



**IMAGE 65**  
Aalto plan for Sunila, Kotka  
(Alvar Aalto Foundation)



**IMAGE 66, IMAGE 67**  
Alvar Aalto planned houses in Sunila, Kotka, (Google Earth, Street View)



**IMAGE 68**  
Korkalorinne Housing,  
Korkalovaara, Alvar Aalto 1956  
(Alvar Aalto Foundation)



**IMAGE 69**  
Korkalorinne Housing Area, Alvar Aalto 1956  
(Google Earth)

**Korkalovaara:** In 1956 Aalto planned the Korkalorinne (Korkalovaara, Rovaniemi) Housing Fund's model housing area. It included 4-storey blocks of small flats, 2-storey row-houses and single floor row houses for altogether 600-700 inhabitants, shops and a central heating plant, all constructed from prefabricated elements. The buildings are white. Taking into consideration the climate, the façades of the houses face south, also sheltering the green area. Traffic and pedestrians were separated (Alvar Aalto Foundation database, Korkalorinne Housing Area).



**IMAGE 70, 71, 72**

Korkalorinne Housing Area, Korkalovaara, Alvar Aalto 1956,  
(Google Earth, Street View)

**Helsinki City Centre:** In 1961 Aalto unveiled his plan (commissioned in 1959 by Helsinki City Board) for the centre of Helsinki. In the concluding words of her presentation on Alvar Aalto's plan for Helsinki Centre at the 'Universal versus Individual' conference held in Jyväskylä (Finland) in 2002, art Historian, Mia Hipeli (the chief curator of the Alvar Aalto Archives) said that "...it is interesting to note that some of Aalto's, then too utopian basic ideas, will now be realized, 25 years after his death" (Hipeli, Plans for Helsinki City Centre by Alvar Aalto, 2002).

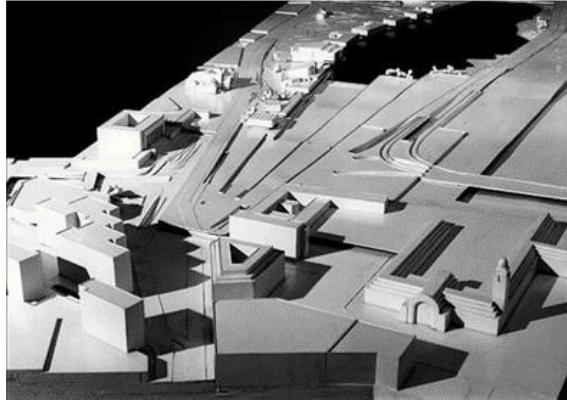


**IMAGE 73**

Plan for development in Töölö bay and Helsinki  
Centre, Alvar Aalto  
(Alvar Aalto Foundation)

To evaluate how utopian these plans were then, or are still today, one should be able to study them in detail. It is also right to say that discussing Aalto's work, one is always aware of the fact that he is widely regarded as the 'National Architect of Finland', and ever since his 'light shown', a good deal of work, in both architecture and design in Finland, is done in his shadow. It seems, at times that although the man himself (said to be often unyielding, even when his errors were clearly indicated to him, or were made clear by time passing), is not with us since 1976, at least some

decision-makers prefer to follow his original ideas, at the cost of rather heavy consequences, at least to the public. For example, in the case of the Carrara marble cladding of Aalto's greatest white monument or the general acoustic problems of all his concert and council halls. (Mannila, HS, 2013; Harju Kilpiö, Youtube, 2013.)

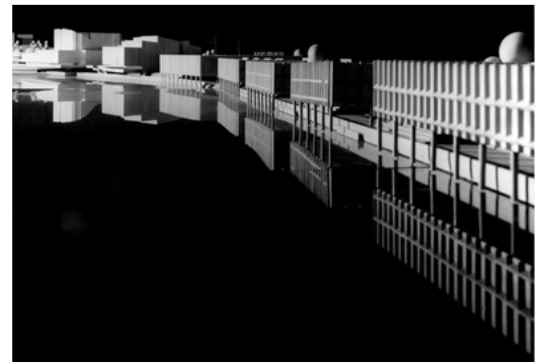
**IMAGE 74**

Alvar Aalto Plan for the centre of Helsinki 1961  
(Helsinki City Museum)

The Aalto plan for Helsinki Centre deals mostly with public and commercial buildings and with traffic issues than with residential ones. According to Hipeli (2002), it had six main areas: Töölö Bay and Hesperia Park, 'Piazza Triangolo' (or simply the terrace square),

Kamppi and the Bus Station, Pasila Railway Centre, Katajanokka Canal and the Main Market Square, the Railway Station and rail traffic (Hipeli, Plans for Helsinki City Centre by Alvar Aalto, 2002).

The 'Terrace Square' (also titled as the 'Republic Square', 'Liberty Square' and 'Piazza Triangolo'), the area between the railway line, the Mannerheim road and the water front of Töölö Bay, was intended to be a shopping centre and a major parking facility. The view is focused in the direction of Töölö Bay and Hesperia Park, where Aalto planned to place his grand white concert hall and congress centre (the only part of the plan actually realised), and other, smaller, major cultural buildings on the water line, partially with their pilotis in the water. Aalto said that the cultural buildings, raised on columns along the shore, framed by the greenery of the park, their marble façades mirrored in the water, would resemble the palaces along the lagoon in Venice (Plans for Helsinki City Centre, Alvar Aalto Foundation). These he thought would make for a grand view for those entering the city from the north along the elevated 8-10 lane highway that was planned to run over the railway line and end in a large parking facility under the layered 'Triangolo', while the square itself was meant to be free of traffic, before turning to the

**IMAGE 75**

The cultural buildings with their pilotis in the water of Töölö Bay  
(Alvar Aalto Museum/Heikki Havas)



east, south and west (Hipeli, Plans for Helsinki City Centre by Alvar Aalto, 2002). Impressions were important. In the words of Alvar Aalto, as cited by Hipeli, “The proposer has regarded it as important that this main artery be so placed that the western and eastern sections of the town can be seen at one and the same time”. (Aalto in Hipeli, Plans for Helsinki City Centre by Alvar Aalto, 2002.)



**IMAGE 76**

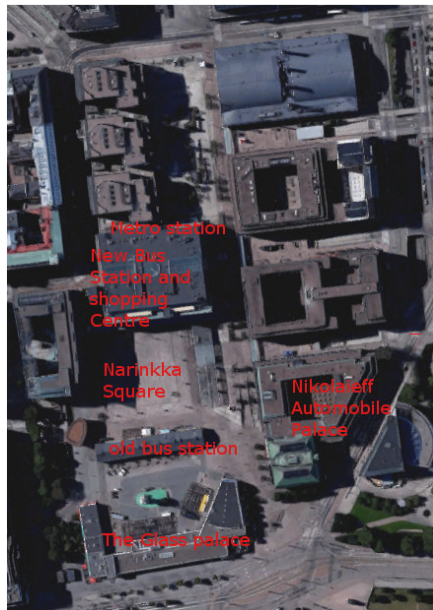
Finlandia Hall and Congress Centre, Alvar Aalto, 1969-1973  
(galinsky 1998-2010)

The direction of the heavy traffic entering the city along the Freedom Highway in different directions was to be arranged by means of overpasses and tunnels, which would eliminate the inconveniences of large traffic roundabouts (Aalto, Arkkitehti 1965 in Hipeli, Plans for

Helsinki City Centre by Alvar Aalto, 2002). Motorised and pedestrian traffic were separated. The new road was reserved for cars only, while pedestrians could walk unhindered all the way from the end of the square to the forests north of the city. “I would like an elk to be able to come and greet Mannerheim's horse in front of the post office without meeting cars on the way”, wrote Aalto. (Plan for Helsinki City Centre, Alvar Aalto Foundation.)

The Helsinki guide map for 1962 (Helsinki City Map Centre) shows a relatively undeveloped Pasila, missing the large present railway yard or residential quarters. Aalto meant Pasila to be a major railway yard and freight depo, a distribution point of rail traffic – east, north and west, and a railway station, and to have a large housing district built with high-rise blocks. (Aalto in Hipeli, Plans for Helsinki City Centre by Alvar Aalto, 2002.) Not having his detailed actual plans for the area before me, I cannot compare his plan to the existing development, but the idea was clearly there. Regarding the rail way station in Helsinki centre, Aalto wrote that “...the present railway station, used exclusively for passenger traffic, must have tracks which make it capable for use as a departure for local

traffic” (Aalto in Hipeli, Plans for Helsinki City Centre by Alvar Aalto, 2002) as it is indeed used nowadays.



**IMAGE 77**

The current area of and near the new Helsinki Central Bus Station (at the lower levels of the mainly underground complex). Also the area intended to be replaced by part of the Aalto development plan for the centre - The Glass Palace, the old central bus station, the Narinkka Square and the old Nikolaieff Automobile Palace (Google Earth)

Aalto also planned diagonally positioned high-rise blocks (as seen in the model, Image 74) that were to be built on the site of the 'Glass Palace', the site of bus station, and the site where the Nikolaieff Automobile Palace stood, which were to be demolished (all buildings survived to this day). These he considered would form a visual backdrop to the 'crater' he saw forming between Kallio and Töölö over the bay. (Plan for Helsinki City Centre, Alvar Aalto Foundation.)

According to Aalto's plan Kamppi was to be built in layers, the upper ones for pedestrians and commerce, and the lowers for traffic. The new Kamppi

Complex (the new Helsinki Central Bus Station and Shopping



**IMAGE 78**

The buildings of the old Helsinki central bus station and the new one, side by side. Narinkka Square. (Google Earth, Street View)

Centre), was opened in 2006. The plan is not that of Aalto, but the idea in general terms does come rather close to his. It was mainly designed by Juhani Pallasmaa (at the time, one of Aalto's major critics in Finland) and various other architects. (Kamppi Center, Wikipedia.)



**IMAGE 79**

Helsinki central bus station, upper levels – the commercial section (Wikimedia Commons)

The Central Bus Station consists of a central terminal for local buses, a terminal for long-distance traffic (underground), the Kamppi Metro Station (underground), a freight depot (underground), an internal parking area



**IMAGE 80**  
Helsinki central bus terminal,  
lower levels,  
(Wikimedia Commons)



**IMAGE 81**  
Helsinki central bus terminal,  
lower levels,  
(Wikimedia Commons)



**IMAGE 82**  
Helsinki central bus terminal,  
lower levels,  
(Wikimedia Commons)

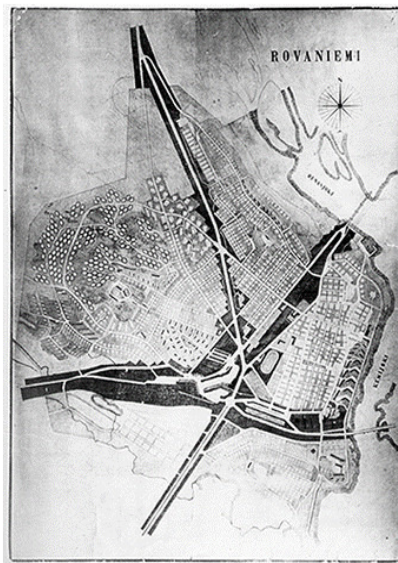
(underground), and is topped by a 6-floor shopping centre with a supermarket, shops, restaurants, night clubs and service points, as well as high-class offices and residential apartments above ground. (Kamppi Center, Wikipedia.)

Another building designed by Alvar Aalto and built (1973) according to his original plan is 'Sähköitalo', the building of the Energy Company of Helsinki, at the corner of Salomonkatu and Fredrikinkatu, just behind the Kamppi Metro Station (Kolbe, in Gordon 2006, 84).

The plan received criticism for its 'aestheticist elitism' and in 1972 Aalto was requested by the City Council to produce a new proposal. A new plot near the Olympic Stadium was allocated for the Opera House (where it was built in 1993 according to the design of Hyvämäki-Karhunen-Parkkinen). The area of the Terrace Square was made significantly smaller and the cultural and office buildings were moved from the park shore to the eastern side. The plan was further reworked by Aalto's office after his death, in 1977 and 1981. By the end of the 1980s new ideas on the development of the city took over. According to the Alvar Aalto Foundation page, a new competition was organised, which produced no valid results, and "the now imminent redesign of the centre will in all probability produce a patchwork of partial solutions and administrative

compromises. Finland will have to make do without the heart that Aalto wished to give it". (Plan for Helsinki City Centre, Alvar Aalto Foundation.)

Of Alvar Aalto's plans for the centre of several Finnish towns, only those for Rovaniemi and Seinäjoki were fully realised (both after Aalto's death) while in other places, such as Helsinki, Jyväskylä, and Säynätsalo, only fragments were built, and others never materialised (Metsäranta, Rakennusperintö, 2015).



**IMAGE 83**  
The Reindeer Antler Plan of Rovaniemi,  
Alvar Aalto, 1945,  
(Rovaniemi Art Museum)

Rovaniemi, the main city of Finnish Lapland, was greatly destroyed by fire set by the retreating German troops and a major explosion of an ammunition train in the town's railway station. Some 90% of all buildings were destroyed. (Rovaniemi, Wikipedia.) In 1945, Alvar Aalto, then heading the work of the Finnish Association of Architects' Rebuilding Bureau in Lapland, created the town-plan of the renewed town. The plan emphasised the position of Rovaniemi as a major junction of roads in the North and the guiding principle at its

basis was flexibility, so that it would enable the fast rebuilding desired after the war and allow for further development in the future according to needs not yet defined at the time. (Lukkarinen and Lohiniva, Rovaniemi Art Museum.)





**IMAGE 84**  
Rovaniemi, Official map, 1946,  
Aalto's hexagonal building lots with  
current ones superimposed.  
(Rovaniemi City Map Service 2016)

Aalto's plan was spacious, intended for fire safety and to emphasise the typical fell landscape of the area. His idea was to rebuild the town in stages, so that people could first build a wooden basic dwelling unit and expand it with time. Yet, this was considered unrealistic and most of the buildings built during the rebuilding era in Rovaniemi (like so many other places in Finland) were blocks of

concrete. The town plan was only partially realised. (Metsäranta, Rakennusperintö, 2015.) The map (Image 84) shows the new type of hexagonal building lots planned by Alvar Aalto in 1946. As the lot boundaries of the superimposed current plan indicate, only 20 of these remained to this day. (Lukkarinen and Lohiniva, Rovaniemi Art Museum.)



**IMAGE 85**  
Rovaniemi library, Alvar Aalto, 1961-1965  
(Seravo Oy 2012)

The City Library, the Lappia Hall and the Town Hall, all planned in 1961 by Alvar Aalto, form the administrative and cultural centre of the city. The design of the three buildings include elements of the local nature and landscape, hints of which are found in all his designs.



**IMAGE 86**  
Lappia Hall, Alvar Aalto 1968-1975  
(Google Earth, Street View)

Apart from the 'tower' (Council Chamber) of the Town Hall (which was made lower than originally planned), where part of the wall surface is covered in dark plates, the buildings are mostly white.



**IMAGE 87**  
Lappia Hall at night, Alvar Aalto, 1968-1975  
(Rovaniemi Art Museum)

Aalto applied to the library building (ready in 1968) a fan-shape, already used by him for the Seinäjoki library building. The Lappia Hall, a congress centre and



theatre was built in 2 stages between 1968 and 1975. The curved roof elements are reminiscent of Lapland's fells, and thanks to some clever modern lighting technique are transformed at darker nights to an image of the Aurora Borealis. The Town Hall, completed in 1988, was built only after his death, and consists of several wings. The form of the Council meeting chamber is typical to Aalto – reminding us of snow- and ice-covered cliffs (Alvar Aalto in Lapland, Rovaniemi, Rovaniemi Art Museum.)



**IMAGE 88**  
Rovaniemi Town Hall, Alvar Aalto, 1984-1988  
(Rovaniemi Art Museum)

The area of the square is dominated nowadays by a green patch of grass that leaves a relatively limited and elongated paved plaza area, between the Town Hall and the library, while the Lappia Hall and the Theatre are



**IMAGE 89**  
Rovaniemi Administrative and Cultural Centre designed by Alvar Aalto, featuring the Library, Lappia Hall and Theatre and Town-Hall (Google Earth)

separated from it by a cul-de-sac. Photos of the area do not indicate that the plaza would function as a place of meeting or functions. Aalto is renowned for his ability to take into account

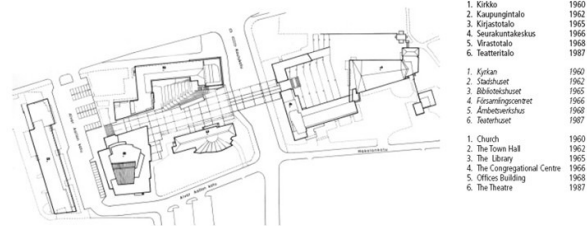
particulars of the social and physical environment (Harry Charrington, *The Architectural Review*, 2012). Unfortunately, I did not manage to locate Aalto's original drawings or his notes, which could tell us more about the idea behind the particular arrangement of these buildings, the relationships between them and the role intended for the plaza.

One of the pioneers of regional planning in Finland, Aalto prepared plans for Kemijoki and Ounasjoki valleys. These included master-plans for several municipalities, including Jaatila and Muurola (Rovaniemi Rural

Municipality) and the central villages of Kemijärvi, Kittilä and Pelkosenniemi, a plan for an experimental village with the intention to improve service availability, and plans for standardised houses. The intention to expand the plan to the entire province did not materialize. (Alvar Aalto in Lapland, District Plan for Lapland, Rovaniemi Art Museum.)



**IMAGE 90**  
Seinäjoki, Centre by Alvar Aalto  
(Seinäjoki City, Juha Harju, Minna Hirvelä & Kalevi A. Mäkinen)



**IMAGE 91**  
Plan for Seinäjoki Administrative and Cultural Centre, Alvar Aalto  
(Seinäjoki City, Juha Harju, Minna Hirvelä & Kalevi A. Mäkinen)

The administrative and cultural centre of Seinäjoki, 'Aalto Centre', is a complex of six buildings designed by Alvar Aalto and built mainly between



**IMAGE 92**  
Seinäjoki Administrative and Cultural Centre  
(Seinäjoki City)

1960 and 1968. The church "Lakeuden Risti" (The Cross of the Plains) and its yard were built between 1957 and 1960. The church and the congregation centre form a protected enclosure that allows for outdoor gatherings and functions (Seinäjoki, the Cross of the Plains Church and Parish Centre 2016). The

plaza ('The Civic Square') paving continues over the road which goes



**IMAGE 93**  
"Lakeuden Risti" (The Cross of the Plains), Alvar Aalto 1957-1960 and 1965-1966, (Seinäjoki City)

between the square and the church complex. The Public Office Building is located behind the western edge of the plaza – the theatre and the town hall, and is clearly separated by a road and parking lots. Also here, besides the brown tiled town hall building's façade and the theatre 'tower', all other buildings are white and flat-roofed, but for the church that is covered by a green roof. Here too Aalto used

the fanned and rock-like structures, which rise above the town hall and the theatre buildings, while the reading hall is fanned. The plaza is



**IMAGE 95**  
Seinäjoki Library, Alvar Aalto 1965  
(Seinäjoki City)

clearly marked by  
its distinct paving  
and houses also an  
elongated water feature.



**IMAGE 94**  
Seinäjoki Town Hall, Alvar Aalto  
1961-1962  
(Seinäjoki City)

## 4.2 On the road to modern architecture – Building the Urban Vista

### 4.2.1 The 'Place'

Take all buildings away from the street and all you are left with are paved and unpaved paths that lead from no-place to no-where. Buildings are an integral part of the built-up environment in general and especially the urban one. "The built-up urban environment consists of elements or parts which were planned and built in different periods, using different planning principles" (Tuomi 2005, 9). Often, the period in which a building was built can be identified by the style, materials, techniques and scale used. In that manner, the street-view tells the story of the place. The current view of any urban street contains visible hints of the various stages of its historical development – and invisible ones, when older buildings and built areas are not present. Consider, an example of a hypothetical small town in Finland that became an independent parish way back in the 17<sup>th</sup> century, a municipality in the mid-1800s and a town in the late 1900s, and has still a longer history of human settlement, but no buildings of the period left (but for a couple from the late 19<sup>th</sup> and early 20<sup>th</sup> century) and no existing streets follow the original old trails.

Buildings, which define and delimit the space around them, and the space between buildings, together create the cityscape, the visual appearance of a city or urban area - the picture of a city. Without buildings, there is no city. That is, the external shell and skin of buildings gives the form to the streets and other urban spaces. Without people there is no city. Buildings, technology, value systems, philosophical and political ideas, schools of thought and social events, concepts of design and art, all come together in the historical story of architecture.

In the concluding chapter to '*The Story of Architecture*', referring to the current state of architecture, and asking what lessons could be learnt from mistakes made thus far, Jan Gympel states that "some critics like to describe the current trends in architecture as 'Modern Pluralism'..."

Architecture has become a matter of fashion, like popular music or hair fashion. Some trends are particularly prominent, adhered to only by few, while the rest of the architects “simply do what they want”. (Gympel 2013, p 111).

#### 4.2.2 Architecture and Art

One cannot, and should not, separate the discussion of architecture from that of art. From its very start, architecture has been linked to art, and for most of its history was one of its branches. Architecture is, in every sense of the word, related to and in a constant dialogue with its contemporary art. Until recently, one could safely assume that every architect was an artist, at least in some measure – and in the past many an artist had designed architectural structures and towns.

Art is, among other things, a form of expressing ideas, personally held or social. It is a vehicle through which the idea is transferred to the viewer, spectator, or spectator-participant, which becomes part of the artistic process through the interaction with the piece (of any type of art) and further ‘creates and develops’ it and the idea within through one’s thought and self-given interpretation.

Every period, movement and style in architecture has clearly been linked to thought and developments in its contemporary art and many share a common name, which indicates the direct relationship between them. We have been brought to think that this is no longer the case and that the focus in architecture has currently strongly shifted towards technology and rational engineering. The relation between architecture and art seems to be suffering from, at least, partial disassociation forced upon it by eminent value changes, brought about by political and commercial thinking.

To better understand where we are standing today and where we may be going, we need to review the recent history of architecture and its contemporary art. This will help us better understand what it is that we see in the cityscape and how it came to be. In order to limit the scope to the

essential, I have chosen to start this review of developments in architecture from the dawn of the last century (although in some places, especially larger cities, older structures are still part of the street-view, especially in the centre or old sections of the city).

#### 4.2.3 Historicism and Technological Development

Two related events which took place in the end of the 1700s changed man's relationship with nature: a new manner and ability to control nature, which was the product of the industrial revolution and led to the emergence of new infrastructure, and fundamental changes in social thinking, that resulted in the humanist disciplines and pioneering work in sociology, aesthetics, history and archaeology. These also formed the background for the emergence of Neo-Classic architecture, which attempted to adhere to Palladian and ancient Greek architectural rules. Bishops, princes and affluent and refined citizens were the main clients of architects. (Frampton, 2011, p 12.)

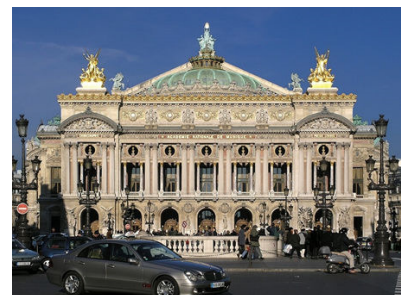


**IMAGE 96**  
Brussels, Palais de Justice, Joseph Poelaert, Old postcard, (photographer/publisher Unknown)



**IMAGE 97**  
Houses of Parliament, London, Palace of Westminster, Charles Barry and Augustus W. N. Pugin, (Wikimedia Commons)

By the end of the 1800s the main group of commissions came from representatives of administrative and commercial institutions. As the political elite was not necessarily also the intellectual one, architects needed to satisfy the public's taste and to take into consideration in their plans the reaction of people to the fast technological, scientific and mechanisation developments of the time. It is said that people were torn between a sense of progress and longing for the known

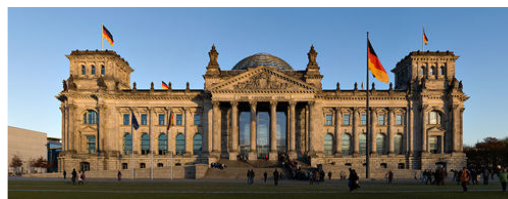


**IMAGE 98**  
Paris Opera, Le Palais Garnier (Wikimedia Commons)



past. As a result, architects often selected to avoid innovative stylistic risks and kept mainly to a façade of generally familiar and well recognised style. (Gympel, 2013, 71-72.)

Historicism (also known as Revivalism), the eclectic architectural style which prevailed as of the mid-19<sup>th</sup> century used a visible combination of familiar features, borrowed from earlier styles, while



**IMAGE 99**

Reichstag building, Berlin, by Paul Wallot  
(Wikimedia Commons)

beneath it hid modern techniques introduced by the industrial revolution (concrete, iron, steel and glass) (Gympel, 2013, 72). The clients wanted art for their money, and once the technical aspects were completed, the architect was commissioned to give the factory, railway station, school building or museum a façade in the right style, a Gothic church, a Norman castle, a Renaissance palace or even an Oriental mosque (Gombrich, 1950/1995, 499). Examples of such buildings are the eclectic Brussel's Palais de Justice (by Joseph Poelaert), the new British Houses of Parliament (by Charles Barry and Augustus W. N. Pugin), Paris' Opera (by Charles Garnier), the Reichstag in Berlin (by Paul Wallot), to mention a few (Gympel 2013, 71, 72, 74; Palais de Justice, Brussels, Wikipedia).

Iron and steel structural elements (considered at the time to be 'false materials') were used in the construction of functional buildings, railway stations, bridges and other such buildings (which, at the time were not considered 'architecture') (Gympel, 2013, p 76). The historicist solution was to hide and cover the modern structural elements while giving the façade a pseudohistorical look. According to Gympel 'Architectural forgeries' provided an escape from the present and a false identity to counteract cultural and historical inferiorities (Gympel 2013, 72, 73).

The use of prefabricated and exposed iron and glass in building was introduced in 1851 by Paxton's Crystal Palace for the Great Exhibition in London and the Eiffel's Tower in 1889 in Paris. These structures had such

features as lightness, transparency, tension and fragility. (Gympel, 2013, p 75.) The development of reinforced concrete and its use in construction revolutionised the industry. The use of cast iron columns, metal supports and girders made possible the building of massive structures in which the solid structure was replaced by a skeleton one. The use of prefabricated elements and concrete prepared cheaply on-site opened the way to building quickly and to almost any height and width. Foundations did not need to be wide any more as was required by older methods, elements could be relatively thin and floors could be piled high. (Gympel 2013, 76; Frampton 2011, 26, 36-37) A second development that allowed buildings (especially in the city-centre) to get higher was the invention of the passenger lift in 1853 (Frampton 2011, 26).

In the construction of Sainte-Geneviève library in Paris (1858), Henri Labrouste applied the principle for industrial buildings set by James Watt already in 1801 to a public building. Even though the external walls are massive stone ones, exposed cast iron columns in the centre of the room are both supportive and decorative. (Gympel, 2013, 77.)

The use of concrete became highly popular after the invention of the 'Portland cement' in the 19<sup>th</sup> century. Highly mouldable, yet limited in tension resistance, the embedding of steel bars in the concrete results in 'reinforced concrete', which benefits from the qualities of both worlds. (Reinforced Concrete Introduction, World Housing Encyclopedia.) In 1861, François Coignet, working under Haussmann in Paris, developed a technique for strengthening concrete with metal mesh (Frampton 2011, 36-37).



**IMAGE 100**

*Sainte-Geneviève Library, Paris 1858* by Henri Labrouste (Archinet, Franck Bohbot)



**IMAGE 101**

*Sainte-Geneviève Library, Paris 1858,* by Henri Labrouste (James Austin)



The work done in Paris by Haussmann starting as of mid-1800s introduced not only infrastructural changes and improvements but also unity of form - standard residential plan types and regularised façades, together with standard systems of street furniture. Standardisation of this kind was also introduced in Vienna, especially in the Ringstrasse (1858-1914), and in Cerdá's plan for the expansion of Barcelona (Frampton 2011, 24).

#### 4.2.4 Quality of Housing and Social Change

The problem of housing shortage and inadequate living conditions caused by intense population migration from the country to the city, which started with the industrial revolution, was now especially accentuated by the rapid process of industrialisation. The residents of the overcrowded, poorly built and maintained tenement blocks suffered from poor lighting and ventilation conditions and crude hygiene conditions. Outhouses and washing facilities were communal (which only helped spreading disease), drainage was badly maintained, and so were privies and cesspools which were cleared less often than would be desired, so that refuse and excrement piled for lengthy periods of time and often leaked into the surrounding soil or the open, which inevitably resulted in high incidence of disease such as tuberculosis and rickets and several outbreaks of cholera in the 1830s and 1840s. The streets of those tenements had no trees lining them and the parks were intended exclusively for the affluent high classes. (Gympel, 2013, 80; Frampton 2011, 21; History House, What work did a Nightman carry out?)



**IMAGE 102**  
The Millbank Estate,  
London, 1897,  
(Stephen Richards)

In England, the epidemics led in the mid-1800s to legislation concerning the construction and maintenance of dense residential areas. These laws decreed that the local authorities were legally responsible for sewerage, refuse collection, water supply, the roads, inspection of slaughter houses and the burial of the dead. The need for

improved housing for the working-class was

recognised and the first flats were built in

London in 1844. A generic model by Henry

Roberts, of semidetached two-storey

apartments presented in 1851 at the Great Exhibition greatly influenced

working-class house planning. The Slum Clearance Acts of 1868 and

1875 and the Housing of the Working Classes Act of 1890 decreed that

local authority was responsible to provide public housing. An effort was

made to 'deinstitutionalise' the image of public housing by adapting the

Arts and Craft domestic style to 6 storey block of flats, e.g., the Millbank

Estate, London, 1897 (Frampton 2011, 21-22; Lofthouse, 2013).



**IMAGE 103**  
The Millbank Estate, London, 1897  
(Stephen Richards)

The 19<sup>th</sup> century was also the era of efforts by industrialists that tried to better the living conditions of their workers. These also served later as inspiration to Howards' Garden City. Some examples worth mentioning are David Dale and Robert Owen's cotton mill's housing at 'New Lanark', Scotland (1815), Sir Titus Salt's (textiles) 'Saltaire' (1850), Henry Ripley's estate of model houses for the working classes 'Ripley Ville' (1866), Lever brothers' (soap) 'Port Sunlight' (1888), and George and Richard Cadbury's (chocolate), 'Bournville' (1879). (Frampton 2011, 22; Barlow Rogers 2001, 404; Newlanark website.)

In the early 1800s Charles Fourier and Victor Considérant published in France various works on the subject of the establishment of ideal self-contained communities, which according to Frampton gave Le Corbusier

some of the inspiration for his self-contained commune Unité d'Habitation (Frampton 2011, 22).

#### 4.2.5 Modern Art of the 19<sup>th</sup> Century

A vast shift in the attitude towards art and artists took place in the 1800s, which resulted in a clear distinction between Art and Craft. The artist was now free from the need to perform 'per order and instructions' of the patron who pre-ordered the work. Artists were free to select their subject and technique, but had to face a new challenge, the need to appeal to their potential buyers. While earlier, the artist's artistic ideas were secondary to the requirement of the patron, in the new situation the artist's taste got precedence, but did not always please potential buyers. This problem was still accentuated because following the industrial revolution, the public now included a growing middle class that lacked tradition and favoured cheaply produced goods that 'masqueraded' art – the new competitors of the artist.

Artists which found their freedom of expression and individuality, dared breaking with tradition and accepted rules. The purpose of art became a fiercely debated subject, mainly in Paris. People who cared about art were looking for more than just the display of ordinary skill. Looking for the true purpose of art, it was said that to be able to achieve it, it had to lose all other purposes it ever had. The popular art of the time is the one least appreciated today, while those works of art that we so admire and consider 'classic', were then the anarchy of the day. (Gombrich, 1950/1995, p. 409-503.)

There were three waves of 'artistic revolutions' in France of the 19<sup>th</sup>-century. Unlike Jean-Auguste-Dominique Ingres, who was highly popular in his day (that admired heroic and classical antiquity related art) and advocated discipline and precision in life painting, revolutionary Eugène Delacroix and his followers did



**IMAGE 104**  
Fantasia Arabe, 1833, Eugène Delacroix,  
(Städel Gallery, Frankfurt)



**IMAGE 105**  
The Gleaners, 1857, Jan François Millet,  
(Musée d'Orsay, Paris)

The second wave was that of the realists, painters like Jean-François Millet, who chose to challenge their subject matter, and painted peasants at work in the fields, life as it really was. Gustave Courbet's exhibition (1855), which he named 'le Réalisme', became the name of this new movement (Gombrich, 1950/1995, p. 508-511).

not accept the standards of the Academy. Colour and imagination, they said, were more important than draughtsmanship knowledge. It became important to convey the atmosphere and emotion and thus painting landscapes became popular. (Gombrich, 1950/1995, 504-506.)



**IMAGE 106**  
The Meeting or "Bonjour, Monsieur Courbet", 1854, Gustave Courbet  
(Musée Fabre, Montpellier, France)



**IMAGE 107**  
Impression Sunrise, 1872, Claude Monet  
(Musée Marmottan Monet, Paris)



**IMAGE 108**  
The Balcony, 1868-1869, Édouard Manet,  
(Musée d'Orsay, Paris)

The third wave was that of Édouard Manet and his friends, that went against the misconception of light, shade and colour painted in the studio by traditional artists, and Claude Monet, who gave the school its name – ‘impressionism’. They urged the painter to abandon the studio altogether and even finish the painting in-situ. At the time they were strongly criticized as sloppy and sketchy, although today we can easily see that this was a deliberate choice made out of knowledge of the way vision works. (Gombrich, 1950/1995, p. 512-518.)

#### 4.2.5.1 Art Nouveau - Architecture, Design and Art

Encyclopaedia Britannica defines ‘Art Nouveau’ as the ornamental style of art that flourished throughout Europe and the United States from the end of the 1880s until the I World War. The style, easily recognised by its sinuous organic lines, influenced fine art, design, and architecture. On its origins the Britannica says that “it was a *deliberate attempt* to create a new style, free of the imitative historicism that dominated much of 19th-century art and design”. (Art Nouveau, Encyclopaedia Britannica online.)

According to Gympel, the ‘back-to-nature’ movement was a result of the reaction of the society to the processes of the early 20<sup>th</sup> century. The lower classes suffered from difficult living conditions while upper classes were challenged by the significant technological and social development.

Alienation from nature was felt by all classes. (Gympel, 2013, 80.)

Viollet-le-Duc, the renowned French architectural theorist of the late 1800s is said to have anticipated Art Nouveau in his principles of Structural Rationalism. Among other things, he advocated that architecture should be true to the 'programme' – fulfil the conditions imposed by need, and to 'methods of construction' – employ the materials according to their qualities and properties and the return to building in a local style, and presented both models and a method to free architecture from the "eclectic irrelevances of historicism". (E. Viollet-le-Duc 1863, in Frampton 2007, 64.)

In their search for a new style that would replace rigid Historicism, artists and architects sought new sources of inspiration. The Art Nouveau school borrowed elements of nature. The various branches of the school and artists within were highly individual in their interpretations, yet, elements of traditional craft were present in all. Thanks to its attitude and theoretical approaches, Art Nouveau transformed in many countries into the beginning of a modern design movement. Its emphasised linearity and reintroduced dynamism to architecture, produced dynamic, graceful and flowing forms. (Gympel, 2013, p 80-81.)

The curving lines typical of Art Nouveau were derived, in part, from botanical studies and illustrations in publications of biologists and botanists, architects and theorists of the time. Nature became the primary source of inspiration for the artists that sought to part with past styles. (Gontar 2006.) The new style was also influenced by the English Arts and Crafts movement (which emphasized a return to handcraftsmanship and traditional techniques) and the Aesthetic movement (which promoted 'art for art's sake'). It was also clearly influenced by Japanese prints and objects that 'flooded' the European market of the time. The influence of the idea of 'total work of Art' - the unification of 'fine art' and the 'lesser arts', advocated by leading 19<sup>th</sup>-century theoreticians, such as Viollet-le-Duc and the British art critic John Ruskin, clearly influenced the work of William Morris, Victor Horta, Henry van de Velde, Hector Guimard, Paul Hankar, Charles Rennie Mackintosh, Josef Hoffmann and Gustav Klimt. (Gontar 2006.)



Art Nouveau brought dynamism back to architecture and opened the door for further development and changes. Emphasis on materials and letting their qualities be visible, together with the acceptance of the use of machines by architects and designers, allowed for taking a step further. Architects extended their interest in design to all areas of life and developed a view, commonly accepted nowadays, that the genuine task of architecture was to redesign and rebuild the world and society. (Gympel, 2013, 81-82.)



**IMAGE 109 a+b**  
Hôtel Solvay, Horta  
(hotelsolvay.be; Mary Ann Sullivan)



**IMAGE 110 a+b**  
Maison & Atelier Horta  
(François Bernardin; adna omerbegovic)



**IMAGE 111 a+b**  
Hôtel Tassel, Horta  
(Mary Ann Sullivan)



**IMAGE 112 a+b**  
Hôtel van Eetvelde, Horta  
(Google Earth Street View)

The four major town houses designed by Victor Horta in Brussels are Hôtel Tassel, Hôtel Solvay, Hôtel van Eetvelde, and Maison & Atelier Horta. These buildings share such properties as an open plan, the use of light diffusion and transformation, which emphasises the curved lines of the structure, interior design in a matching style, the use of steel and glass, (new at the time), and modern technical utilities of their time. (Major Town Houses of the Architect Victor Horta (Brussels), World Heritage list, UNESCO.)

Iron and glass were well suited materials for the creation of curving lines, well-familiar examples of which are the entrances to the Paris Metro by



**IMAGE 113**  
Stairway of Tassel House, Brussels  
(Wikimedia Commons)



**IMAGE 114**  
Metro entrance, Paris, Hector Guimard  
(Wikimedia Commons)



**IMAGE 116**  
Castel Béranger, Paris, Hector Guimard  
(Wikimedia Commons)

Hector Guimard (1900) and the staircase in Hôtel Tassel (1893) in Brussels by Victor Horta. (Gympel 2013, 82.) The structural frames of iron and steel were left visible even in the facades of major buildings, and further integrated into the grid of supports and floors, and filled with large glass sheets. In Europe, this was a method previously used only for industrial buildings that were not considered to be of architectural importance. (Gympel, 2013, 82.)



**IMAGE 115**  
Metro entrance, Paris, Hector Guimard  
(Frank Derville)

The new style was known by different names in different places—Jugendstil, Sezessionstil, Liberty, Modern Style, Modernismo, and Art Nouveau—and received local as well as personal interpretations. (Gympel, 2013, 80-81.)

Hector Guimard designed buildings, furniture and various objects. Most familiar are his

designs of the Paris Metro's entrances, and various buildings in and outside Paris. Like Horta in Brussels and Gaudi in Barcelona, Guimard was one of Art Nouveau's key figures, and like them, his work was



**IMAGE 117**

Castel Orgeval,  
Art Nouveau Home by Hector Guimard  
An old post-card showing Castel  
Orgeval

influenced by the ideas of Viollet-Le-Duc.

Guimard was also directly influenced by the designs of Victor Horta, William Morris and the ideas of John Ruskin. (Collins, Hector Guimard, Encyclopedia of Art and Design.)

The ideas of Eugène Viollet-le-Duc and in particular those touching on cultural

nationalism, the return to regional building style, clearly influenced also the work of Antoni Gaudí in Barcelona and possibly also that of Charles Rennie Mackintosh in Scotland. (Frampton 2011, 64.)

**IMAGE 118**

Casa Milà roof and chimneys  
(Wikimedia Commons)

The Barcelona based, Catalan, Antoni Gaudí was the main figure of the Spanish version of the movement - Modernismo. Gaudí's fantastic and at times bizarre forms hint at the close affinity of his architecture to expressionism. He conceived the entire building as a sort of a sculpture, in which he

mixed his interpretation of Gothic design-language and Moorish elements. His structures bring to mind the organic shapes and textures of nature. He developed a new, well-balanced manner of defining space, and combined

**IMAGE 119**

Casa Milà, Gaudí, 1910, Barcelona  
(Wikimedia Commons)

in his buildings elements of crafts such as ceramic and glass mosaic. Gaudí's approach and philosophy was an all-encompassing one, and at the same time highly individual. He moulded every detail of his architecture and avoided straight walls and sharp corners. (Gympel, 2013, p 81.)

Frampton, on the other hand, emphasises the link between Gaudí's ideas and those of Catalan (repetitively arising) aspirations for revival and independence. He indicates that besides the influence of Viollet-le-Duc, Ruskin and Richard Wagner, Gaudí was driven by, on one hand, the



**IMAGE 120**  
Casa Vicens, Gaudí (1878)  
(TheSavvyExplorer.com)



**IMAGE 121**  
Casa Batlló, Gaudí, Barcelona, 1904  
(Wikimedia Commons)

the Moorish-style Casa Vicens (1878), and also introduced his style-signature, the 'Catalan vault' (forming a gentle arch by plain bricks laid lengthwise over a wood form), already at this early project (Frampton 2011, 65).

desire for the revival of indigenous Catalan architecture (i.e. both Gaudí and his patron, Eusebio Güell Bacigalupi were affected by the ideas of the Catalan separatist movement) and on the other hand, the compulsion to create new forms of expression, to which Frampton adds Gaudí's especially

creative imagination and power of fantasy. (Frampton 2011, 64.) Another element which clearly drove his creations was his faith. Gaudí was also involved in his early days with the Mataró Workers' Co-Operative and was (at least at the time) also influenced by socialist ideology. Yet, later in his career, most of his work was done for bourgeoisie clients. (Frampton 2011, 65.)

Gaudí first formulated the essence of his style, gothic in structural principle, yet, Mediterranean with clear Islamic influence in



**IMAGE 122**  
Barcelona, Montserrat  
(Barcelona-home.com)

It is said that Gaudí was obsessed with the image of the Montserrat mountain and monastery (an alleged place of concealment of the Holy Grail), where he first worked in 1866. Examples of buildings by Gaudí: Casa Batlló (1904), Casa Milá (1906-1910), the church of La Sagrada Familia (1882 – still under construction). (Barlow Rogers 2001, 409)



**IMAGE 123**

La Sagrada Familia, Barcelona, started 1882, still under construction (Eye on Spain)



**IMAGE 124**

Glasgow School of Art, (Phil Brown)



**IMAGE 125**

Glasgow School of Art, detail (Phil Brown)

The main figure of the Modern Style (Art-Nouveau) movement in the United Kingdom was the Glasgow-based Scottish architect, designer and painter Charles Rennie Mackintosh. His interpretation of the style was material-based and made use of clear geometrical basic forms (he was inspired by Scottish tradition, nature, and the simplicity of the Japanese form). He admired Japanese art for its simple forms, natural materials, and quality of space. He was also influenced by his Scottish heritage, and later on by

Modernism, which were all reflected in his work. (The Scotsman, 2005.)

Charles Rennie Mackintosh was not only an original architect and designer (mostly of furniture), who created 'the Glasgow Style', or Scottish Art Nouveau, but also a gifted painter, mainly a water colourist.



**IMAGE 126**

North façade of Charles Rennie Mackintosh's Scotland Street School, Glasgow, Scotland. (Wikimedia Commons)



Most of his paintings were created in the last years of his life, in England and France. (Mairiuna, scotiana.com.)

Alan Crawford, his biographer, wrote about Mackintosh's water colours, "*He did not paint the landscape as he found it; he was, as always, governed by his imagination, and was happy to move lighthouses, promontories and mountains to get his composition right. And he liked to combine different viewpoints*". (Alan Crawford 1995, in Mairiuna, scotiana.com.)



**IMAGE 127**  
Hill House, Mackintosh, 1903  
(Undiscovered Scotland)



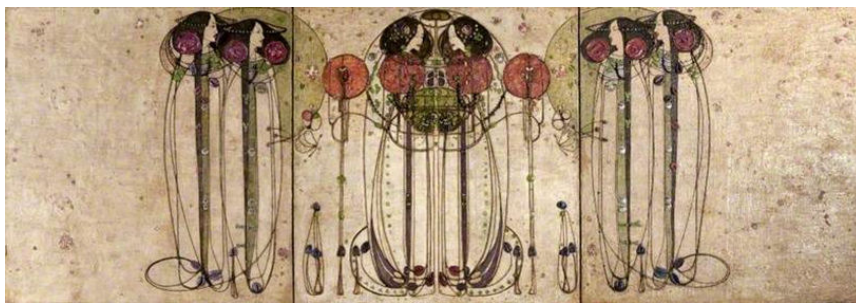
**IMAGE 128**  
Armchair by C.R. Macintosh,  
(The Hunterian Museum and Art Gallery, University of Glasgow)



**IMAGE 129**  
Willow Herb, Buxstead, Mackintosh, 1919  
(The Hunterian Museum and Art Gallery, University of Glasgow 2012)



**IMAGE 130**  
Port Vendres, La Ville, Mackintosh, 1925-1926  
(Glasgow City Council, Glasgow Museums)



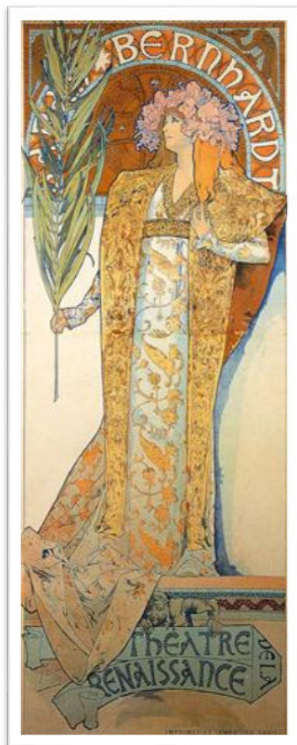
**IMAGE 131**  
Gesso panel, 'The Wassail' by Charles Rennie Mackintosh, Scottish, 1900 (CSG CIC)

Although Art Nouveau impacted especially on architecture and with it, on so-called decorative art, it did find its way to the hearts and brush of several prominent artists. Looking for new standards, they chose to

experiment with natural, organic shapes and contours. The thought behind Art Nouveau was the elimination between painting and sculpture, craft and decorative art. The place where this is clearest is of course architecture and interior design of the period, but then, not all artists were architects and not all architects were involved with painting or sculpture. A few names of the period and style should be mentioned, so as to give a broader picture of this school.

Alphonse Mucha was an artist of Czech origin, active in Paris, best known for his depiction of women and the role he played in shaping the aesthetics of French Art Nouveau. He became famous for the poster he created in 1894 for the star actress Sarah Bernhardt. The new, unconventional style was an immediate hit and was named after him. It

earned him many commissions for Bernhardt and others. Mucha designs for his clients included costumes, stage decorations, magazines and book covers, posters, jewellery, and furniture. (Mucha Museum, 2002.)



**IMAGE 132**  
Sarah Bernhardt (poster), A.  
Mucha, 1894, in the public domain.



**IMAGE 133**  
Monaco, Monte Carlo, lithograph, Mucha, 1897,  
(Wikipedia Commons, Art Renewal Center)



**IMAGE 134**  
Panels by René Lalique, for The Orient Express train, restaurant car (albumphotosvoyages.fr, André)



**IMAGE 135**  
Glass vase, René Lalique, (Wikipedia Commons)

glassware, “demi-cristal”, benefitting from new technologies that made casting glass into any form possible. (Rene Lalique, Encyclopedia of World Biography 2006, via Encyclopedia.com.)

Lalique’s prominence continued in the Art Deco period as he successfully blended his style with the emerging less naturalistic one. In this period, his glassworks turned into small, relatively inexpensive decorative items, while he continued to occasionally produce large design luxury pieces and car mascots. He also designed several famous water fountains. The factory was closed following the German occupation and reopened by Lalique’s son in 1945. (Rene Lalique, Encyclopedia of World Biography 2006, via Encyclopedia.com.)

René Lalique was a French glassware and jewellery designer, whose stylistic and innovative works were among the finest during both the Art Nouveau and the following Art Deco periods. He designed and produced jewellery, architectural features (doors and windows, primarily for upscale residences) and other glass-made

decorative objects and furnishings. He felt sympathetic to the ideas of the Arts and Crafts Movement in England and his naturalistic style became apparent during the time he studied in London. He founded his own workshop (the expanded firm is still active today). The earlier phase of his work was devoted mainly to the design of jewellery, but in

1898 he established a workshop devoted to



**IMAGE 136**  
POPPY NECKLACE. René Lalique. Patinated glass, enamel, gold, rose cut diamonds, 1900-1903. (2015 San Francisco Sentinel)

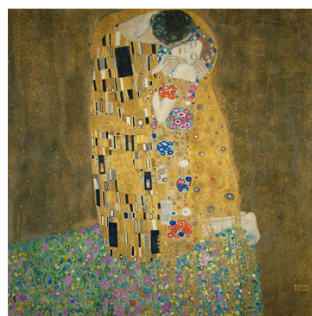


**IMAGE 137**  
Dragonfly lady brooch, René Lalique (Fundação Calouste Gulbenkian)



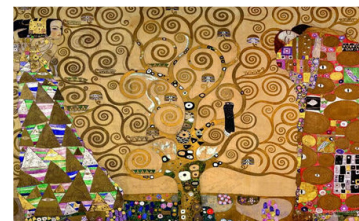


**IMAGE 138**  
Portrait of a Lady in  
Black, Gustav Klimt,  
1894  
(2015 Artsy)

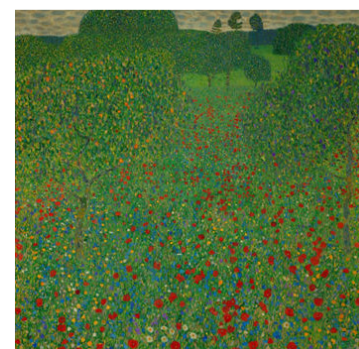


**IMAGE 140**  
The kiss, Gustav Klimt,  
1907-1908  
(2015 Artsy)

Gustav Klimt was a prominent figure in Vienna's artistic life in the period between 1900 and 1918. He was a founding member and first elected head of the Secession art association formed in Vienna in 1897, joining the already established Berlin and Munich Secession groups. The group of young anti-establishment artists hoped to bring freedom of expression to art and art to



**IMAGE 139**  
The Tree of Life, Gustav Klimt, 1905  
(Gustav-Klimt.com)



**IMAGE 141**  
Poppies, Gustav Klimt, 1907  
(2015 Artsy)

the public. (Vienna Cessation, Wikipedia; Munich Secession, Wikipedia; Gustav Klimt, Encyclopedia of visual artists.) The style

that they cultivated was called Jugendstil, 'Young Style'. Although his early style was mostly classical, by the end of the 19<sup>th</sup> century he

experimented with a new erotic-allegoric style, which was considered at his time to be pornographic and pervasive. Klimt's depiction of the new Secession art association protectress, 'Pallas Athene' (1898), using gold leaf and transforming anatomic details into ornamentation, illustrates the style he adopted thereafter. (Moffat, 2008; Smith 2012, BBC part 3, 2012.) Many of the members of the Secession movement, which insisted on the equality of all arts, were architects and designers who engaged in various forms of expression, including painting, illustration, typography, furniture and textile design. The Vienna Secession movement advocated both the notion of synergic form of art, that which is larger than the sum of its parts, "total work of art", as coined by Richard Wagner, and the utopic idea

typical of the time, that art and love had the power to change society and save the people (Smith, BBC ch-4, 2012; Rosenman 2015.)

Klimt's work combine realism and ornamental symbolism. It often incorporates gold leaf and in some works borders on the decorative rather than the purely artistic. In 1905 following a split of opinion within the group regarding commercialisation, Klimt and a group of his followers lost the vote and left the Association and the building (Rosenman 2015.) After leaving the Secession, Klimt's work was focused on eroticism and especially women. His paintings of the last period depict women in the nude in erotic positions with strong emphasis on sexuality. Towards his last years, following a trip to Rome his work includes besides women also landscapes in his own manner of impressionism. (gustav-klimt.com 2011.)



**IMAGE 142**  
Wienzeile 40, Vienna, The Majolica House, Planned and owned by Otto Wagner, 1899, (Thomas Ledl)

The style of the Viennese Jugendstil, like that of Mackintosh in Scotland, was more 'bulky' and 'heavier' than the French or Belgian one. In fact Mackintosh visited Vienna and his work was popular in Austria and Germany. Although Scottish historians insist that the influence was one sided, from Glasgow to Vienna, there are clear signs of exchange of

ideas between Hoffmann and Mackintosh, going both ways. (Billcliffe & Vergo 1977, 739; Muir 2014, 1.)

It is said that for this very feature, it played an important role as the bridge builder between modern architecture and later modernist functionalism. Hoffmann started



**IMAGE 143**  
Wienzeile 38, Vienna, 1899, Planned and owned by Otto Wagner, (Thomas Ledl)



departing from the curving lines towards more abstract form already by 1901, when Mackintosh's work was presented in Vienna. (Frampton 2011, 81.)

Otto Wagner, the architect of the Vienna Ringstrasse and Die Großstadt's plan was also the name - both architect and owner - of the two adjacent houses, number 38 and 40 on Wienzeile Street in Vienna. Number 40 is known as 'the Majolica House' (1899). The entire façade of the otherwise squared building was covered by floral ornament tiles. It was said to be highly functional, as it could be easily cleaned and hardly damaged. Its neighbour at number 38, was clearly built to match, but is decorated with golden medallions and its corner, on Köstlergasse 1, is elaborately decorative. The 'calling women' sculptures were by Othmar Schimkowitz.



**IMAGE 144**  
Postsparkasse, Vienna Otto  
Wagner, 1904-1906  
(Kuks Hannover)

In 1906 he built the Postsparkasse in Vienna (Stein, Vienna – Metropolis of the Belle Epoque). All three buildings show common structural features, yet in the Postal Saving Bank's building Wagner took still a long step away from Jugendstil and ornamentation. It is a reinforced concrete building and the structure resembles a very large metal box, an impression reinforced by the use of white

Sterzing plates and aluminium rivets as well as other aluminium elements. By 1911 the Secession was over. (Frampton 2011, 83.) Loos, who strongly rejected ornamentation and considered it 'a crime' took things a step further towards simplicity in style, when building in 1909 the Goldman & Salasch building, nicknamed the 'house without eyebrows'. (Smith, BBC ch-4, 2012.)

#### 4.2.6 The Birth of the High-rise Building in the USA



**IMAGE 145**  
Magnolia and Irises, ca.  
1908 Louis C.  
Tiffany, Tiffany Studios  
(The Metropolitan Museum  
of Art)

European Art Nouveau found its way to the USA and received here its own version of design-language by the hands of American artists, designers and architects. The

painter, glass artist and manufacturer, Louis Comfort

Tiffany was the most prominent of them. His greatest source of

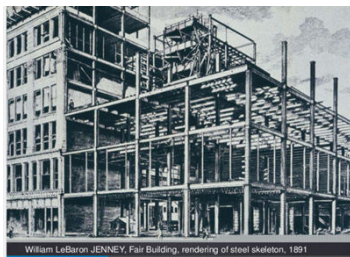
inspiration was nature, especially in his use of colour.



**IMAGE 146**  
Vase, 1893–96, Louis  
C. Tiffany, Tiffany Glass  
& Decorating Co.  
(The Metropolitan  
Museum of Art)

His versatile operations gained international fame and included artwork, stained glass, blown glass, metal work, enamels, pottery and jewellery. (The Charles Hosmer Morse Museum of American Art.)

The main contribution of American architecture in the end of the 1800s was the 'Chicago School'. The 1871 Great Chicago Fire killed 300 people and left 100,000 homeless (The United States Census Bureau page lists a total population of 298,977 for Chicago in 1870 (United States Census



**IMAGE 147**  
Skeleton of Fair building, an early  
skyscraper, W.L. Jenney, 1891  
University of Illinois ARCH 416, 2015  
Course material, Jennifer Burns

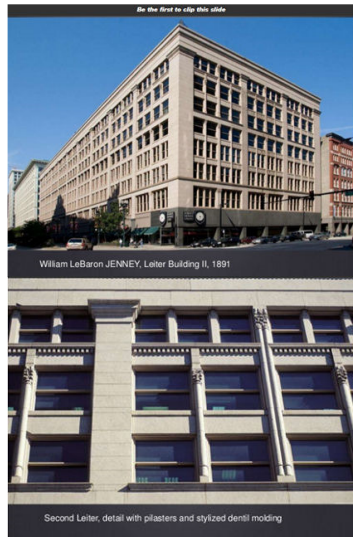
Bureau/History). The fire destroyed more than 17,000 structures in a 4-by-1 mile central area of the town, including high-rises, the iron of which melted easily in the heat of the fire. Prior to the fire, high-rise buildings required a base large enough to carry the load of the many floors above. For example a 15-floor brick building, such as the Monadnock Building,

needed 2-metre thick walls at ground level (Gympel 2013, 77).

Architects were faced by the rising price of land in the centre of the city and therefore the need to maximise floor space by building tall buildings. There was need for fast built of both office and residential buildings. To build anew, they needed to solve the technical problems of loadbearing

and fire resistance. The architects, whose work is now known as the 'Chicago School', solved these problems in a cost-effective way by using an economic and simple skeletal design made of steel, which proved far more fire-resistant than iron, and also allowed for new structural features. (Gympel 2013, 77, 78.)

Gympel writes that "Such buildings, whose consistently simple design was derived from constructive conditions and functional requirements, gave Chicago the most modern architecture in the world at the turn of the century" (Gympel 2013, 79).



**IMAGE 149**  
*Second Leiter Building*  
 1889 William Le Baron Jenney  
 University of Illinois ARCH 416, 2015  
 Course material, Jennifer Burns

Examples of such buildings are the First (1879) and Second (1889) Leiter Buildings, and the Home Insurance Building (1895). Le Baron

Jenney covered the supports, cross-girders and columns on the façade and filled in the openings created with enormous glass windows. The shape of these buildings was relatively simplified, and their already significant height was still intensified by

decorative elements of the outer shell. Similar height intensifying features can be noticed in the Guaranty (Prudential) Building, built in 1894 in Buffalo and the Wainwright Building, built in 1890 in St. Louis, both by Louis H. Sullivan and Dankmar Adler. (Gympel 2013, 79).



**IMAGE 148**  
*First Leiter Building*  
 1879 William Le Baron Jenney.  
 Demolished in 1972.  
 University of Illinois ARCH 416,  
 2015 Course material, Jennifer Burns



**IMAGE 150**  
Home Insurance Building  
1885 William Le Baron Jenney  
Demolished 1931  
(chicagology)

Some of these forefathers of the skyscrapers present features that are not common to bare modern high-rises. They were often highly decorated and adorned, both within and without (the form was that of a box but the surface was often busily decorated); and were it not for their form, they could well belong with other Art Nouveau specimens.



**IMAGE 151**  
Wainwright Building,  
St. Louis, 1890  
Dankmar Adler and L.H. Sullivan  
(City of St. Louis)



**IMAGE 152**  
Wainwright Building, 1892  
St. Louis.  
Sullivan, Adler & Elmslie  
External wall and roof-  
decoration  
(Wampa-One 2011, Flickr)

The wall decoration of the *Wainwright Building* (1890) by Dankmar Adler and L.H. Sullivan, in

St. Louis, was limited to the edge of the roof and the horizontal area underneath the windows. It does not reach the 2 lowest levels and is not clearly seen from the street. (Gympel 2013, 79.)

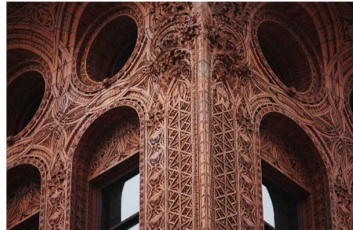
Sullivan covered the external walls of the *Guaranty Building* all over with terracotta tiles decorated with Art Nouveau motifs. On the other hand, on the street level, large windows left little room for decoration, and the rich decoration that runs along the entire height of the building, especially along the edge of the roof could hardly if at all be noticed from the street level, and is therefore relatively insignificant in relation to the entire



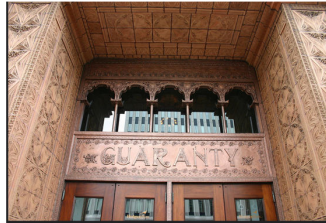
**IMAGE 153**  
Guaranty (Prudential) Building Buffalo, 1894  
Sullivan & Adler  
(Mary Ann Sullivan)



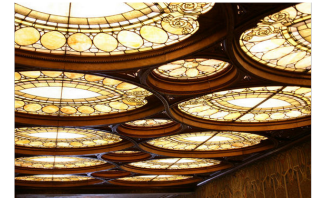
building. (Gympel 2013, 79) This combination, probably strange looking from current perspective, can be also seen in other buildings of the time, and such in which Sullivan was part of the planning team.



**IMAGE 154**  
Guaranty (Prudential) Building,  
Buffalo, façade (near the roof)  
(Mary Ann Sullivan)



**IMAGE 155**  
Guaranty Building Exterior,  
Entrance  
(Mark Hogan, Flickr)



**IMAGE 156**  
Guaranty Building Interior,  
Entrance  
(Mark Hogan, Flickr)

On decoration, or the (relative) lack of it, on the external walls of the Chicago Auditorium building, Adler wrote in 1892 that:



**IMAGE 157**  
Roosevelt University Auditorium Building,  
Chicago, 1889 by Adler and Sullivan  
(Wikimedia Commons)

*“it is to be regretted that the severe simplicity...rendered necessary by the financial policy of the earlier days of the enterprise, the deep impression made by Richardson’s ‘Marshall Field Building’ upon the Directors of the Auditorium Association, and a reaction from a course of indulgence in...highly decorative effects on the part of its architects, should have happened to coincide...and thereby deprive the exterior of the building of those graces...so characteristic of its internal treatment” (Adler 1892 in Frampton, 2011, 54).*

Interestingly, it was Sullivan himself, who decorated intensively so the external walls of the Guaranty and the Wainwright buildings (not to mention the grand Art Nouveau’esque interior of the Guaranty Building), who said that “It (the sky-scraper) must be proud and impressive to the last inch, rise up in joy, so that it forms a unit from the ground to the roof without a single deviating line” (Sullivan in Gympel 2013, 79), coined the motto “Form follows Function”, and further said that the form of a building should always be the result of considerations for its intended use (Gympel

2013, 79) (which was adopted later by the followers of modernist architecture).



**IMAGE 158**  
Carson Pirie Scott department store, Chicago, 1899, L.H.Sullivan (aviewoncities.com)

The only decoration of the *Carson Pirie Scott* department-store in Chicago (1899), planned by Sullivan, is limited to the rounded corners of the building and to the bands between the windows of



**IMAGE 159**  
Carson Pirie Scott department store, Chicago, 1899, L.H.Sullivan Detail – entrance, (Steve Silverman Flickr)

the 2 lower floors, which like the entrance façade area are intricately ornamented. As a matter of fact, decoration removed, this building could look like a building built in the 1920s or even 1950s.

(Gympel 2013, 79.)



**IMAGE 160**  
Carson Pirie Scott department store, Chicago, 1899, L.H. Sullivan Detail – Entrance, (Steve Silverman Flickr)

At the same time, contemporary buildings in New York were adorned with massive, historical façades, like the Woolworth Building (1913) by Cass Gilbert. In the eyes of the consumption worshipping American society, skyscrapers were not solely icons of economic and social progress, but with time,

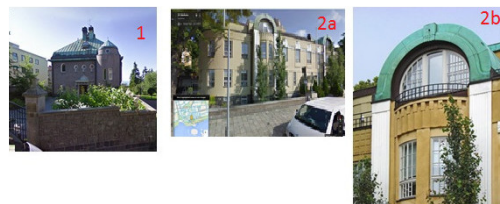
they became important status symbols and advertising mediums. For example, the form of the *Chrysler Building* (1930) incorporated Art Deco design elements that emulated company products or their parts. (Tietz 1998, 43.)

#### 4.2.7 Finland, National Romanticism or Jugend

The name given to architectural Art Nouveau in Finland, 'Jugend style' ('Jugendtyyli', after Jugendstil) was influenced by the German tradition, in which most architects in the Nordic countries were educated, in the 19<sup>th</sup> and early 20<sup>th</sup> century. (Nikula 2006, 69; Nikula 2005, 95.) The

**IMAGE 161**

- 1 Huvilakatu, Eira, Helsinki, (Museovirasto, Saara Vilhunen 2007)  
 2 Tampere, Kauppakatu 6, built 1920, (Google Earth Street View)  
 3 Tampere, Commerce building, main square; Built in 1899, Andersin, Jung and Bomanson, (M62)  
 4 Palander Building, Tampere main square, Central Square; Built in 1899, Birger Federley 1901 and Vihtori Heikkilä 1905, (M62)  
 5 Corner of Perämiehenkatu and Speranskintie, Helsinki, (Google Earth Street View)  
 6 Melior House, Eira, Helsinki, (Niko Lipsanen)

**IMAGE 162**

- 1 Armfeldintie 6, Eira, Helsinki, (Google Earth Street View)  
 2a+b Villa Ensi, Merikatu 23, Helsinki, (a) Google Earth Street View (b) Dalbera

international Art Nouveau style took different forms in different locations. The Finnish version, which happened to coincide with the exciting pre-independence time, took a special turn, got deeply immersed in the local situation, lent itself well to

the creation of the national narrative and identity, and turned in to what is known in Finland as 'Kansallisromantiikka' – National Romanticism. Finland, at the time a Grand Duchy under Russian rule, struggled to achieve independence (finally becoming a state in 1917, following WWI).

Architecture and art were serving to create a national identity, distinct from Russia and anything it stood for. Its role was to reinforce the validity of a national culture and present the Finns to the rest of the world as a nation in its own rights. (Ringbom in von Bonsdorff et al. 1998, 231.)

The Finnish variation of this international style was intended to reflect the desired national character. As the national nature could not be easily defined, it was easy to integrate non-native, even fantastic architectonic



elements to serve the purpose. National elements were taken from local medieval and later structures – old churches and castles (the latter built by the ruling Swedish Crown) – as well as Karelian and Ostrobothnian wooden architecture, combined with borrowed foreign elements, to create a Finnish national building culture. For ornaments, Finnish Jugend used local animals and plants, and Karelian elements. (Ringbom in von Bonsdorff et al. 1998, 231.)

The Finnish style elements are best observed in the town apartment buildings which often took a ‘castlesque’ form. The high reaching, rough granite footing makes the building look robust and well rooted in the ground, while the rendered, coloured façade, the varying structural elements and large windows lighten the effect. Asymmetrically placed bay



#### IMAGE 163

- 1 Finnish National Museum, Gesellius, Lindgren and E. Saarinen, 1910 (Google Earth Street View)
- 2 Kotka, Haukkavuori observation tower, originally a water tower 1914-1920, Architect: Jussi Paatela, (Kymi)
- 3 Lahti Town Hall, E. Saarinen, 1911, (Google Earth Street View)
- 4 Joensuu Town Hall, E. Saarinen, 1914, (Tuohirulla)
- 5 Tampereen Johannes' Church, Sonk, 1907, Neo-Gothic – National Romanticism and Jugend characteristics, Google Earth Street View
- 6 Helsinki Central Railway Station, E. Saarinen, 1914 Google Earth Street View
- 7 Harjukatu Lahti, Kansanopisto, Google Earth Street View

windows, and tower-like overhangs and projections give the building a medieval air and an eclectic look – as if various parts were added to it in different points in time. The entrance to the building is often an archway built as part of the granite footing. This and other arched orifices enhance the medieval look. Large windows are mostly segmented into multiple panes. The ‘towers’ often culminate in a pointed, spired or domed roof,

which add to the fairy-tale character of the building. Many of the public buildings of the period are rather monumental in size and effect, which leaves an impression of a fortification, and their square towers received a matching squared top. (Ringbom in von Bonsdorff et al. 1998, 231- 233.)

Rendered walls were mostly painted in a single or a combination of two

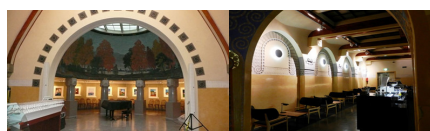


**IMAGE 164**

- 1 'Tower tops' Kauppiaankatu 2, Helsinki (Google Earth Street View)
- 2 Roofs of the corners of 'Kolmio' Kauppiaankatu 4, Helsinki, (Google Earth Street View)
- 3 Palander house, Tampere, main square, M62, Google Earth Street View
- 4 Tower tops' Kauppiaankatu 7, Helsinki Google Earth Street View
- 5 Round tower projection Luotsikatu 18, Helsinki Google Earth Street View

shades of light yellows, pinks, browns, and several shades of green, and look to the modern eye cheerful compared to those which were all-cladded in grey or brown granite. Possible decorations, far lesser compared to previous styles, were painted in off-white. In some cases ceramic tiles, strips, dentils, mouldings, and stone carvings were used. It also made use of granite - local,

traditional building material of churches and castles, which made the buildings look rather 'solid' – and incorporated picturesque neo-gothic elements, such as towers. The use of the unyielding granite (not popular earlier), was now justified as a natural, local material that suited the



**IMAGE 165**

- Jugend Hall, Lars Sonck, 1904, Uschakoff House, Pohjoisesplanadi 19, Helsinki  
 (a) Heikki Ambrusin / YLE Uusimaa  
 (b) Nadja Zhukova

solemn, sombre and strict character of the emerging nation. (Ringbom in von Bonsdorff et al. 1998, 231- 233.)

Among the leading names of the National Romanticism – Jugend style in Finland –

were Sonck, Gesellius, Lindgren and E. Saarinen.

Riitta Nikula considers that the use of the name Jugend or even National Romanticism does not express correctly the Art Nouveau style which

developed in Finland, because the Finnish architectural school was influenced not only by the German Jugend, but also influenced by that of Belgium and France, the Austrian Secession and British Arts and Crafts.

(Nikula 2005, 95.)

Examples of the style are relatively abundant, especially in Helsinki, where whole areas, such as

Eira (mainly built between 1910 and 1914) and the old part of Katajanokka (1903-1906) were built in the style.

The town plan of Eira,

like that of the Vallila and Etu-Töölö quarters, incorporated Sitte principles and their streets are curving and picturesque.



**IMAGE 166**

1 – 2 Corner of Rautatienkatu and Harjukatu, Lahti, (Google Earth Street View)  
3 Lahti, The corner of Rauhankatu and Hämeenkatu, (Google Earth Street View)

Jugend was a style difficult to achieve in wooden houses, and was more



**IMAGE 167**

1 Näveri house, 1906, Orimattila, (Google Earth Street View)  
2 Heinola, Kauppakatu 6, (Google Earth Street View)  
3 A wooden upper floor built on a stone lower one. Turku, Humalistonkatu 14, (Google Earth Street View)

popular and obvious in stone houses designed for and built by people of means. Unfortunately many of the wooden houses of the period were not maintained and preserved and very few examples survived (Piiparinen 2011, 25).

Country towns in Finland lost most of their older buildings to the wave of modernist standardisation which swept throughout in the post war years.

A few interesting examples have survived to this day, and if one looks carefully, one may be surprised to find them in the near-by surrounding.

Examples here are from Orimattila, Heinola and Turku.



#### IMAGE 168

- 1 Windows, bottom of projection, relief decoration, Kauppakatu 9, Helsinki (Google Earth Street View)
- 2 Façade moulding plaque and windows, Laivastonnkatu 2, Helsinki (Google Earth Street View)
- 3 Façade moulding plaque and faceted windows, Katajanokkankatu 1, Helsinki (Google Earth Street View)
- 4 Owl motif, under tower-projection, Luotsikatu 12, Helsinki (Google Earth Street View)
- 5 Decorative motif, Kauppiaankatu 2, (Google Earth Street View)
- 6 The entrance of Kauppakatu 2, Helsinki (Google Earth Street View)

- 7 Entrance, Katajanokkankatu 3, Helsinki (Google Earth Street View)
- 8 Kruunuvuorenkatu 2 (Google Earth Street View)
- 9 Kruunuvuorenkatu 2 (Google Earth Street View)
- 10 Dentils motif, under tower-projection, Katajanokkankatu 6, Helsinki (Google Earth Street View)
- 11 Dentils motif, under tower-projection, Luotsikatu 10, Helsinki (Google Earth Street View)
- 12 Plant motif, under tower-projection, Luotsikatu 10, Helsinki (Google Earth Street View)

Like in other places, Jugend's days in Finland too were short, and by the time WWI broke, its popularity was over. Thereafter Finland became an independent state and its architecture school followed changed with that of the time.

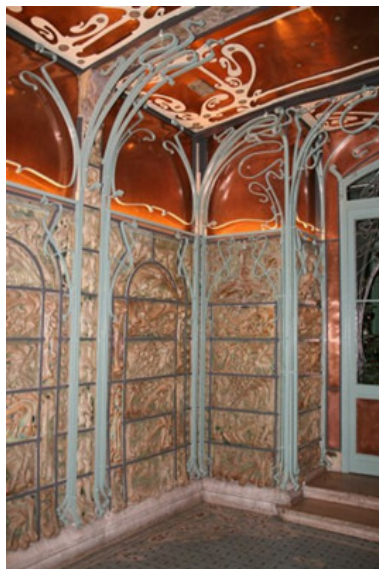


#### 4.2.8 Was Art Nouveau Merely About Ornamentation

By the 1920s, Art Nouveau in its various local versions went out of fashion. In the latter part of its short days, it was blamed for being merely decorative, focusing on void ornamentation. Already in 1908, referring to Jugendstil, the Austrian modernist architect Adolf Loos said that ornamentation was “downright criminal” because the investment in work could not be reflected in the price. Swiftly changing fashion and tastes made products undesirable and useless well before they lost their usability. (Gympel, 2013, 83.) This lack of intuitive understanding of human needs and nature, was one of the canonic ideas that brought about functionalism as it should not be understood, and opened the door to a long chain of thought and developmental errors.



**IMAGE 169**  
Rue Jean de la Fontaine 14, Paris  
Castel Béranger, Guimard  
(Google Earth, Google Street View)



**IMAGE 170**  
Rue Jean de la Fontaine 14, Paris  
Castel Béranger, Guimard Entrance  
hall to Castel Béranger, (Sébastien  
Cord)

From the distance of time and what we now know about each of the variations of the Art Nouveau movement and the players involved, although in some cases the style was used to excess and in others for ornamentation, the claim seems objectively to be unjustified and may have its roots in the struggle between modernist movements – the first of which was without any doubt the New Art. Such a claim may have well been an attempt at belittling its great contribution to modern art and architecture alike. After all, the later modernists were rather zealous and overbearing.

It is often considered that Art Nouveau could not offer solutions to the burning housing problem faced by towns and cities and that it was an elitist movement, that its products and above all, its ideas were not fit for mass production. And yet, according to French

architect Sébastien Cord, (who specialised on Guimard's work, lives in Castel Béranger and was also responsible for the restoration of the communal entrance hall) Guimard's idea for Castel Béranger, the first Art Nouveau house in Paris, was an attempt at redefining communal living and advocating for social equality; all flats are of a similar size and



**IMAGE 171-172**  
Rue Jean de la Fontaine 14, Paris Castel  
Béranger, Guimard  
Taken from the communal courtyard, BBC  
Channel 4, Sex and Sensibility, part 1

structure and there were no differences based on class or status involved. At the same time he created a work of art. Even practical elements such as the structural metal elements add to the visual effect. (Cord in Smith 2012, BBC Channel 4, Part 1.)

Art Nouveau architecture managed at the time to combine a new approach, a departure from the Historicist and Haussmannesque style, combined with artistic thinking. It created a street scape with variation of form and

material, soft, naturalistic curving lines and above all, colour – thanks to the combinations and variations, the eye does not get tired and neither is the mind. Art Nouveau architecture's visual language brought beauty and nature to the everyday environment, on every possible level, well before research has shown that life in the city has a negative effect on human health and well-being and that nature has an opposite effect and its intended introduction to the urban environment may remedy some of that effect.

There were of course regrettable cases where the variation gave way to a repetitive, rather similar designs, and those of heavy ornamentation which may had been created for the sake of ornamentation alone (beauty is indeed in the eye of the beholder), but compared to many other styles, Art Nouveau often had a deep thought at its core – cultural identity, philosophy, social and political issues – and they were on display for all to



see – if they only wanted to do so. Art Nouveau was meant to be an antidote to the ugliness and unease of the modern age, to reform the city with beauty. (Smith 2012, BBC channel 4, part 3.)

Art Nouveau had far more than nature as its source of inspiration. In today's jargon, one could say that it was environmental friendly in its use of local materials. At least in England and Scotland, it was heavily Japanese inspired – the power of the line, naturalistic asymmetry and curving lines, a certain respect for nature, respect to natural materials and textures, and frankness about human life and nature. (Smith 2012, BBC channel 4, part 2.)

We may want to remember the source of inspiration for the symbolic language of Émile Gallé – that made his social ideas known through his glass artwork, e.g. in the Dreyfus affair, in the Mortuary Chapel by Mary Watts, whose symbolic language was Celtic-Christian, and who endeavoured to create employment for the poor through craft, believing that anyone could create beauty if given the means. (Smith 2012, part 1&2.) As to the mass-production issue, we need not look further than Arthur Liberty, who made his fortune doing just that.

Would Art Nouveau have survived longer had the two World Wars not taken place? Would its destiny have been the same? What impact would it have had on the later developing architectural styles and cityscape?

#### 4.2.9 From Expressionism to Rationalism

Processing the following schools of art, design and architecture that developed side-by-side in the earlier part of the 20<sup>th</sup> century (which were categorised and compartmentalised in this manner only later on by historians), makes clear their relations of mutual inspiration and intricate reciprocal seeding. These together with a process of globalisation of ideology, politics and economy, that started in fact at the turn of the century (long before the one that we all tend to think of when the term is mentioned), culminated and evolved first into the International Style, that

later on, in the second half of the century, turned into the Global Style, known as Modern Architecture (as was the case with every “new” style that evolved in the past).

#### 4.2.10 Expressionism – Art and Architecture



**IMAGE 173**  
J. M. W. Turner  
Snow Storm, Steam-Boat off a Harbour's Mouth, 1842  
(Public Domain)

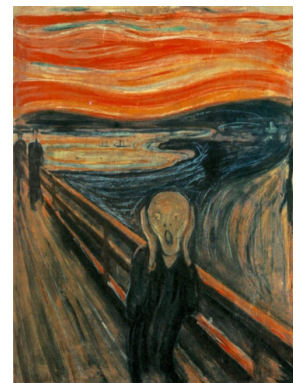


**IMAGE 174**  
The Starry Night, Vincent van Gogh, 1889  
(The Museum of Modern Art N.Y.)



**IMAGE 175**  
The Dance, Henri Matisse 1901-1910,  
(Hermitage Museum, Saint Petersburg)

Several further trends in architecture, design and art followed, and had all contributed to later developments. The Expressionist artists strove to express one's feelings about the object and convey them to the viewer, not just accurately represent reality. The movement evolved in the end of the 19<sup>th</sup> and early years of the 20<sup>th</sup> century, mostly as a reaction to Impressionism (which was all about the reproduction of nature and the effect of sunlight). The roots of expressionism are said to be found some 40 years earlier, in the work of Turner (England). Expressionism is linked to the work of van Gogh (the Netherlands), Gauguin (France), Munch (Norway), and has especially gained followers in Germany and France (Kirchner, Heckel, Mueller, Schiele, Kokoschka, Marc, Grosz, Matisse, Kupka, Modigliani, Picasso, and many others.) (Collins, Expressionism, Encyclopedia of Art History.)



**IMAGE 176**  
The Scream, Edvard Munch, 1893  
(WebMuseum at ibiblio)

The direct interplay between art and architecture is easily noticeable in the case of expressionism. Early 1900s architecture treated the building as a work of art or a sculpture. For the expressionist architect, the important aspects of the building were the artist's expression and ideas.



**IMAGE 177**  
AEG Turbine Factory, Berlin, 1908-1909,  
Peter Behrens  
(Wikimedia Commons)



**IMAGE 178**  
Fagus Fabrik, Alfeld (Leine), 1911-1913,  
Walter Gropius and Adolf Meyer,  
(Wikimedia Commons)

Peter Behrens, one of the founding members of the Werkbund and the architect of the AEG Turbine factory in Berlin (1909), started out as an artist and was later involved with applied art and Art Nouveau architecture in Germany. According to Gympel the turbine factory was a milestone of modern architecture, because he totally avoided any form of "Historicist disguise". (Gympel 2013, 84.) It was a high, column-free, light-filled hall, a monumental temple of work. In contrast, the Fagus factory, designed by his pupil, Walter Gropius, and Adolf Meyer, is a light, almost transparent cube that used no symbolism and was later

considered a prediction of the formal language of Rationalism. (Gympel 2013, 84.)

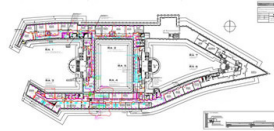
Expressionist architects, contemporaries of the mainstream International Style practitioners, were centred primarily in Germany, the Netherlands and Scandinavia. They tried to cope with the industrial age by giving it an artistic, expressive interpretation. Reacting to the mechanisation of war (World War I, lost by Germany) "Expressionism rejected the machine age as the foundation of artistic creation. In architecture, this came out as the opposition to design as conditioned only by utility, materials, construction, and economics" (Sennot 2004, 805). They considered political and artistic revolution one and the same and reflected that in their work. They favoured Jugendstil for its romantic longing and rejection of industrial construction methods. Instead of making the form to follow function, they



**IMAGE 179**  
Chile House, Fritz Höger,  
1922-1923 Hamburg, various  
angles (Google Earth Street  
View)



**IMAGE 180 a+b**  
Chile House, Fritz Höger,  
1922-1923 Hamburg, various  
angles. (Google Earth Street  
View)



**IMAGE 181**  
*Chile House, plan*  
(Bauatelier, architecture and  
engineering, Hamburg)

favoured 'expression over function', an idea supported by Gothic and Far Eastern architecture, where sculptural forms were prevalent, and

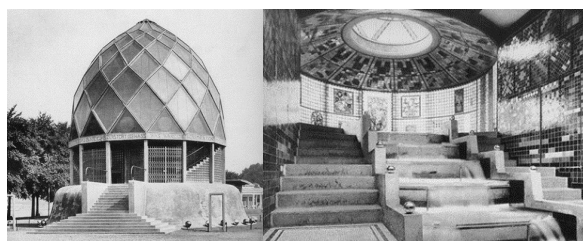
influenced by literary and philosophical sources. The expressionist conception of the building was that of a total work of art and Expressionist architects attempted to solve the problems of the world through symbolic architecture that appealed to the intellect through feelings. (Sennot 2004, 806.)

Expressionism considered that structure, material and function were secondary to the world-view and emotions of the artist-architect. (Gympel 2013, 84.)

The expressionist architects integrated the tradition of using unrendered bricks in the creation of various forms of façade ornamentation, together with contrasting white, adorned window frames, of which

Fritz Höger's Chile Haus in Hamburg (1922-1923) is

an example. It is said that its impression is Gothic-dynamic, free of the ground below, "victorious over the dreadful (post WWI) times". (Gymel 2013, 86.)



**IMAGE 182**  
Glass Pavilion at the Cologne Deutscher Werkbund Exhibition  
1914, Bruno Taut,  
(Photographer unknown)

The Glass Pavilion was designed by Bruno Taut for the Werkbund Exhibition of 1914 in Cologne. According to Kai Gutschow, "Taut gradually transferred ideas from Expressionist painting to

architecture and helped move his designs, and with it modern architecture more generally, from a focus on visual 'object' to multisensory 'experience'..." (Gutschow 2006, 63). His use of glass, steel and concrete, the materials of the post WWI new buildings, was highly innovative.



According to Frampton, Taut designed the crystalline structure “in the spirit of a Gothic cathedral” (Frampton, 2001, 116). This structure was an exemplification of Taut’s idea of the ‘City Crown’ (an urban concept of a city’s central communal point, modelled after the medieval cathedral or temple, a universal model of all religious inspiring buildings that will serve as an essential urban element for the restructuring of society). (Frampton, 2001, 116.) It was said that glass architecture would bring a new culture, which seems not very far from where we are today.



**IMAGE 183**  
Einstein Tower, Potsdam  
Mendelson, 1912  
(Google Earth, Street View)

The astrophysical observatory, named Einstein Tower, was built in 1921 in Potsdam by Erich Mendelsohn as a “Stadskrone”. It was originally conceived in concrete as a built sculpture, but due to the inadequate construction technology at the time, was built of bricks and covered with stucco, which allowed for smooth and organic curves. According to Eric von Eckardt who studied Mendelsohn’s work, Mendelsohn said

that he had designed it out of some unknown urge, letting it emerge from the mystique around Einstein’s universe. (Eckardt 1960 in Einstein Tower, Wikipedia.) His design was affected by the sculptural forms of Van de Velde’s Werkbund Theatre, the Glass Pavilion by Taut, and also to the thatched-roof buildings by the Dutch architects Eibink and Snellebrand. (Frampton, 2001, 120.)



**IMAGE 184**  
*De Dageraad* (1918-1923)  
in Amsterdam, architecten:  
Michel de Klerk en Piet  
Kramer (Janericloebe)



**IMAGE 185**  
Michel de Klerk’s Eigen Haard  
(Janericloebe)

After the completion of the observatory he visited various expressionist housing projects in Amsterdam, including Michel de Klerk’s Eigen Haard and Piet Kramer’s De Dageraad. This more structural Dutch Expressionism style of building had an immediate

impact on Mendelsohn, who turned after this visit from plasticity to

“intrinsic structural expressiveness of materials”.

(Frampton, 2001, 120.) In the late 1920s and early 1930s Mendelsohn assembled in his buildings simple geometrical units and tidily profiled edges. (Frampton, 2001, 122.)



**IMAGE 186**  
The renovated Mossehaus,  
Berlin, 1921-1923,  
(Stoha, Wikipedia.de)

Mossehaus, was a renovation project 1921-1923, for which Mendelsohn he designed new floors, frontage and entrance. He gave the otherwise Wilhelmine style (1890-1918) building a new, streamlined look, using

stripes and sculpted elements in the fenestration. It is considered that this project had great influence on Streamline Moderne (Mossehaus, Wikipedia).

#### 4.2.11 From Art Deco to Streamline Moderne

The style that evolved between the two World Wars (the 1920s and the 1930s) as a reaction to the austerity of WW1 is known as Art Deco. It probably owes its name to the 1925 Paris Exhibition, “Exposition Internationale des Arts Décoratifs et Industriels Modernes” organised by the association of French artists led



**IMAGE 187**  
June 1927. Cover by Harriet Meserol. Image via Diana Moss  
(Booooooom Design Inc.)



**IMAGE 188**  
The Musician, Tamara de Lempicka, 1929  
(Tamara Art Heritage)



**IMAGE 189**  
1 Spirit of the Wind, car mascot René Lalique, 1930 (Wikimedia Commons)  
2 Peacock Tray, Jean Dunard, 1914, (Wikimedia Commons)  
3 Jean Dunand & Jean Goulden – Lacquered cabinet, 1921, (WideWalls)



by Hector Guimard, whom we met already in the discussion of Art Nouveau in Europe, and

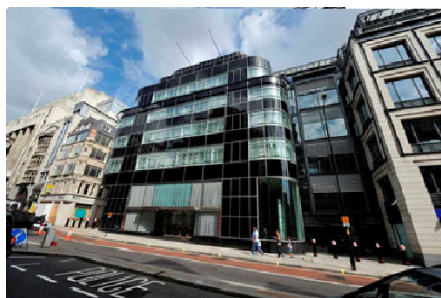
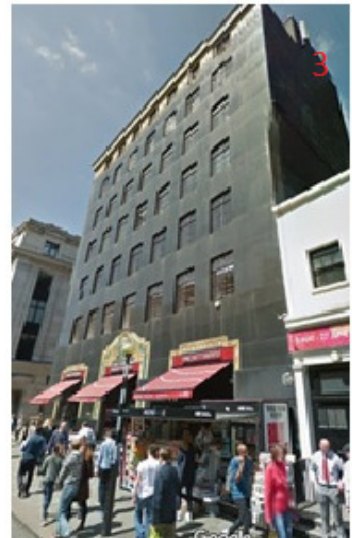
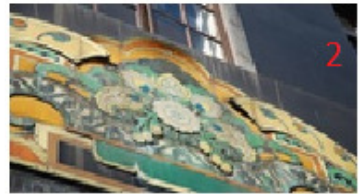


**IMAGE 190**

1 The Hoover Building, Wallis, Gilbert and Partners, 1933-1938 (Wikimedia Commons)  
 2 The main entrance  
 3 The Hoover Building, (Richard Rogerson)

others. (Art Deco, Victoria and Albert Museum, Collins, Art Deco, Encyclopedia of Art History). The name Art Deco was given to the most ornamental phase in the 1920s-1930s only

in the 1960s by art historians. It was an eclectic style that was influenced by and drew from many sources, including Art Nouveau (especially those more linear in nature, such as Josef Hoffmann and Charles Rennie Mackintosh), Cubism, Futurism, Constructivism, national folk art – Egyptian and Aztec art, and Classical Antiquity. It was highly decorative and colourful but unlike Art Nouveau had no ideological basis. (Art Deco: Design influences, Victoria and Albert Museum).

**IMAGE 191**

1 The Daily Express Building, London, Ellis and Clark, 1932 photo (Nick Weall) 2 Entrance hall, recreated (Max Alexander)

**IMAGE 192**

Palladium / Ideal House  
 1-3 Agryll Street, Soho, London  
 Hood and Jeeves 1929  
 (Monmouth Dean 2010 and Google Earth Street View)

Art Deco was adopted by architects and designers around the Globe. Its angular, stepped and radiating lines and bright colours were a sharp contrast to the sinuous lines of Art Nouveau. It was the style of progress and speed, and together with it being a lavish

and opulent style it radiated luxury, glamour and exuberance. It was the style of advanced technology and social progress. Art Deco had an impact on every aspect of art and in that way also on architecture in both Europe and the USA.



**IMAGE 193**

- 1 Detail, Bell Telephone building, Washington DC, (decopix.com)
- 2 The Theatre of Champs-Élysées, Paris, August Perret, 1913, (Wikimedia Commons)
- 3 Apartment building and public swimming pool, 13 Rue des Amiraux, Paris, 1922-1927, Henri Sauvage, (Wikimedia Commons)
- 4 Henri Sauvage, 26 Rue Vavin, Paris, 1912-1914, (Wikimedia Commons)
- 5 Bank, Buffalo, NY, (decopix.com)
- 6 Le Samaritaine, Building 2, Paris, Henri Sauvage 1928, (Wikimedia Commons)
- 7 Ocean Drive, Miami Beach Art Deco District, Florida. (Circa Old Houses)

Art Deco architecture features upward rising lines and angular shapes. The building and the interior are bold and highly decorated. Designs are colourful, rich and geometric. The American stock-market crash of 1929



**IMAGE 194**

- 1 Senate House, University of London, UK, Charles Holden, 1937, (Wikimedia Commons)
- 2 Bell Telephone – NYC, (decopix.com)
- 3 Chrysler Building, New York City (Carol Highsmith)

initiated the global gradual decline of style and the emergence of the Streamline Moderne – changing the linearity from upward vertical to horizontal.

Ornamentation changed from rich to clean and austere. The dazzling

details and sharp angles became clean surfaces and curves. (Juster 2010, Decopix).

We nowadays use the term 'Art Deco' to refer not only to the typical Art Deco style as already described, but very often also to Streamline Moderne/Art Moderne, Bauhaus, and even De Stijl and Rationalist architecture. Yet, these modernistic styles, although related and contemporaries, are different in their essence and development.



**IMAGE 195**

1 Lasipalatsi, Helsinki, 1935-1936, Revell, Riihimäki, Kokko, (Google Earth Street View)

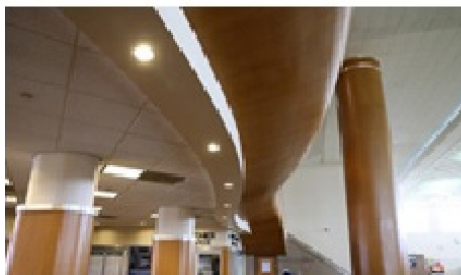
2 Alvar Aalto, Paimio sanatorium entrance, 1929-1933, (Jussi Kallioinen / Yle)

3 Paimio (Leon Liao)

4 Ty-Kodak Building, Quimper, France, Olier Mordrel, 1933, (Michiel2005)

5 De La Warr Pavillion, Bexhill, England, Erich Mendelsohn, 1935, (Alan Stanton)

Both the Daily Express and the Hoover side building incorporate both Art Deco and Streamline Moderne features. According to the Encyclopedia of



**IMAGE 196**

Greyhound Depot, Cleveland, Ohio by W. S. Arrasmith General view and details, (decopix.com, and Advance Ohio)



20<sup>th</sup> Century Architecture. (Sennot 2004, 123-124.) The change and departure from Art Deco was gradual. The Streamline Modern style was influenced by nautical themes and movement. The ornamentation underwent a major reduction, moving gradually towards the essence of structure and function and the direction shifted to a horizontal position. It is characterised by curving forms and long horizontal lines. Windows are often arranged in continuous horizontal bands. While the design language of Art Deco was most suitable to corporations, expressing might, power and success, the horizontal Streamline Moderne was better suited to buildings that served transportation, and was frequently applied to air, train and bus terminals, gas-stations and road-side diners. Streamline Modern coincided and fitted well the Depression Era. (Sennot 2004, 123-124; Juster 2010, Decopix.)

#### 4.2.12 Bauhaus



**IMAGE 197**  
Bauhaus school building in Dessau, Germany, 1926, Gropius, (Mewes in de-Wikipedia)

The German revolutionary school of art, architecture and design that advocated the idea of “total works of art” (Gesamtkunstwerk) was created by a community of artists working together and



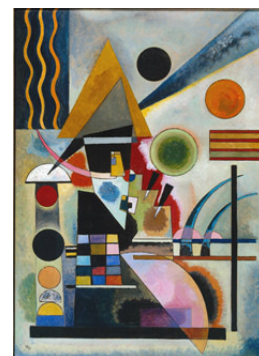
**IMAGE 198**  
Comedy, Paul Klee, 1921, (DACS, 2002)

bringing back art into everyday life. The school, (opened in 1919 and closed in 1933 under the pressure of the Nazi regime), gained a central position



**IMAGE 199**  
Circle, Josef Albers, 1933, (The Joseph and Annie Albers Foundation/VG Bild-Kunst, Bonn and DACS, London, 2016)

and greatly influenced modern design, art and architecture. It was founded and headed by the architect Walter Gropius (1919-1928), and later on by the architects Hannes Meyer (1928-1930) and Ludwig Mies van der Rohe (1930-



**IMAGE 200**  
Swinging, Wassily Kandinsky, 1925, (Tate, London)

1933). The teaching staff of the Bauhaus school included many artists, and in the beginning consisted almost entirely of painters. The purpose was to stimulate the students and develop their creativity. Among the teachers we find Feininger, Itten, Muche, Schlemmer, Klee, Kandinsky and Moholy-Nagy. (Bauhaus, Tate Glossary.)

The ideology of combining art and manufacture and the manner of operation of the school matured through a lengthy and complex process. As a result, the school underwent several changes of direction and focus from romantic medievalism to the unification of art and industrial design – its most original achievement. (Borteh, The Art Story Foundation.)

Prominent differences of approach and opinions between its leading figures involved, among others, the sharp difference of approach by Gropius and Itten, and the appeal of the Dutch De Stijl introduced to the school by Theo van Doesburg. (Frampton 2011, 125.)

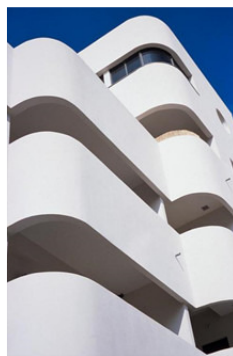
Two model houses were largely built and furnished by the Bauhaus: the Sommerfeld House (1922, designed by Gropius and Meyer), a traditional total-work-of-art log house, and the Bauhaus Experimental House (1923, designed by Muche and Meyer), that was a “Wohnmaschine” (living machine) that featured minimum circulation, was smoothly rendered, and was equipped with the latest labour-saving devices. These houses illustrate well the ideological change that took place within the school. (Frampton 2011, 126-127.) It is also interesting to note that in the very same year, 1923, Le Corbusier, the former fellow employee of Gropius, Meyer, Kramer and Mies van der Rohe at Behrens’ office, wrote in *Vers une architecture* (Towards an Architecture) “Une maison est une machine-à-habiter” (A house is a machine for living in).

After 1923, the approach of the school became close to the *Neue Sachlichkeit* (‘New Objectivity’) movement, which advocated practical engagement with the world, and was reflected in the Bauhaus Dessau buildings (1926). (Frampton 2011, 127.) The nowadays recognised approach of the Bauhaus—in which the form derived from the method of

production, constraints set by material, and necessity—emerged thereafter, and by 1927 the ‘licensed’ industrial production of the furniture designs, texture fabrics, lamps and metal was in full operation. (Frampton 2011, 128.)

The department of architecture opened in 1928 under the leadership of Johannes Meyer, that also took over from Gropius as the head of the school. He steered the school further towards “socially responsible design”. In 1932, the successful, highly productive school that was allegedly sympathising with leftist ideology, was closed by the Nazi regime. (Frampton 2011, 129.)

The Bauhaus placed crafts on par with fine arts and paved the way for many of the ideas that have inspired artists in the late 20th century. (Borteh, The Art Story Foundation.)



**IMAGE 201**  
Bruno House, Tel-Aviv,  
(Yigal Gawze)

Declared a World Cultural Heritage site by UNESCO (2003), Tel-Aviv “White City” area, designed by Jewish architects that escaped Nazi Germany in the 1930s and 1940s, houses the largest group of buildings in the Bauhaus, or International Style in the world. (White City of Tel-Aviv, UNESCO.) Among these 19 architects were Arie Sharon, Dov Carmi, Zeev Rechter, Pinchas Hueth, Josef Neufeld, Genia Averbuch Richard Kauffmann and Erich Mendelsohn.



**IMAGE 202**

- 1 Massaryk Square neighbourhood, central Tel-Aviv (Google Earth Street View)
- 2 Freishman Street, Tel-Aviv (Google Earth Street View)
- 3 Massaryk Square neighbourhood, central Tel-Aviv (Google Earth Street View)

“This group created a new architectural language, which is rich and diverse, characterized by its asymmetry, functionality and simplicity. The



balconies, building pillars, flat roofs and "thermometer" windows became the trademarks of the city". (Gawze 2009.)

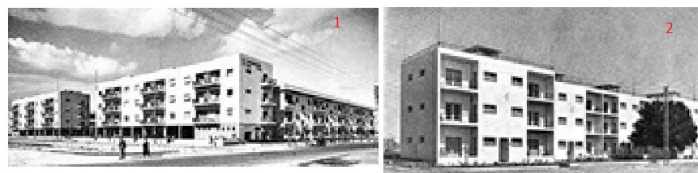
The easily noticeable characteristics of the Bauhaus style are the functional design, lack of ornamentation, and asymmetry and regularity combined. The houses are usually cubic and right-angled and have smooth facades. Some corners and balconies are rounded. The houses built in Tel-Aviv were painted white or beige (hence the name "the White City"), probably to suit the sunny climate, although these are not necessarily characteristic to the style. Unlike their European counterparts, the Bauhaus buildings of Tel-Aviv sport flat roofs. The large European windows were made smaller and in many of the buildings one finds long and narrow horizontal windows and long and narrow balconies. The horizontal strip of windows, noticed in some of the buildings are attributed to the fact that some of the architects who planned the houses worked for a while in Le Corbusier's office in Paris and were influenced by his style. The first building on pilotis, following Le Corbusier's idea was built in 1933. (Zisling, 2000.) This started a long history of building apartment-buildings on stilts (still popular in the 1990s), leaving the ground floor, not to the original common garden area, but for parking cars. (Engel House, Wikipedia, Hebrew.)



**IMAGE 203**

Engel House, 1933 Zeev Rechter, (Izhak Kelter, scanned from "Houses Risen from the Sand", currently in the public domain)

Purists restrict the use of Bauhaus to buildings in Germany alone and term anything in the style built outside Germany 'International Style'. Most



**IMAGE 204**

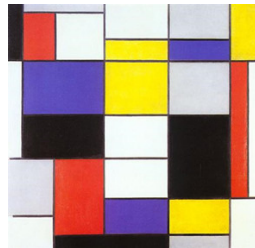
1. Meonot Ovdim A, Workers' housing, Tel-Aviv, Arie Sharon, 1931 (Esther Zandberg and Achbar Ha-Ir)
2. Workers' housing, Neufeldt, 1936, Kiryat Avoda, Holon, (Haaretz)

others use both terms interchangeably, and it should in fact also include late Art Deco and Streamline Moderne. After all, the term 'International

Style' was coined by Hitchcock and Johnson's book, so titled, published in 1932. (Zisling, 2000.)

#### 4.2.13 De Stijl

The intention of the De Stijl group, founded in 1917, was to abolish natural form to allow for pure artistic expression. They strived to create a pure reality by eliminating all until nothing could be eliminated any further. The result of such ideas were the minimalist paintings of Piet Mondrian, consisting of



**IMAGE 206**  
Piet Mondrian,  
Composition A, 1923  
(public domain)

squares in red, Blue and yellow (the basic colours) and white, and black lines. (Gympel 2013, 87.) The Schröder House in Utrecht (1924) is considered the most important of the few buildings that were realised in this style. It was designed by Gerrit Thomas Rietveld (joined De Stijl in 1919), who started

as a furniture maker, and in 1917 created a chair made of standardised timber elements, which he intended for mass production. The 2<sup>nd</sup> floor of the Schröder house has movable walls that allow the reallocation of spaces, like a dynamic Mondrian painting. (Rietveld Schröderhuis, UNESCO.) The house design is special for its time in the way the architectural space is handled and in the way it fits the concept of the function of a building. The building clearly has many artistic qualities. The interiors and furniture were designed especially for the house and are an integral part of it. The house has influenced many architects then and now, and is considered to be close to that of 20<sup>th</sup> Century Rationalist Architecture, New Architecture, or Functionalist Architecture. (Rietveld Schröderhuis, UNESCO; Gympel 2013, 87.)



**IMAGE 205**  
Schröder House in Utrecht  
Gerrit Rietveld, De Stijl, 1924  
(Wikimedia Commons)

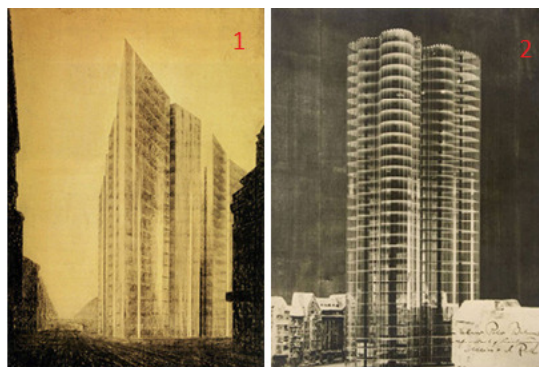


**IMAGE 207**  
Red and Blue  
Chair, Gerit  
Thomas Rietveld,  
1917, (Wikimedia  
Commons)

#### 4.2.14 International Style – Rationalism

Although already discussed in part within the earlier sections of the closely related planning and design styles, and often considered as an interchangeable term for Bauhaus, in its broader definition, International Style, or Rationalist Architecture, reaches further, and needs to be discussed on its own. The type of design has its roots in the 1920s in Germany, Holland and France and spread to the USA in the 1930s. In the USA, especially its sleek and ‘modern’ look, which was totally void of decoration, and the manner in which steel and glass were used, was found to be well suited for skyscraper architecture. This made it between the 1950s and 1970s also synonymous with Corporate Modernism. (Collins, International Style, Encyclopedia of Art and Design.)

The term “International Style” was coined by the curators of the “International Exhibition of Modern Architecture”, held in New York in 1932 (where most of the buildings exhibited, as examples of the ‘modern style of architecture’, were European) (Zisling 2000; Collins, International Style, Encyclopedia of Art and Design.) The names associated with the style are Walter Gropius (Germany and later on the USA), who we met already in connection with the Bauhaus school, Jacobus Johannes Pieter Oud (a co-founder of the De Stijl movement) in Holland, Le Corbusier (Charles



**IMAGE 208**  
Friedrichstrasse all glass skyscraper planned by Mies van der Rohe, on the left the 1921 and on the right the 1922 version.  
(Building Design 2014)

Edouard Jeanneret-Gris) in France, who is discussed in this paper on his own, thanks to the large shadow he managed to leave on architecture and town planning, and Richard Neutra, Philip Johnson and Ludwig Mies van der Rohe in the USA.

(Collins, International Style, Encyclopedia of Art and Design.)

Ludwig Mies van der Rohe, who emigrated to the United States from Nazi Germany in 1938, was originally a founding member of the architectural

association Der Ring, and Director of Architecture with the German Association of craftsmen, Deutscher Werkbund, and the last head of the Bauhaus school, before it was shut down by the Nazi Regime. In 1921 and 1922, long before planning skyscrapers in Chicago, he planned 2 versions of the Glass Skyscraper (Friedrichstrasse, Berlin), which were well ahead of their time and never realised. They would look well at home in many of the large cities of today. (Collins, Ludwig Mies van der Rohe, Encyclopedia of Art and Design.)



**IMAGE 209**  
Ludwig Mies van der Rohe, The German Pavilion, Barcelona 1929 (Wikimedia Commons)

Well before his move to the United States, Mies van der Rohe showcased modern architecture in his exquisitely modern and (then) visionary design of the German Pavilion for the Barcelona Exhibition of 1929 (and the iconic Barcelona chair), which later evolved into the Tugendhat House in Brno,

Czechoslovakia (1930). Once in the USA, he built the Farnsworth House (1945-1951) – a glass pavilion meant to serve as the weekend retreat of Dr Edith Farnsworth. (Collins, Mies van der Rohe, Encyclopedia of Art and Design.)



**IMAGE 210**  
Barcelona Chair, L.M. van der Rohe, 1929 (Wikimedia Commons)



**IMAGE 211**  
Villa Tugendhat, Património da Humanidade em Brno, L.M. van der Rohe 1930 (Viajar a Praga)

Studying these buildings reveals elements that were inspired by idealised Japanese concepts of traditional design and temple and palace architecture, above all others, the idea of borrowed (outdoor) views (which in the design language of the

Japanese garden serve to expand small gardens beyond their limits). Mies van der Rohe often borrowed 'into the house' whole landscapes, well



beyond the border of one's private garden, or tried (at the same time) to make his relatively transparent building as if 'vaporise' by being able to see the view beyond through its walls. Signs of inspiration by traditional Japanese architecture may be also found in his idea of the unintrusive, open-plan, low building devoid of ornamentation, in the



**IMAGE 212**  
Farnsworth House, Mies van der Rohe, 1945-1951, Fox River in Plano, IL  
(National Trust for Historic Preservation)



**IMAGE 213**  
The Glass House, Johnson House, Philip Johnson, 1949, (National Trust for Historic Preservation)

internal walls that did not need not bear weight, and could be easily relocated, and in the austere style.

Later on Philip Johnson, who curated an exhibition of the works of Mies van der Rohe at the Museum of Modern Art

(1947) took the idea of the Farnsworth glass house and developed it further into his Glass House, built in 1949 in New Canaan, Connecticut. It is said that "the building is an essay in minimal structure, geometry, proportion, and the effects of transparency and reflection". (The Glass House, National Trust for Historic Preservation.)

Oud considered that ornamentation was a manner in which architecture covered up imperfections in the 'balance' of the design, and that the aesthetics of the ornament-free style was in the 'rhythm' and in the balance of the parts, which are interdependent in a complex manner, and which only together and only in the composition they are in, form a perfect design. "An ornament-free architecture



**IMAGE 214**  
1 Kiefhoek Estate, Rotterdam, JJP Oud, 1925-1929, (Tim Benton)  
2 Stuttgart, Weissenhofsiedlung, gallery house by J.J.P. Oud. 1927 (Wikimedia Commons)  
3 Kiefhoek Estate, Rotterdam, JJP Oud, 1925-1929, (Tim Benton)

demands the maximum purity of the architectural composition” (Oud 1921 in Gympel 2013, 88).

International style, an early form of minimalism, was characterised by skeleton of steel and reinforced concrete, asymmetric structure, right angles, purity of line and surfaces of strict geometric elementary forms, flat roofs, white-plastered walls (or coloured, in the case of Taut and Le Corbusier), window-bands, glazed curtain façades, and pilotis (Gympel 2013, 88; Collins, International Style, Encyclopedia of Art and Design.)

#### 4.2.15 Le Corbusier

Charles-Edouard Jeanneret-Gris, better known as Le Corbusier, was one of the group of architects that worked and trained at the office of Peter Behrens that included, Mies van der Rohe and Gropius, who later became imminent figures of modern architecture. Le Corbusier did not develop his ideas in a vacuum, but rather borrowed ideas and further developed and integrated them in his ‘grand plans’. (Collins, Le Corbusier, The Encyclopedia of Art and Design. Frampton 2007, 149-150) “His ideas on building design were influenced by Frank Lloyd Wright's Prairie Houses, the AEG works of Peter Behrens, the concrete, glass and steel designs of Walter Gropius, the spatial concepts of Gerrit Rietveld (1888-1964), the geometrical lines of De Stijl, and the social awareness of Russian Constructivism (later the Soviet Narkomfin Building)” (Collins, Le Corbusier, The Encyclopedia of Art and Design).

Besides his utopian ideas regarding urban structure and function, Le Corbusier developed several concepts of buildings, intended originally for his ideal Cities, which came to influence modern building. He also left us with some examples of such possible buildings. His residential buildings, small and large, are based on his theoretical ideas, and were built to showcase them.

**Le Corbusier's art:** The discussion of the work of Le Corbusier, should also mention his various works of art, and his notion of ‘Purism’ of art,



which may help one better understand his perception of the world. According to the Portuguese-Mozambican architect and artist, Amâncio (Pancho) Guedes, Purism (the art movement briefly led in the 1918-1925 by Ozenfant and Le Corbusier (Collins, Le Corbusier, Encyclopedia of Art and Design)), although the least known, was the most influential of modern art movements, and shaped the definitive image of the 'International Style' through the work of Le Corbusier. According to Guedes, many of the modernist architects were also painters or had close friendships with painters, and therefore a strong dependence prevailed during much of early modern architecture on painting, and Cubism, Constructivism, De Stijl and Purism were all instrumental in the creation of the various currents of modern architecture. Yet, Guedes finds a difference between De Stijl, where the art and the architecture fully met, and the work of Le Corbusier and Purism, which had a more 'complex and poetic' connection, rather than a direct one. (Guedes, 2004, 250.)



**IMAGE 215**

1 Le Corbusier, 1920, Guitare verticale (1ère version), (FLC/ADAGP)  
2 Amédée Ozenfant, 1920-1921, Nature morte (Still Life), at San Francisco Museum of Modern Art, (Wikimedia Commons)

In relation to Purism, Le Corbusier was Ozenfant's 'disciple', and both considered Purism to be an intellectual and constructive successor of Cubism (which they considered, had

degenerated into a decorative style) and Dadaism (which was just negative). Their idea was that man was a geometrical animal, animated by a geometrical spirit. Machines were solutions to problems and technical realization was the materialisation of the concept. Thus, a work of art should evoke 'a sensation of mathematical order' and that this order should be achieved through 'universal means'. (Guedes, 2004, 250.)

Purist art aspired to be an ‘industrial art’—one that would mimic mass-produced objects—and the Purists painted everyday objects, which in their eyes, had reached in their simple shapes ‘an anonymous standardised purity’ using a method fit for industrial production rather than for a creative one. (Guedes, 2004, 250-251.)



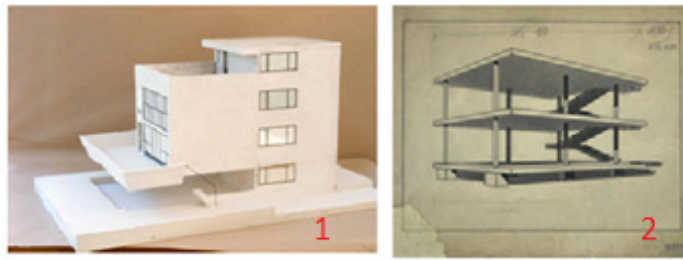
**IMAGE 216**  
Le Corbusier, 1936-1937  
Deux musiciennes, (FLC/ADAGP)



**IMAGE 217**  
Le Corbusier, 1932  
La danseuse et le petit félin,  
(FLC/ADAGP)

Many architects served as sources of influence for Le Corbusier’s ideas and are mentioned within the text that deals with his work in town-planning and architecture. Guedes mentions two names that influenced Le Corbusier’s art paintings and sculptures, Ozenfant and Fernand Léger. With Ozenfant, who acted as Le Corbusier’s painting mentor, he launched *L’Esprit Nouveau* (The New Spirit) – a monthly art publication. Le Corbusier and Ozenfant were quite inseparable, until Le Corbusier published a collection of articles they published in the magazine as a book by the name “Towards an Architecture”. Ozenfant, who was the (minor) co-author of these, was left out by the now successful architect. (Guedes, 2004, 251.) Later paintings by Le Corbusier are abstractive and his main theme seems to be robust and heavily curving female figures.

**Le Corbusier’s Architecture:** In 1914 Le Corbusier presented his “Dom-ino” system – an idea of an open-plan skeleton made of concrete slabs supported by reinforced concrete columns and a staircase between the levels. The rest, including the walls (non-load-bearing), windows, doors, etc., could be selected by the developer or client from a catalogue of parts – to create the final product (Gympel 2013, 89). Dom-ino was structurally based on the Hennebique frame, which he kept on using for most of his house plans (Frampton 2011, 151).

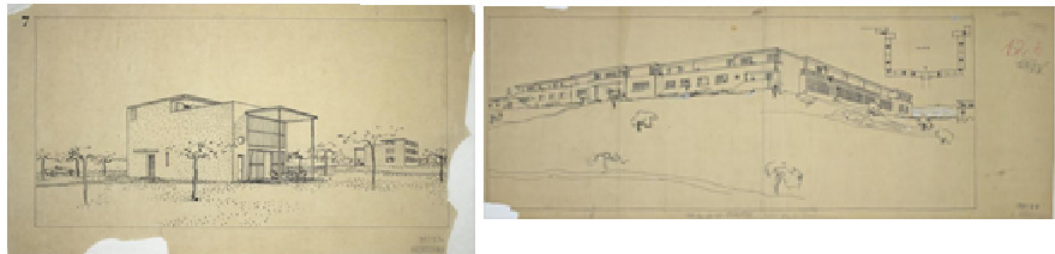
**IMAGE 218**

1 Maison Citrohan 1922, (FLC/ADAGP)

2 Maison Dom-Ino 1914-1915, (FLC/ADAGP)

He used Dom-Ino as his template, later on employed for single family and the dwelling unit of the larger multiunit blocks raised on pilotis alike.

The inspiration for the Dom-Ino system was the result Le Corbusier's meeting with Garnier in 1907 and thereafter his stay at the Charterhouse of Ema, in Tuscany, which impressed him deeply. (Frampton 2011, 150.)

**IMAGE 219**

1 Maison Citrohan (inspired by Charterhouse Ema) 1927, (FLC/ADAGP)

2 Maison Dom-Ino, (FLC/ADAGP)

“Le Corbusier identified Ema (monastery) as a social and spatial model for how individuals and families might participate in collective activities without losing their privacy”. (Coleman 2007, 137.)

Le Corbusier considered that buildings, like machines, should be serial industrial products. He revealed his model of Maison Citrohan for the first time at the Autumn Exhibition in Paris (1922). This was a further combined development of the ‘Maison Dom-Ino’ and the ‘Ville Pilotis’ concepts, “a double-height living space, complete with a sleeping mezzanine and children’s bedrooms on the roof”. (Frampton 2011, 153.)

**IMAGE 220**

Ville de Pessac, France, Le Corbusier 1926  
(pessac.fr)

Le Corbusier attempted to have his models realised, and in 1924-1926 used a version of the Maison Citrohan in the estates Quartiers Modernes

Frugès which he built in Lège and later in Pessac (France), on commission by the industrialist Henry Frugès, who in turn, inspired by Le Corbusier's book, wanted to create a small working class quarter. (Le Corbusier, Ville de Pessac.) Frugès indicated that he meant the site to be "a laboratory" for Le Corbusier's ideas and theories – he was given "a life-size sandbox to roll out his vision of economic, standardised, mass-produced properties which were geometrically sparse, minimalist and functional". (Le Corbusier's Cité Frugès, Invisible Bordeaux.)

**IMAGE 221**

1-3 Houses in Quartiers Modernes Frugès, Ville de Pessac, France, Le Corbusier 1926,(FLC/ADAGP)  
4 Houses in Quartiers Modernes Frugès, Ville de Pessac, France, Le Corbusier 1926, Copyright (Invisible Bordeaux)

The 50 flat-roofed houses, in 6 optional designs, were built from identical size units of reinforced concrete. (Quartiers Modernes Frugès, Pessac France 1925, Fondation le Corbusier.) Only the outer walls were load-bearing, so that modification of the interior was made easy. Some of the external walls were painted colourful (kudos to the designer) to brighten up the impression. The workers of Frugès' factory found the houses too

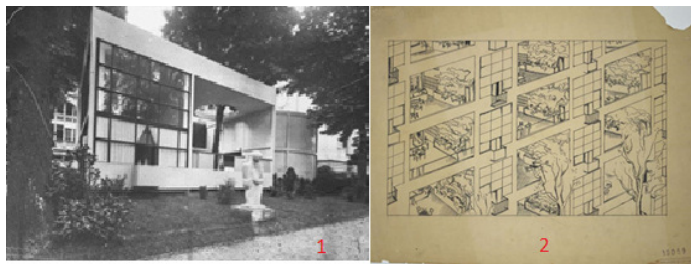
**IMAGE 222**

Houses in Quartiers Modernes Frugès, Ville de Pessac, France, Le Corbusier 1926  
Copyright (Invisible Bordeaux)

modern and the location too far from the factory, and refused to live in them. The houses were thereafter sold to private owners at a loss. (Le Corbusier's Cité Frugès, Invisible Bordeaux.)



The mixture of types of units indicate that Pessac was a success in Le Corbusier's attempts in the early 1920s to put his various designs for the standardised dwelling into production. (Frampton 2011, 154.) It is most unfortunate that concrete tends easily deteriorate and rapidly acquires a dirty and grimy look, especially as pollution sticks onto the surface. Painting the walls adds variety, and maintenance is essential to guarantee that the concrete does not reveal its ugly face, the face of aging Brutalism.

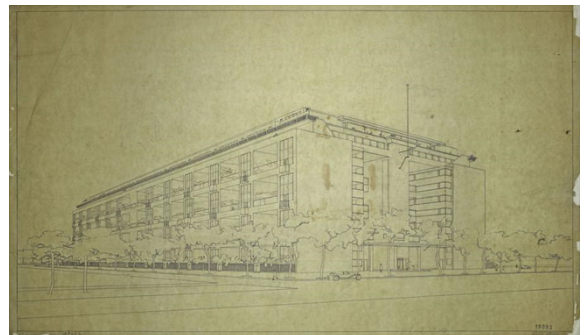


**IMAGE 223**

1 Pavillon de l'Esprit Nouveau, Le Corbusier 1925, (FLC/ADAGP)  
2 Immeubles Villas Apartments 1922, (FLC/ADAGP)

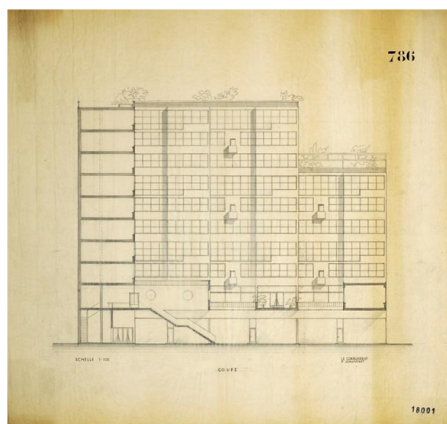
The same general type of a single dwelling unit, Dom-Ino, developed into the Maison Citrohan, which turned further into the Pavilion

l'Esprit Nouveau, exhibited at the Exposition des Arts Décoratifs in Paris, 1925. This was the basis for the units of the Immeubles Villas Apartments, which Le Corbusier included in his plan of Ville Contemporaine. It now became his general type of high-



**IMAGE 224**

Immeubles Villas Apartments 1922, (FLC/ADAGP)



**IMAGE 225**

Galerie Pellegrini, Paris, France, 1926, unrealised project (FLC/ADAGP)  
<http://goo.gl/fh8x56>

density living, consisting of the adapted units of Maison Citrohan stacked up on six double floors. (Frampton 2011, 155.)

He then further refined the concept and developed it into "Unité d'Habitation", the vertical community or town on pilotis, Le Corbusier's basic unit of urban high-rise - the "mother of all Dom-Inos". Only a few of these were in fact built, Marseilles

(1945), Nantes (1952), Briey-en-Forêt (1956), Firminy (1960), and Berlin (1962). A similar project planned for Meaux (1957) was never realised. In following the development of the concept, one should also note the unrealised project of smaller magnitude, “Galerie Pellegrini” (Paris) he developed in 1926.



**IMAGE 388**  
Unité d'Habitation

(Works/Architecture/Projects/Fondation le Corbusier.)

The stilted communes planned by Le Corbusier (originally the basic housing unit of his ‘ideal cities’) which were in fact built, e.g. the one in Marseilles, rises to the height of 12 floors (337 split level apartments), and includes medical and educational facilities, shops, a hotel and a restaurant, and sports facilities on the roof. (Collins, Le Corbusier, Encyclopedia of Art and Design.)

Probably inspired by his infatuation with Italian monastery life, Le Corbusier believed that limiting the living space would lead to a more collective manner of living and based the dimensions of his units on his “Modulor” system of proportion that “fitted” the scale of architectural elements to a standard-sized human, which he saw as his further developed version of the “Vitruvian Man”. Using his system, he initially calculated the ideal height for a room at 2.2 m, based on a man’s height of 175 cm. The measure was later changed to 2.26 as man’s average height was corrected to 180 cm. (Collins, Le Corbusier, Encyclopedia of Art and Design; Gympel 2013, 98, Modulor, Wikipedia.) In any case, a low ceiling compared e.g., to the current Finnish standard (Ympäristöministeriön asetus asuntosuunnittelista, 2005, Finlex).



Le Corbusier related to an apartment or a house as to a 'machine for living'. Behind this idea, says Gympel, is his belief that an artificially created world, completely planned and designed by man, had to be better than a randomly created natural one. (Gympel 2013, 98.)

The use of enormous slabs of rough-cast naked concrete (known as *Beton Brut*), which the buildings were constructed of, is obvious to the eye; and like in his Pessac project, Le Corbusier used a colour design on the inside walls of the balconies, which livened the impression of the façade. (Gympel 2013, 98.)

Although only five *Unite d'Habitation* blocks were built by Le Corbusier, he inspired a whole generation of imitators who littered every corner of the Globe with poorly designed and built imitations, which copied his elements (e.g., the heavy sunlight shading elements, suitable for the Mediterranean climate) irrespective of the actual location of their buildings. The spacious multi-storey dwelling unit within or the open plan principle were not copied. (Gympel 2013, 98.) Instead, most buildings that borrowed, in some way, the external form, offered small, enclosed, cramped, basic apartments. After all, the problem they were employed to answer, was essentially a different one. The same destiny awaited Le Corbusier's original idea of elevating the building and the parking facility on pilotis, so that the ground area would be part of the continuous park in which pedestrians could walk freely. (Frampton 2011, 180.) The buildings which borrowed the external shell and areas in which such projects were placed, received little attention in terms of landscaping, mostly in the form of turf. Parking space, if included in the plan, was placed on the yard or under the pilotis. In many cases, the area under the building was later on enclosed and utilised and in other models that were developed later on, in the post-war years, the buildings were built against the ground. (Zisling 2000.)

Unlike clothes, accessories, hair-do, objects and other such elements, most buildings do not disappear into thin-air or the recycling market once they get out of fashion. As a matter of fact, a good number of structures

that were meant to be temporary, have been with us for many decades and turned into classics in their own right.

No matter where on the Globe one is, the fingerprints of Le Corbusier and his long shadow are visible to this very day. It is obvious that Le Corbusier did not act alone and his ideas did not develop in a vacuum, and yet he has dominated. Not only in the sense that many architects and urban planners still follow the grain of his ideas, but in the fact that anything after him seems to be in dialogue with his ideas—relating to them in some way—by accepting and implementing them to a variety of degrees, or by arguing against them. No matter what one does, it seems that the spirit of Le Corbusier is still haunting us.

*“However, while acknowledging his influential role in the development of 20th century architecture, critics of Le Corbusier say his architecture paved the way for the concrete excesses of Brutalism, and to the isolation of communities in badly built housing blocks.” (Collins, Le Corbusier, The Encyclopedia of Art and Design).*

#### 4.2.16 Brutalism

Le Corbusier’s architectural utopianism, depicted by his use of concrete in the various Unité d’Habitation or in Chandigarh, featured bulky, harsh, monumental structures of exposed and unfinished grey surfaces of raw concrete (in French ‘béton brut’), which he extensively used in the 1940s and 1950s. This was later nicknamed ‘(New) Brutalism’ (by British architectural critic Reyner Banham, 1966), and for those not infatuated with the style, for a reason too. (Collins, Le Corbusier, Encyclopedia of Art and Design.)

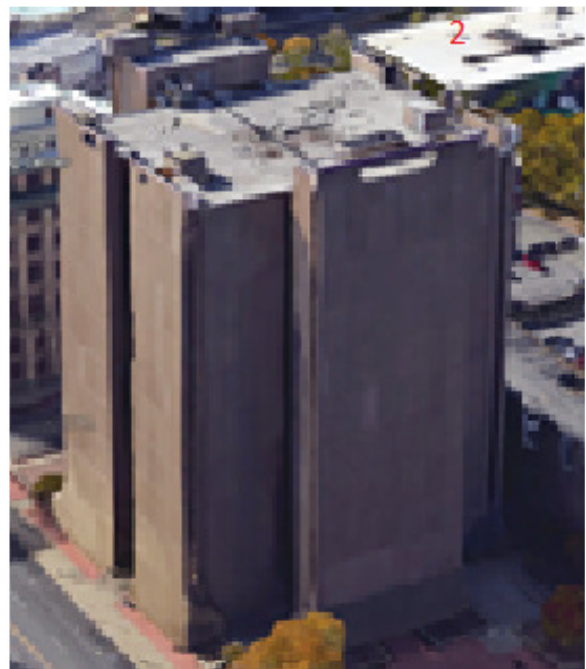
Although Brutalist architecture was said to be “an ethic, not an aesthetic”, a reaction of the younger generation to the lightness of the architecture of the 1930s and 1940s, or an impression of the moral seriousness of the architects that designed it, its looks made it to be considered “brutal”. (Sennot 2004, 332.)

**IMAGE 226**

1. A WW2 Flak Tower, Hamburg, Germany, Designed by Friedrich Tamms, 1940, Olaf Kowalzik - editorial collection/Alamy

*The flak towers (Flaktürme), large, above-ground anti-aircraft gun blockhouse towers constructed by Nazi Germany from 1940 onwards, were used by the Luftwaffe to defend against Allied air-raids and as air-raid shelters to thousands of civilians. (Flak tower, Wikipedia)*

2. Tegar Fort, Latrun, Israel (British Mandate military police)  
Built 1940s, currently a museum, Wikimedia commons

**IMAGE 227**

1 Buffalo City Court House (Frank A. Sedita City Court), NY State, Pfohl, Roberts and Biggie, 1974, (Google Earth, Street View)

2 Chicago (IL. USA) Metropolitan Correctional Center  
Harry Weese, 1975, (Google Earth, Street View)

Brutalist structures often bring to mind artillery fortifications, bunkers, bomb-shelters and 'pillboxes', in both material and structure, echoing power and emanating a sense of alienation; industrial sites, saturated in noise of heavy machinery in motion, and floors stained with machine oil awash with naked lights; heavy civil engineering structures, bridges, support walls, dams, sewage systems. As highly plastic, concrete can

easily be moulded thin or thick into various shapes, and reinforced, to form large structures that need relatively little support, the 'brute' impression of the style is a matter of stylistic choice.

Between the 1950s and 1970s, Brutalism was the stylistic choice for public buildings and institutions – it was the choice of the day for government buildings, educational institutions, hospitals, churches, banks, office complexes, shopping centres, bus and train stations, parking buildings, airports, power nuclear stations, apartment buildings and single family homes, the lot.



**IMAGE 228**

- 1 Dallas City Hall, Texas, USA, 1978, I. M. Pei and Theodore Musho, Daniel Lobo
- 2 Carmel Medical Centre Heifa, Israel, Jacob Rechter, 1976, (Wikimedia Commons)
- 3 Royal National Theatre, London, Denys Lasdun, 1977, (walklondon.com)
- 4 Apartment blocks, Viale della Resistenza, Naples, Italy, (Google Earth Street View)
- 5 Danske Bank, Belfast, N. Ireland, Designed by BDP, 1972, (Google Earth Street View)
- 6 Parkkitalo, Lahti, Finland, (Google Earth Street View)
- 7 Community College Rhode Island, Royal National Theatre, London, Perkins and Will Partnership, Harkness and Geddes, and Gree Beretta, 1967-1972, (Wikimedia Commons)
- 8 Police Headquarters, Winnipeg, Canada, Les Stechesen, 1966, (Google Earth Street View)
- 9 Pirelli Tire building, New Haven, Connecticut, USA, Originally built as the headquarters for Armstrong Rubber, Marcel Breuer, 1968 (Google Earth Street View)
- 10 Delft University of Technology Aula Conference Centre, the Netherlands, Jo van den Broek and Jaap Bakema, 1966, (Google Earth Street View)

More than in any other type of building, has the architecture been called to serve the purpose, than in religiously related ones. Architecture has always been harnessed to the creation of impression and mood in religiously related buildings, and aspects such as form, scale, volume, the effect of natural light, acoustics, internal features, all have to be taken into consideration when draughting the plan.

**Churches:** Once Modernist architecture became popular, churches and other buildings related to worship and religion were not spared and they too were built in the style, and from its favourite material.

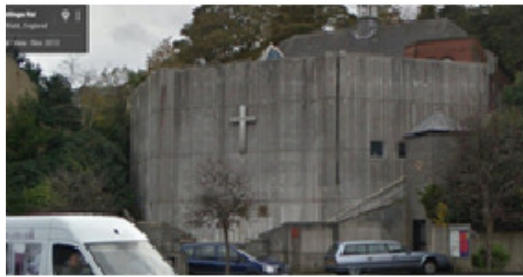


**IMAGE 229**

The Church of St. Pierre of Firminy, Le Corbusier, 1971-2006  
(John Roux / Google Maps)



A large number of religious creations in concrete are to be found in many corners of the Globe, and Finland too has had its fair share of concrete churches and chapels.

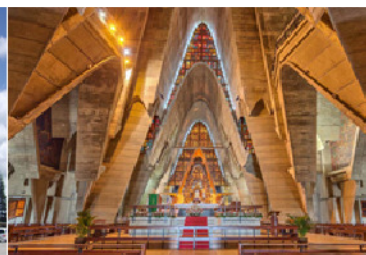


**IMAGE 230**

Trinity United Church, Sheffield, UK  
1971 John Jenkinson, (Google Earth Street View)

While some architects tried to preserve familiar Classic church-design elements, others utilised the plasticity of concrete to their advantage and created less conservative, sculptural or futuristic structures. Yet, many architects of

concrete churches were attracted to the rough, austere, coarse and 'brutal' qualities of concrete, and selected to construct angular and box-like structures, that were it not for the cross sign attached to them, one would pass for a storage facility or a bomb-shelter. Many of the interiors too reflect the impression. Concrete houses of worship are found in most, if not all religions and denominations, including those which are not known originally for austere and grey interior design.



**IMAGE 231 a+b**

Basílica Catedral Nuestra Señora de la Altagracia/Our Lady of Altagracia (Roman Catholic), Salvaleón de Higüey, Dominican Republic, 1954-1970, André-Jacques Dunoyer de Segonzac and Pierre Dupré (Wikimedia Commons & the stream)

The Basílica Catedral Nuestra Señora de la Altagracia/Our Lady of Altagracia (Roman Catholic), in Salvaleón de Higüey, the Dominican Republic,



looks mostly like a traditional cathedral built of concrete. The general impression is not a heavy one. In fact, the same building if built of stone would have had a far 'heavier' look. The grey walls are only a background to a colourful and spacious classical style church.

The main theme in the Church of Light by Tadao Ando in Osaka is the natural light entering through the cross-shaped window into the space otherwise clean of any decoration, more like a site for meditation in solitude than for public religious services and community activity.



**IMAGE 232 (1+2)**  
The Church of Light, Ibaraki Osaka  
Tadao Ando 1989  
(黄腾 in Panoramio & Wikimedia Commons)



**IMAGE 233 (a+b)**  
The Holy Cross Church, Chur, Switzerland, Walter Förderer 1969  
(Walter Schmid)

The appearance of the Roman Catholic 'Holy Cross' Church at Chur (Switzerland) is that of a defensive fortress.

The heavy tectonic-like slabs of the monumental Wotruba Church in Vienna, designed by the sculptor Franz Wotruba, brings to mind Stonehenge or other suchlike ancient, primordial locations of worship. It is a work of art, a sculpture, which the visitor enters.

The Methodist Trinity United Reformed Church building in Sheffield, UK, would look like a left-over WW2 bunker or some storage facility, if it were not for



**IMAGE 234**  
Church of the Most Holy Trinity (Wotruba Church) in Vienna Mauer  
Fritz Wotruba and Fritz G. Mayr  
1976, (Wikimedia Commons)



the cross on its front wall. I am not sure that a good wash could help it much either, (Image on page 161).

**Finland**, too has had its fair share of concrete churches. Unlike the more traditional churches in Finland, the walls are bare and the atmosphere is



**IMAGE 235 (1+2)**

Kouvola Central Church, Jaakko and Kaarina Laapotti, 1977  
(Wikimedia Commons & YLE/Raine Martikainen)



strict and austere.

People's attitude towards concrete churches was

unofficially surveyed in 2014 by Janne

Toivonen, a reporter of the largest Finnish newspaper, Helsingin Sanomat, with the intention, as he put it, to initiate a discussion on of the visual impact of these buildings. The publications I located did not include a link to results or conclusions; yet, Toivonen wrote that "if nine out of ten find something ugly or offensive, there must be a reason", (Toivonen (1), 2014.)



**IMAGE 236 (1+2)**

Järvenpää Church, Erkki Elomaa, 1968  
(Wikimedia Commons; Järvenpää Congregation)



**IMAGE 237 (1+2)**

Alava Church, Kuopio, André Schütz, 1968  
(Wikimedia Commons; YLE/Toni Pitkänen)



Comments made by members of the public interviewed nearby the Tapiola Church were not very flattering. "It is suitably hidden behind the pine trees", "Many

here call it the Anti-Devil Bunker", "It looks rather like a storage facility". (Toivonen (2) 2014.) The janitor told that lacking visual cues, the church was not easily found (by people) and that especially older people considered that it did not resemble a church (younger ones have probably gotten accustomed to it but concrete churches are not favoured by them for wedding ceremonies). "Architecture", wrote Toivonen, "is meant for people, not the other way around". (Toivonen (1) 2014.)



**IMAGE 238 (1+2)**  
Kaleva Church, Tampere  
Raili and Reima Pietilä 1964-1966  
(Wikimedia Commons)

The question remaining to be asked is, how the style of these structures affect the human environment they are placed in, and especially the congregations that use these buildings as locations for spiritual nourishment and ministry of life-teachings related to them. It would have been interesting to know what

impact do these buildings have on the flock of believers, worshipers or otherwise people attending services or receiving other services from the institutions located in them, in comparison to those attending them and receiving them in structures of different architectural style, but I have not come across a suitable study to answer the question.

#### 4.2.17 Not Everything Made of Concrete is Brutalist!

In search of the essence of Brutalism, I reviewed a large number of photos titled 'Brutalist architecture' and viewed several lengthy documentaries on the subject. Although the



**IMAGE 239 (1+2)**  
The Eliyahu Halastchi Central Synagogue, Beer-Sheba, shaped after the Biblical 'Tabernacle', Nahum Zlotov, 1970,  
(Ali Kubin)

definition of Brutalism as a style is rather open-ended, many buildings that were built of concrete at the time, even when the concrete itself was left raw, seem to produce a very different impression than the heavy, unpleasant, austere, inhumane, threatening 'classic Brutalist' ones do.

Concrete, even when left raw, can be used in a variety of ways. It can be made to look heavy and menacing, but it can also be made to look light, even when the layers of concrete are not as thin as those used by Eero Saarinen or Félix Candela. Such a building is the (Audrey and Theodore

**IMAGE 240**

The Geisel Library of the University of California, San Diego, Willian Pereira and Associates, 1970, This photo shows also the lowest floors, (Walter Koenig)

(Dr) Seuss) Geisel Library of the University of California, San Diego, designed by Willian Pereira and Associates in 1970, which is often classified as Brutalist/Futurist. I find that this building is an indication that concrete, even when used as cast slabs, can be a very versatile medium of expression. Depending on the angle it is viewed from, this

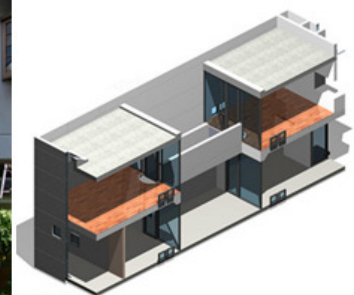
particular building, resembles an upside-down pagoda. The reflective ribbon of glass windows lighten it to the point that they make it rise in the air, an impression strengthened still by the thin lines of the ribbed horizontal planes and further emphasized by the diagonally rising 'supporting' beams (like eaves and rafters in a wooden frame), which make it look like a tree, or palms holding a precious object, or a giant lotus flower – all in the eyes of the beholder.

The Azuma House in Osaka, was designed in 1976 by Tadao Ando, known for his fondness of Brutalist concrete structures. It is an interesting experiment and statement piece. Tadao Ando is quoted saying that his goal in designing this early work of his was to introduce a question on the inertia that has invaded human dwelling. (Wong and Tong 2012, 6.) From a bird's-eye view, it is clear that although the building lot seems small (the land area is 64.7 m<sup>2</sup> and the house's 57.3 m<sup>2</sup>), many other houses in the neighbourhood occupy lots of similar size. The essence of the building is in the statement it makes.

Although his material

**IMAGE 241 (1+2)**

Azuma House (Project name: Row House), Osaka, Japan  
Tadao Ando, 1975-1976,(Hiromitsu Morimoto)  
Model of the Row (Azuma) House, (Archweb.it)



has been mainly harsh concrete throughout his career, it is said that his main theme is the integration of nature into the built environment and that he has harnessed it to express the sensation of “one-with-nature”. The middle open atrium, meant to be an open garden, allows nature – the wind, rain and sun-light to come into the building so that the inhabitants live in tandem with nature, and in some way it was a contemporary reinterpretation of traditional Japanese architecture. The house was intended to confront the conventional thinking about houses in Japan. “When I made the Row House, I was deliberately confronting what had become the conventional thinking about residential architecture in Japan — that it must simply be comfortable, rational and fun to live in” said Ando to Japan Times. (Corkill, 2008.) This project is most likely one of his least Brutalist projects.

Another interesting experiment in concrete was Habitat 67, created in 1967 by a young, starting architect, Moshe Safdie. Habitat was originally conceived as part of Safdie’s graduation project at McGill University. It was



**IMAGE 243 (1-2-3)**  
Moshe Safdie, Habitat 67, Montreal, Canada  
(Wikimedia Commons)

constructed as one of the pavilions of the Expo 67 World Fair in Montreal, Canada. (Safdie Architects, Projects, Habitat 67.) The 12 floor project pioneered the design and implementation of three-dimensional prefabricated units of habitation. It comprises 354 identical modules which form 158 (one to four bedroom) apartments of 15 different housing types, each with its own roof garden. (Safdie Architects, Projects, Habitat 67.) The project was intended to combine the benefits of suburban and multilevel living that would provide a suitable housing solution to crowding cities. It was meant to be an affordable project but in the end became a victim of its own desirability. Due to the high per-unit cost it was never expanded (Habitat 67 website; Jacobs 2015; Moshe Safdie, Wikipedia.)

Safdie went on to plan further Habitats in New York, Israel, and Puerto Rico, but these were never realized. The project inspired both small-scale projects of this type at its time as well as steel-glass recent projects.

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Brutalism had its hay-day in the mid-1960s, and was over by the mid-1980s. (Brutalist Architecture, Wikipedia.) Nevertheless, as buildings tend to last longer than other fashionable items, many Brutalist buildings are still found in large cities and small towns around the Globe.

The conservation of Brutalist structures is currently a hot topic. Fierce discussions on whether Brutalist buildings should be conserved or destroyed are waged around the world where glass towers are the new dominant style. Voices are sounded for and against.

In its Le Corbusierian essence, Brutalism, had a disregard of the past. Why then should Brutalism be conserved? What will conservation of these buildings, who are often unappreciated, give to future generations? If conservation is to take place, how much should be conserved and what criteria should be followed in selecting the 'lucky' structures. Those in favour of the preservation of older brutalist structures claim that to grasp the unique cultural as well as historical value of these buildings, it is necessary to understand the style and how it came to be. (Flood 8, 2012.)

In Tel-Aviv, a Brutalist haven at the time, some 300 buildings are now being listed for conservation by a new official program, and it is said that a "Grey City" is the next stage of the UNESCO (International Style/Bauhaus) "White City". (Jacobson, 2016.) Russel Smith suggests that the current fascination of the younger generation with Brutalist architecture is similar to the attraction that is evoked by the same emotions that make stealth bombers and Stormtroopers exciting. (Smith R., 2013.) What comes to mind is, that some architects and members of the public alike, may be fascinated anew with Brutalism as a counter-reaction to the over-flooding of the urban landscape with reflective surfaces of brittle glass.



A revival of scholarly interest in Brutalism started towards the end of the 2010s. Lewis presents an impressive list of publications, books and exhibitions that deal with the style. “It seems safe to say that there is no topic in architecture at present that is of greater interest and curiosity than Brutalism”. (Lewis. The New Criterion 2014.) Asking why this particular style currently resonates with us while others do not, Lewis replies that “discarded styles are revived only when they can be made to speak again to the present, when they offer some quality that is lacking from the current scene” (Lewis. The New Criterion 2014.)



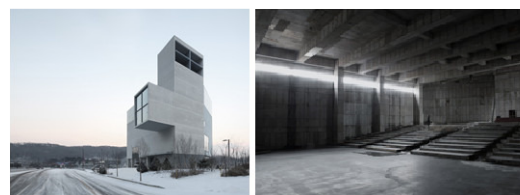
**IMAGE 244**  
Sancaklar Mosque, Istanbul, Turkey, Emre Arolat, 2012  
(Thomas Mayer)

One interesting idea that Lewis presents in his article, is that the possible of the second coming of Brutalism may be related to the fact that “for more than a generation now, architecture has aspired to a state of absolute sleekness, in which materials have no weight and surfaces no texture” (Lewis. The New Criterion 2014.)

Not only there seems to be a vivid, if not fierce discussion on the need to and value of conserving original Brutalist structures, but (New) Brutalist or Brutalist-Sculptural style buildings are still built in the 21<sup>st</sup> Century. I could not, unfortunately, access any information on the extent of the phenomenon, but there is no doubt that there is a new wave of construction using concrete; rugged, smoothened, or sculptured. Some examples are offered in the images on this page. Will this wave produce once again ‘old-school Brutalism’, or will it be incorporated successfully into the predominant ‘glassy architecture’, or will it be just a temporary and marginal wave



**IMAGE 245 (1-2)**  
The Sunset Chapel is a boulder-shaped mausoleum in Acapulco, Mexico, Studio Bunker Arquitectura 2011  
(Esteban Suárez)



**IMAGE 246 (1-2)**  
RW Concrete Church, Byeollae, Korea  
Nameless Architecture, (2013, NAMELESS)



created by intellectual interest, that will fade as quickly as it came, will have to be left for the test of time.

#### 4.2.18 Prefabricated happiness, the buildings

Prefabrication of building elements is nowadays an industry-standard in the construction of industrial or public buildings, and of apartment blocks, row and terrace houses, and even single family homes. The roots of the ideas and technology is found in the inter-war years.

Prefabricating building elements, from those for an entire building (Le Corbusier's Dom-ino system) up to entire settlements (Ernst May's New Frankfurt development program) coupled with rationalised efficiency and mechanisation of production, were believed to be the solution for the re-emerging problem of urban housing shortage, and in turn gave rise to the standardisation of building elements and the development of the industry as we know it today.

Already in 1911 and 1917, Frank Lloyd Wright planned the American System-Built Houses also known as the American Ready-Cut System, for



**IMAGE 247**

American System-Built Homes, Frank Lloyd Wright, W. Burnham St, Milwaukee, Wisconsin (Google Earth Street View)

the production of affordable modest houses. The system allowed for

customisation, and customers could choose from seven models. He

teamed-up with Richards Co. to

prefabricate the elements and pre-cut

all carpentry parts in the factory, to

reduce building time and save on needed labour. It is assumed that 25

were built, but only 15 survived. (Moma, Home Delivery, 2008; American System Built Homes, Wikipedia.)



**IMAGE 248 (1-2)**  
Betondorp, Watergraafsmeer, Amsterdam,  
(Google Earth Street view)

Inspired by Frank Lloyd Wright and the Garden City movement, Johannes Bernardus van Loghem and Dick

Greiner designed and planned the Dutch experiment conducted in the 1920s in Betondorp area in Watergraafsmeer, Amsterdam, where half of the affordable housing was built of concrete (while the other half was built in brick). (Betondorp, Atlas Obscura; Betondorp, Wikipedia.)

German architects and city planners, Martin Wagner in Berlin and Ernst May in Frankfurt, were both inspired by the system devised by the American Grosvenor Atterbury for the model housing community of Forest Hills Gardens (1909), in which he used precast concrete panels, prefabricated off-site and assembled by crane. (Grosvenor Atterbury, Wikipedia.)

Ernst May, with a team of progressive architects, ran the New Frankfurt development program, which resulted in the 1920s in several 'garden-city' influenced, semi-independent, well-equipped settlements, which were built from simplified, prefabricated elements. (Gympel 2013, 89; Ernst May, Wikipedia; New Frankfurt, Wikipedia.)

Concrete plate construction (Plattenbau) was first used in the pilot project Berlin-Friedrichsfelde (1924-1926), where large plates were lifted by cranes. Ernst May devised a further modification "Frankfurter Plattenbau", that used smaller slabs manufactured off-site and rotating cranes (Knaack et al. 2012, 18-19; Martin Wagner, Wikipedia, Ernst May, Wikipedia.) The Large-Panel System (LPS) building system was extensively used for post-war housing projects in East Germany (DDR), and in a different form in West Germany, and as the group of following photos from different places around the Globe shows, was intensively used from the post-war years onwards in the construction of housing projects on every continent. Many of these projects fell victim to poor maintenance and lack of attention and

suffered from decay and various structural problems, which concrete is so easily prone to. (Moma, Home Delivery; 2008; Plattenbau, Wikipedia; Martin Wagner, Wikipedia; Luisenstadt 1997.)

The use of prefabricated concrete elements provided a method for quick and economic way to provide housing for the masses.

The use of prefabricated elements is globally the most prevalent method of construction, extensively used for industrial, commercial, office and high-rise apartment buildings.



**IMAGE 249**

- 1 Plattenbau, Munich-Neuperlach, Germany, (Wikimedia Commons)
- 2 Moscow, (Google Earth Street View)
- 3 Shenshen, China, (Hije, Panoramio)
- 4 Camino a Santa Fe, Mexico City, (Google Earth Street View)
- 5 Khrushchyovkas, St. Petersburg, (Google Earth Street View)
- 6 Khrushchyovkas, St. Petersburg, (Google Earth Street View)
- 7-8 Av. Lo Ovalle, Santiago, Chile, (Google Earth)
- 9 Myllypuro, Tuulimylytie, Helsinki, (Google Earth Street View)
- 10 Paris, Clichy-sous-Bois, (Wikimedia Commons)
- 11 Paris, Chemin de Poster, Clichy-sous-Bois, (Google Earth Street View)
- 12 Liipola, Lahti, Finland, (Google Earth Street View)
- 13 Stockholm, Bruskogsbacken, (Google Earth Street View)
- 14 Soi Pluk Chit, Bangkok, (Google Earth Street View)
- 15 Gerth Egedeip Aqquataa, Greenland, (Google Earth Street View)
- 16 Calle Tlaloc, Mexico City, (Google Earth Street View)

## 4.2.19 From Modern Art to Minimalism



**IMAGE 250**  
Wassily Kandinsky, *Cossacks*  
1910-11, (ADAGP, Paris and  
DACS, London 2002)

The doctrine of Expressionism encouraged experimentation. What mattered in art was the expression of feelings through the choice of



**IMAGE 251**  
Matisse, *Harmony in Red*, 1908  
(2011 HenriMatisse.org)

colours and lines. One line of experimentation was the idea of doing away with all subject-matter and relying exclusively on the effects of tones and shapes. (Gombrich 1995, 569.) Wassily Kandinsky is said to be the first painter to exhibit a painting without any recognisable object (but he was also a mystic who disliked the values of progress). His painting 'Cossacks' (an experiment at colour-music) started what we now know as "abstract art". (Gombrich 1995, 570.)



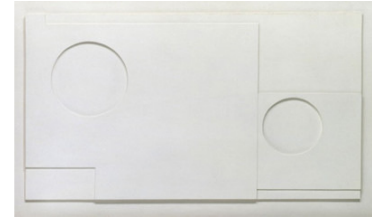
**IMAGE 252**  
Picasso, *Violin with Grapes*, 1912,  
(MOMA New York)

Unsatisfied with the feeling of uneasiness created by Impressionist 'snapshots' of fleeting sights, Cubism set out to reform representation by the introduction of order, structure and pattern, building a solid picture. The idea was to construct the things, not copy them. The picture does not really look messy despite the apparent jumble of disconnected forms. (Gombrich 1995, 570.)

Mondrian, whom we discussed earlier in connection with the De Stijl movement, wanted to build his pictures out of the simplest elements—straight lines and pure colours—striving for clarity and discipline that would reflect the objective laws of the universe. (Gombrich 1995, 582.)



Ben Nicholson concentrated on the exploration of simple shapes – circles and rectangles. (Gombrich 1995, 583.)



**IMAGE 253**  
Ben Nicholson 1935 (*white relief*)  
1935, Painted wood, 101.6 x 166.4 cm,  
(Angela Verren Taut 2014. DACS)

With an emphasis on 'creating' and on 'things', Henry Moore started sculpturing by looking, not at the model, but at the stone, his intention to make something out of it, not by smashing it



**IMAGE 254**  
Reclining Figure, Henry Moore, 1979  
(The Henry Moore Foundation)

to bits. (Gombrich 1995, 585.)

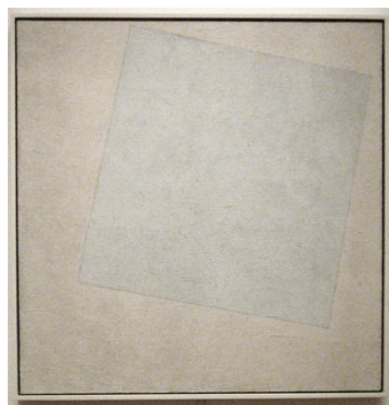
It is accepted that the roots of the postmodernist Minimal Art movement, which emerged in New York in the 1960s, a style of abstract painting and sculpture, characterised by extreme simplicity of form, reduced

to its essential geometric abstractions, are to be found in the works of painters associated with the Bauhaus school. (Collins, Minimalism, Encyclopedia of Art History.)



**IMAGE 255**  
Malevich, Suprematism, 1916-1917,  
(Wikimedia Commons)

Kasimir Malevich (1878-1935), who was named by the late leading figure of modern architecture, Zaha Hadid as the inspiration for her use of painting and drawing in the development of buildings, produced a-logical



**IMAGE 257**  
Malevich, Suprematist Composition, White on White, 1918,  
(Wikimedia Commons)

paintings such as 'An Englishman in Moscow' and the 'Black Square', which led to Suprematism, which Malevich said was intended to "free art from the burden of the



**IMAGE 256**  
Malevich, Black Square, 1915, oil on linen,  
(Wikimedia Commons)

object". 'White on White' it is said was "a virtual admission that his research had come to a dead end". (Collins, Kasimir Malevich, Encyclopedia of Visual Artists.)

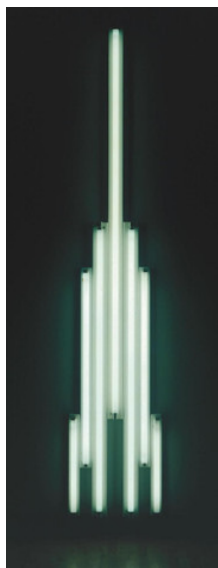
Minimalism was clearly drawing from Russian Avant-garde, Constructivism and Suprematism. (Minimalism, Tate Glossary.) The reduction of the artist's means to a point of complete purity and integrity, so that only that which is intrinsic to the medium remains, and by eliminating all that is not

intrinsic to it, would produce a unitary experience for the spectator. "All I want anyone to get out of my paintings... is the fact that you can see the whole 'idea' without any confusion....what you see is what you see," remarked the painter Frank Stella. (Honour & Fleming, 2009, 851.)



**IMAGE 258**

Frank Stella, 1967, title unknown (from Black Series II), lithograph on paper, (ARS, NY and DACS, London 2002)



**IMAGE 259**

Dan Flavin, Monument for V. Tatlin 1966-1969 (ARS, NY and DACS, London 2016)

Minimalism is defined as an extreme form of abstract art, where the artwork, or situation is not an imitation or representation of an aspect of the real world, or an emotion or a sensation. The work of art, the medium and form is the reality, which the artist wants the viewer to interact with.

(Minimalism, Tate Glossary.)



**IMAGE 260**

Donald Judd, untitled 1991, Concrete, at the Israel Museum, Billy Rose Art Garden, (Wikimedia Commons)

#### 4.2.20 Minimalist Architecture

As we have seen before, minimalist architecture had its roots in the artistic idea of striving to arrive at the very core, the essence of the idea, pure artistic expression, which means, in effect, that people would need to live



in a bare environment, stripped of all possible elements – an intellectual experiment examining the essential and the unessential for everyday living. But unless one has the means to obtain only the necessary when required, living in such an experiment puts a strain on the modern individual that has for thousands of years learnt to accumulate possessions ever since one stopped being a hunter-gatherer, as means for ensuring survival. True enough, there were eras when the ideal home environment was crowded with objects and colours, which too can overload the senses, if crammed into too small rooms, but what may look appealing in fashionable modern magazines, is mostly far from the reality of everyday life – of what people can afford and what they can afford to functionally give up.

Minimalism gave final legitimacy to the removal of all decorations, but at the same time allowed for architecture deprived of any artistic aspect. It also gave a legitimacy to the rise of engineered ‘copy-paste’ architecture.

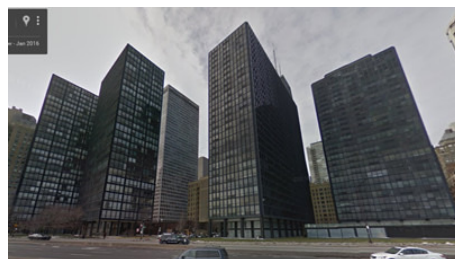
Gympel maintains that for Functional style building to emerge, the hand and the creative spirit of the artist were “essential to the discovery of an obvious, simple, functional and thus ‘good’ form”, and quotes the art historian Fritz Baumgart on the possible artistic value of the style of the building: “The innumerable repetitions of a gridded office block box based on a once proven plan, does not involve any art”. (Gympel 2013, 89.)

The maxims of Mies van der Rohe was “Less is more” and “As simple as possible, no matter how much it costs”. (Gympel 2013, 97.) Minimalism is a highly demanding form of simplicity, but can easily turn into just simplicity, especially when the idea of stripping off elements is followed, not for the minimalist thought of arriving at the essence of existence, but at the minimum cost. Far too often the minimalist style was seen as an excuse to build quickly cheap and undecorated boxes. (Gympel 2013, 99.)

#### 4.2.21 The Glass Towers

Ludwig Mies van der Rohe too left us with a legacy, which after almost 100 years, still seems to be unchallenged. In 1851 Joseph Paxton proved that glass could be largely used in construction and opened the door to a new manner of thought. Already in 1921 and 1922, Ludwig Mies van der Rohe visualised and planned 2 versions (an angled and a round one) of his glass skyscraper. Following the rise of the Nazi regime, he too emigrated, like several other leaders of the modern style in architecture, to the USA. As a matter of fact, he was appointed head director of architecture at the Armour Institute of Technology (currently IIT) already in 1937, during a visit to the USA. (Collins, Mies van der Rohe, Encyclopedia of Art and Design.)

Post war United States was rich and unlike the emerging monumentalist Eastern Block, it was open to new 'modern' ideas and style (Gympel 2013, 96), which provided fertile ground for the modern style, characterised by reduced forms and colours, lightness and transparency.



**IMAGE 261**  
Lake Shore Drive apartments in Chicago (on the right hand-side), Mies van der Rohe 1951 (Google Earth Street View)



**IMAGE 262**  
Seagram Building (middle), New York, Mies van der Rohe 1958 (Google Earth Street View)

In his position in AIT, Mies van der Rohe was commissioned to design many of the new campus buildings, including his masterpiece - the School of Architecture itself - known as S.R. Crown Hall. (Mies van der Rohe, Encyclopedia of Art and Design.) He experimented with minimalist architecture, as is exemplified by his design for the Farnsworth weekend House (completed in 1951). In 1948-1951 he built his long lost glass-sheathed tower dream in the form of the Lake Shore Drive apartments in Chicago, featuring two box-shaped steel-framed



**IMAGE 263 (1+2)**

The same one, the inner structure and the outer mirror  
Comcast Center, Philadelphia  
Robert A. M. Stern, 2005  
(Wikimedia Commons, Google Earth Street view)

and glass-clad skyscrapers. (Gympel 2013, 96.) These were the world's first all-glass apartment buildings. In 1958 he completed the monolithic Seagram Building in New York. (Mies van der Rohe, Encyclopedia of Art

and Design.) This radical and modern design, his realisation of the glass tower as an office building, which was made possible by advancements in technology, set in motion 'the glass-tower movement'.

Mies van der Rohe advocated the elimination of all ornamentation, and is known for coining the saying "Less is more", referring to his idea that bare simplicity of form and the natural colours of the materials were the essence of beauty, for which the form had to be revealed. (Gympel 2013, 96.)



**IMAGE 264**

A mirrored skyscrapers in Itam Bibi, (Av. Pres. Juscelino Kubitschek / R. Minas de Prata, São Paulo, Brazil)

Nowadays, around the world, glass towers seem to give birth to more glass towers that are often built right next to them. The smooth walls of brittle, yet shiny glass jutting up endlessly to the sky, and reflecting them (if they are not surrounded by other, higher towers that hide the sky and prevent them from so doing) to create artificial

skies, as if the building was never there and does not cast a shadow down below. At times these windowless absolute windows reflect the buildings

on the other side of the street, recreating the canyon-like impression, or if the one across them too is a huge reflecting body of glass, they keep reflecting each other endlessly.



**IMAGE 265**  
Cira Center, Philadelphia,  
(Michaelwm25, via flickr)

Once again the link between art and architecture rears its head. Minimalist art is a demanding one on the viewer. It requires the observer to know a great deal to be able to appreciate it. It entails that the viewer actively takes part in the process of its creation and

meaning-making, by affording the time and effort to contemplate and interpret its meaning, an element less decisively present in symbolic language as used by more traditional art.



**IMAGE 266**  
Robert Morris, Untitled, 1965/71 Mirror  
plate glass and wood,  
(ARS, NY and DACS, London 2002)

The urban environment created by closely-built large boxes competing for a piece of the sky to reflect, greatly resembles the mirroring boxes which Robert Morris set for his untitled minimalist-modernist work of art in 1965. Morris “typically arranged these (mirroring boxes) into ‘situations’ where ‘one is aware of one’s own body at the same time that one is aware of the piece’”. This work demonstrates the principle. As the viewer walks around

the four cubes, their mirrored surfaces produce complex and shifting interactions between gallery and spectator”. (Tate, Robert Morris, 2004.)

No doubt, glass buildings are sleek and shiny. Often described by their designers as ‘transparent’. The truth has to be said, that if and when the sky is blue and the sun is shining, these tall walls of reflecting glass, if not tinted golden or green, reflect in part the sky, in a way that brings to mind



**IMAGE 267**  
Marina Blvd. Singapore (Google Earth Street View)

experimental stealthy buildings with actual mirrors such as the sculptural work of Ekkehard Altenburger on the Isle of Tyree (1996), or the Tree Hotel in Harads, Sweden (Tham & Videgård Arkitekter, 2010).

New glass structures built today have moved away from Mies van der Rohe’s original idea, and although they too are clad in glass, their designers seem often more interested in finding ways around the motto “less is more”, creating ever more daring if not bizarre structures and compensating for the lack of old-time decoration by using different shading tints and



**IMAGE 268**  
Vista of Shanghai pudong, China  
(wikimedia commons)





**IMAGE 269**  
Tree Hotel, Harads, Sweden  
Tham & Videgård Arkitekter, 2010  
(Åke E:son Lindman)

faceting their higher and higher climbing structures in all forms that physics and technology permit. It is not only large Chinese cities and Persian Gulf emirates that get decorated with these shiny structures, as a matter of fact we seem to find them in all

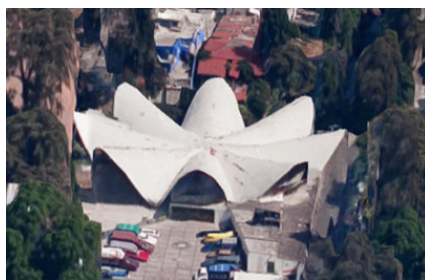
places, far and near, as the rendered images and models presented in an article by Sami Takala in Helsingin Sanomat indicate (Takala, 2015).

Being engulfed in urban streets, overcrowded by shiny, reflective glass-boxes, that at times reflect the sky and mostly one another, the man in the street is like the man in the modern art gallery, aware of one's body as one is aware of the shifting intricacies between the buildings' shiny surfaces and oneself.

#### 4.2.22 Sculptured Architecture, Deconstructivism

Deprived of the use of decoration for the sake of pure minimalism, it seems that architecture has been effortlessly trying to find ways around it.

The 1950s were interesting times in architecture. At about the same time



**IMAGE 270**  
Los Manantiales, Mexico City, Candela 1958  
(Google Earth Street View)

that Mies van der Rohe preached minimalism and Le Corbusier and Niemeyer paved the road for Brutalist architecture, several architects took a sculptural approach to architecture and

experimented with the morphability of concrete. Félix Candela experimented with thin-shell concrete to build the elegantly artistic Los Manantiales restaurant in the



**IMAGE 271**  
Sydney Opera House from the harbour,  
Jørn Utzon, 1959-1973,  
(McDaniel Woolf Architects)



Xochimilco area of Mexico City. (Miller, 2014.) In 1962 the Trans World Airline terminal in Queens, New York City, was completed according to the design of Eero Saarinen, who died a year earlier (Perez, 2010), and in 1973 Jørn Utzon finally completed the Sydney Opera House, which had its start way back in 1959. (Gympel 2013, 102.)

‘Sculptured’ structures, organic in their form, allowing for freedom of



**IMAGE 272**  
TWA terminal, by Eero Saarinen, 1962  
(Google Earth Street View)

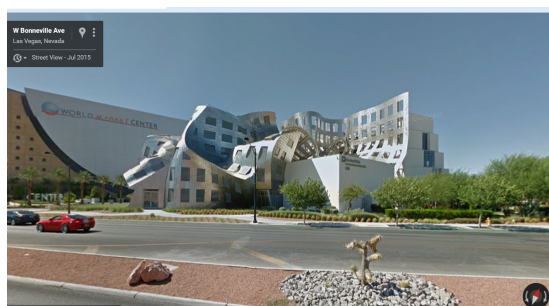
expression were far better suitable to express freedom and democracy than Rationalist or Brutalist architecture. (Gympel 2013, 101.) ‘Organic Architecture’

was based on Plato’s theory of proportion, which at the time had also influenced Renaissance architecture. The main criteria was the perception of man in relation to the building, which was once again considered relevant and buildings were no longer to be treated as isolated structures and their form was required to be in harmony with the landscape. The desire was to give form an expression of its own using symbolism. (Gympel 2013, 101.)

Another ‘school’ of architectural practice that I find interesting, especially in relation to the development of current ‘special looking’ buildings, is ‘weird-looking’ Deconstructivism.

Deconstructivism, a form of post-modernist avant-garde art, was

made possible by technological advancements in design software. It is an attempt at disordering rational geometry, distorting the straight line of the



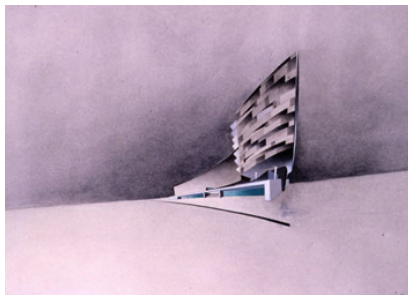
**IMAGE 273**  
Lou Ruvo Center for Brain Health, Las Vegas, Frank Gehry, 2010, (Google Earth, Street View)



**IMAGE 274**  
Royal Art Museum, Toronto, Daniel Libeskind,  
(Steven Evans Photography)

traditional structures. It can be understood as an attempt at revolting against the rules of modernist architecture. (Collins, Deconstructivism, Encyclopedia of Art and Design). It was introduced by the 1982 winning project of Parc de la Villette, in Paris (Tschumi, Eisenman and Derrida), and the 1988

MoMa New-York exhibition "Deconstructivist Architecture". The Wexner Center for the Arts by Eisenman in Columbus, 1989 was the first major public building of this style. (Deconstructivism, Encyclopedia of Art and Design.)



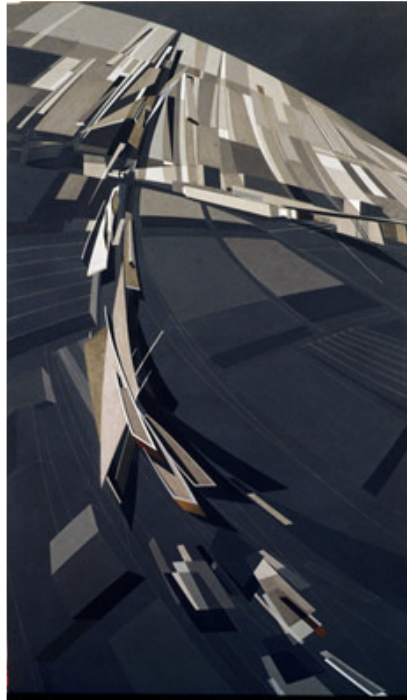
**IMAGE 275**  
IBA Housing, Berlin,  
Painting by Zaha Hadid  
(Zaha Hadid Architects)

Zaha Hadid, who died just recently, started her career after studying with some of the leading figures in the Deconstructivist School of architecture. Her first realised projects, The Vitra Fire Station in Weil am Rhein (1990-1993) and the IBA

Housing in Berlin (1986-1993) were both rather angular structures. She processed her ideas through artistic painting, inspired by the suprematist, utopian and revolutionary work of Kazimir Malevich (Ben Lashihar 2016), in which the core idea was reaching purity of art and total freedom of expression through the total abstraction expressed by the elementary geometrical shapes within the object. (Suprematism, Encyclopedia of Art History.)



**IMAGE 276**  
IBA Housing, Berlin, By Zaha Hadid, 1993,  
(Christian Richters)



**IMAGE 277**  
Painting by Zaha Hadid  
(Zaha Hadid Architects)



**IMAGE 278**  
Vitra Fire Station, Weil am Rhein, 1993 By Zaha Hadid,  
(Christian Richters)

Her work evolved throughout the years to include over-imposing structural elements, such as the Library and Learning Centre of the University of Economics in Vienna (2012), where the vast and mostly white

interior with its tilting planes and curving lines brings to mind Streamline Moderne and luxury cruisers, and culminated in the last years in the curving, undulating, sinuous, flowing organic lines and use of sculptural symbolism, which is exemplified by the design of the Heydar Aliyev Centre in Baku (2012) and the mix-use Wangjing Soho buildings in Beijing (2014), that were designed to look like Chinese mountains.



**IMAGE 279**  
Library and Learning Centre of the University of Economics in Vienna, By Zaha Hadid, 2012  
(Iwan Baan)

**IMAGE 280**

Heydar Aliyev Center, Baku, By Zaha Hadid, 2012, (Iwan Baan)

A more comprehensive review of buildings, especially public ones, but with a clear shift to residential buildings, reveals an interesting combination of

**IMAGE 281**

Wanfjing Soho, Beijing, China, By Zaha Hadid, 2014, (Virgile Simon Bertrand)

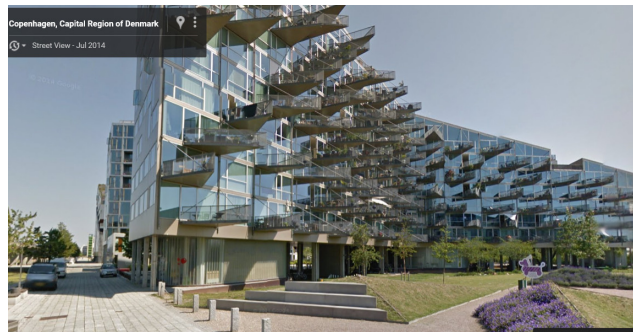
minimalist structures that receive a sculptural touch through incorporation of deconstructive elements – faceting, tilting, warping, twisting, and the use of protruding and jutting elements, such as balconies and bays, sloping silhouette, terraced storeys, irregular arrangement of windows and colours.



Current concrete buildings differ greatly from the older type lamella, which populates the older suburbs and small country towns. Architects, it would seem, are looking for



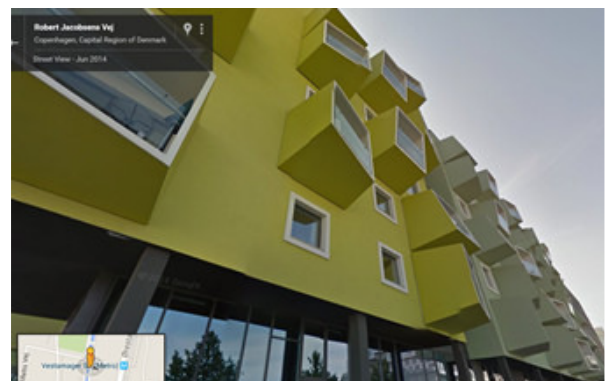
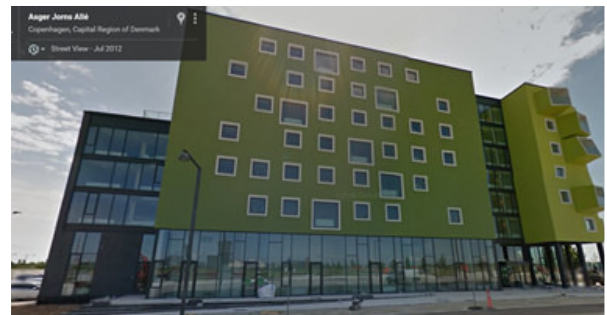
**IMAGE 282**  
Copenhagen, Ørestad  
(Google Earth Street View)



**IMAGE 283**  
Copenhagen, Ørestad, VM building  
(Google Earth Street View)

ways to decorate their buildings without going back to earlier styles, while keeping in line with current building conventions. The result is often an attempt at “reinventing the box” by giving it regular windows

arranged in an irregular manner, adding various protrusions to the building, mixing various cladding materials, traditional and more experimental ones, or arranging boxy elements in different angles (to an extent after the style of the more gutsy Deconstructivists). Some of the houses get to be painted, if not whole, at least in part, making them different from the often used grey concrete and red bricks.

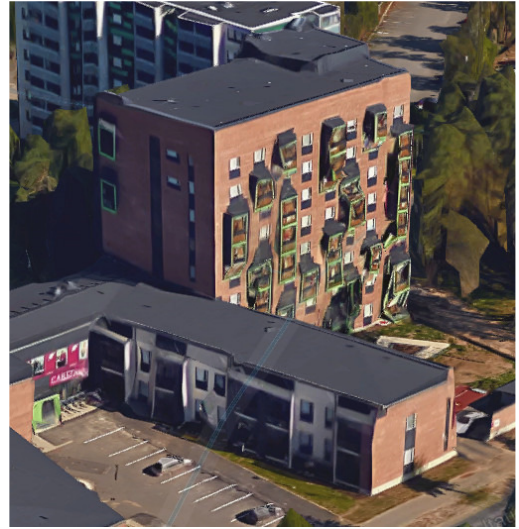


**IMAGE 284 (1-2)**  
Do the windows change the box?  
Copenhagen, Ørestad  
(Google Maps, Street View)



**IMAGE 286 (1-2)**

Only a bird can see these colours, the pedestrian can only see the brick wall along the street  
Aleksis Kiven katu, Helsinki, 2011  
(Google Earth, Street View)



**IMAGE 285**

Oulu, Tuira, recent building added to an established area from the 1990s  
(Google Earth Street View)



## 5 THE EFFECT OF NATURE ON HEALTH AND WELL-BEING

Studies show that simple actions such as a walk through a garden, a park or an art gallery, or just sitting on the beach, can lower blood pressure and reduce stress. Engaging in meaningful, creative work like gardening, drawing, writing, playing an instrument, or building something, make one feel productive. (Smith, Segal and Segal, 2015.)

### 5.1 Nature in the Urban Environment

Intuitively, people have always known that nature had a positive effect and possessed restorative qualities. Yet, nature in the city need not be taken for granted. In fact, nature as we have currently learnt to expect it, is a relatively new-comer to the city.

Old European city-centres were densely built. Even in areas where houses had enclosed yards, they were intended for utilities and services. In parts of the town, in most cases further from the centre, backyards were used for kitchen gardens and keeping some poultry and a few livestock for home-consumption. Gardens in the city were private, and country-houses were the privilege of royalty and the upper classes.

In many places the urbanisation process, hand in hand with industrialisation, brought about a distinct separation between nature and the urban space. Although not a new phenomenon, in earlier times towns (even major ones) were relatively small and nature was in fact near-by, while most of the population was not urban. Modernisation brought about not only larger urban centres, but also greater detachment of the 'urban' from the 'rural'.

Public parks are a relatively modern phenomenon. Pleasure and recreational parks and gardens existed already in ancient times, but they, like the walled gardens and hunting parks of the Middle-Ages, were the private property of royalty and the aristocracy. The meticulously designed

gardens of the Italian and French Renaissance and the Baroque, and the later introduced English Garden, were all such private affairs.

The park as we know it – a space for ‘nature’ within the ‘urban environment’, set for the benefit of the public – is as late as the age of industrialisation.

*“Although the royal parks belonged to the crown, it was customary by the 17<sup>th</sup> century for royalty to share them with the public. In Green Park, Charles II enjoyed fraternising with his subjects as he took his daily stroll along Constitution Hill, as the broad walk as the southern end of the park is still called. In the 18<sup>th</sup> century, Queen Caroline, the wife of George II, had the Queen’s Walk built along its less public eastern border, for by that time, the park had become crowded with Londoners enjoying themselves as they strolled along its crisscrossing web of gravel paths set amid green grass”. (Barlow Rogers 2001, p 218.)*

Prince’s Park in Liverpool, the earliest purpose built public park, was planned in 1842 by Joseph Paxton for Richard Vaughan Yates, who owned a good deal of land in Liverpool. Yates hoped that the park would act as an amenity to attract middle-class residents to house-lots adjacent to it. Although open from the very start to public use, Prince’s Park remained in private ownership until 1908. (Barlow Rogers 2001, p 322.)

The idea that the inhabitants of the crowded industrial towns needed public open space of natural attractive surroundings and recreation was acknowledged only in the Victorian era. According to H. Jordan, these parks also assumed a social role as they were considered to be places of betterment for the lower classes and they were often coupled with entertainment and educational attractions. It was fashionable for wealthy philanthropists to gift parks to the public, and it is said that more public parks were opened between 1885 and 1914 than before or after that period. (Jordan, 1994, 85.)

The link between ‘nature’ (or green and open space) on one hand, and physical health and general well-being on the other, was clear from the

start. As indicated by Eisenman, the significance of greening the city is not a new notion and was recognised already in the 19<sup>th</sup> century by Frederick Law Olmsted and the American Park Movement, and its traces can be found in the roots of professional urban planning and landscape architecture. As quoted by Eisenman, Olmsted predicted that the city would become the main form of future human dwelling and would have an effect on both human mind and character. (Eisenman 2013, 287; Olmsted, 1870.)

Many of the social reforms, including the Park Movement (in both Europe and the USA) aimed to improve the health and well-being of the industrial city-dwellers through the improvement of the physical conditions in the city. It was considered that open, public green spaces were important for the health and vitality of the urban population. Nowadays, the requirement in New York City is that there should be no more than a 10-minute walk (half a mile) to the nearest park (large or small). (NYC Mayor's office of Recovery and Resiliency.) In comparison, in 1833 the British Parliament made a law that required every town to build a park. (Eisenman 2013, 289.)

In the process of the creation of New York Central Park, it was argued that the park would provide the city with a 'green lung' and improve the air quality. In their descriptive text to the plan for Central Park, Olmsted and Vaux, who used a naturalistic design approach, indicated that it meant to act as 'a lung' and provide 'pure and wholesome air', and that it was also intended to have an impact on the mind and imagination, and thus remedy the vision of the streets and houses of the city. In *Notes on the plan of Franklin Park and Related Matters* (1886), Olmsted noted that in addition to physical health risks, industrial urbanisation and city living compromised both mental health and social bonds. (Eisenman 2013, 290.)

## 5.2 Physical Health - Mental Well-Being

Although the focus here is on the direct impact of nature (in its various forms) has on emotional well-being and mental health, the impact of nature on physical health is in no way ignored. Neither ignored are the indirect impact of nature on mental health and emotional well-being mediated via good physical health, and the intimate bi-directional connection between physical and mental health.

The relationship between physical exercise and activity, and physical and mental health is nowadays a clear fact. (Kolappa et al, WHO, 2013, 3.) This is also supported by a growing number of studies which show that exercise, physical activity and physical-activity interventions have beneficial effects across several physical and mental-health outcomes. Regular engagement in physical activity contributes to better health outcomes across a variety of physical conditions. (Penedo et al, 2005, 189.) It has been shown that physical activity has an improving effect on health, reducing risk factors for chronic disease and improve mental health. (Hancock 2011, 7.) Exercise is a recognised potential therapy for clinical and subclinical depression and anxiety. (Fox, 1999, 2, 6)

## 5.3 The Effect of Nature on Well-Being and Mental Health

There is a relatively large body of studies that support the assumption on the impact of nature on mental health, and the importance of nature to general well-being. These studies indicate that the positive effect of contact with nature does not depend on the 'natural area' facilitating physical activity and exercise, although those in themselves are clearly beneficial, but nature in itself has an intrinsic value to the well-being and health of people, physiological and psychological alike. Contact with nature can be active – being physically in a natural environment – and occur either through direct engagement with the environment, such as tending a garden, maintaining the natural environment, etc., or indirect, yet active contact with the natural environment, through engaging in any

activity that takes place within the natural environment (but which does not concern tending it) such as taking a walk in an open space or sitting on a park bench, engaging in artistic or sport activity in nature; and passive contact, such as viewing natural environment from a distance, through the window or a photo or painting.

‘Nature’, can be outside the urban environment, or in one’s city apartment window box. It can be intended, planted and well maintained, or accidental, wild and informal. ‘Nature in the urban environment’ includes anything from ‘an urban forest’ of any size, parks, vacant lots, road-side trees and gardens, to potted plants kept indoors, the view of natural environment through the window, and even the graphic representation of nature in the form of landscape photos or paintings. Studies indicate that all of them have a positive, health supportive, restorative effect on people, and as already indicated in the previous chapter, better than that of urban landscape with no natural elements in it.

### 5.3.1 The impact of direct contact with nature

#### 5.3.1.1 Well-Being, Mental Health

People have an intuitive concept that nature is relaxing and that it provides a good way to recover from stress. The ‘urban forest’ is said to be playing an important role in recreation and to have an aesthetic impact. Although correct assumptions, they are too simplistic and do not touch upon the many benefits of nature, which remain most often hidden (S. Kaplan 2003 in Konijnendijk et al, 2004, 222).

According to S. Kaplan, nature has a restorative effect. It has a positive effect on stress (produced by a negative event - present or anticipated) and its induced physical symptoms, such as rapid heart-beat rate, elevated blood pressure and sweating extremities. It also reduces mental fatigue – the feeling of incompetence. Direct Attention Fatigue (DAF) is the fatigue caused by intentional attention needed for work and task solving,



which is effortful and tiring. DAF causes individuals to be readily distracted, planning impaired, unable to stick to a plan, impulsive, and irritable. DAF is unfortunately common and rather widespread. These symptoms are common in seriously ill people, carers of the ill, grieving people (for a significant person, a home or a job), people who are overworked, sleep deprived, and many people in the urban environment that have to withstand continuous attention demanding situations such as traffic and the like. (S. Kaplan 2003 in Konijnendijk et al, 2004, 222-224).

S. Kaplan offers several possible explanations to the fact that spending time in an 'urban forest' or 'nature' helps recovery from DAF: Attention Recovery Theory – fascination, the effortless form of attention, allows the directed attention to rest and permits recovery from DAF. There are many sources of fascination, but a quiet one, which is characteristic of natural settings allows also for reflection, which enhances the recovery from DAF. S. Kaplan calls such situations 'restorative experiences' and such environments 'restorative environments'. In the Book *The Experience of Nature: A Psychological Perspective*, based on their research, R. Kaplan and S. Kaplan list four functions of a restorative experience that impact the process of recovery of mental effectiveness: 'clearing the head' function (getting rid of intellectual clutter); 'permitting recovery of directed attention'; 'cognitive quiet' fostered by soft fascination; and 'reflection on one's life'. (S. Kaplan and R. Kaplan 1989, 196-197.)

Some additional qualities restorative environments are required to have are: produce a sense of 'being away'; 'sufficient extent' or 'another world' – provide enough to see and experience; 'compatibility' with one's purposes – be clear and coherent and thus enable effortless functioning. (S. Kaplan 2003, 224-226.)

Kaplan's theoretical ideas are supported by the results of research projects that investigated the recovery from fatigue of care-givers (Canin 1991 in S. Kaplan 2003, 226), restoration of the directed attention capacity of cancer patients (Cimprich 1990 in S. Kaplan 2003, 226), the creation of

social interactions, the reduction of fear and aggression in public housing projects (Kuo, Sullivan & Coley 1998 in S. Kaplan 2003, 227), improved life management of residents of housing projects (Kuo 2001 in S. Kaplan 2003, 228), improved self-discipline and life-related decisions made by girls in public housing (Faber et al 2002 in S. Kaplan 2003, 228), reduced ADD symptoms of children (Grahn et al. 1997 and Faber et al. 2002 in S. Kaplan 2003, 228), and improved directed attention in the elderly (Ottoosson and Grahn 2002 in S. Kaplan 2003, 228).

The improvement to people's quality of life made by green environment has health implications, but is not limited to them. These implications are social, as the better the health of people, the better they can manage their lives economically, in the sense that less public resources need to be spent. People who make better decisions about their lives can often improve their economic management and income, and the improvement to the life quality of the elderly and others with lesser ability for social control, is also morally desired.

#### 5.3.1.2 Active Gardening and Tending Nature

People like having friendly, manageable and convenient nature in their immediate vicinity. For many people, their own small garden is their only contact to nature, which also serves as means for self-expression. (Dunnett & Qasim 2000, 44.) Residential gardening supports a vast industry of plants, furniture, accessories, decorations, design, maintenance, and publications. Where a yard is not available, a residential garden may also be located on a roof or balcony area, or even in window boxes used for the purpose of gardening.

In the past, gardens were either formal affairs of the rich and powerful, or then just vegetable patches that produced vegetables and fruit for private consumption. The cottage garden was relatively small and was intended for the production of fruit, vegetables and herbs to secure food for the family. Although plants in the cottage garden were limited to local varieties

that were sure to produce food for the table, they also included some flowers, which were employed to attract pollinating insects and thus ensure a successful crop. Their beauty was only an added value.

Only in the 19<sup>th</sup> century, the cottage garden evolved further to include an ornamental part, known as 'residential garden'. Workers, artisans, and members of the Victorian middle class could now afford the time and cost of gardening for pleasure rather than survival (which was also made possible by the mass production and distribution of foodstuffs). Like the cottage gardens, residential ones remained small in size. (Roots, Cottage Garden.org.)

Allotment or community gardening is a popular form of gardening in various countries in Europe and North America. City allotments were mainly gardened by the middle classes of the age of the industrial revolution. According to Phil Sion, "...demand for inner city allotments came originally not from the poor in an attempt to grow their own food, but rather from the relatively well-off middle-classes, who wanted space to both grow their own, and more importantly to have a garden to relax and escape the confines of the city". (Sion, History, The Allotment Gardener.) The popularity of allotment gardening seems to have fluctuated in reaction to fashion as well as to the political and economic situation. Allotment gardening in Finland ('siirtolapuutarha') was influenced by the movement in Germany and Sweden and started in the early years of the 1900s. According to the Federation of Finnish Allotment Gardens there are nowadays some 4,000 allotment gardeners in Finland, organised in 32 local associations.

Several studies of the impact of gardening on mental well-being dealt especially with allotment gardeners. The results of a study conducted recently by the Universities of Westminster and Essex (Wood, Pretty and Griffin 2015, 5) indicated that, compared to city-dwellers who did no gardening at all, those who did even as little as 30 minutes of gardening a week demonstrated significant gains in mental well-being, experienced

lower levels of fatigue, depression, tension and anger, had higher self-esteem and better general health, including lower body-mass index. They concluded that “allotment gardening can play a key role in promoting mental well-being and could be used as a preventive health measure”. (Wood, Pretty and Griffin 2015, 6.) In some cases houses located in the heart of the city have their own gardens following building tradition and regulations. Some 90% of house owners in Britain have been indicated to want a private garden, and private gardens occupy a significant proportion of the total area of a city. (Jeffcote 1993 in Dunnett and Qasim 2000, 40; Kellet 1982 in Dunnett and Qasim 2000, 41.)

Gardening has a long tradition and is one of the most popular leisure activities. Private gardens are an intensively used type of outdoor space. Based on the results of a major survey carried out in Sheffield (a typical British city) on the role of residential gardens in developing greater environmental sustainability in cities, Dunnett and Qasim conclude that, besides providing people with contact with nature and adding to the biodiversity of the urban area, residential gardens also provide direct health and social benefits to their owners and create a fulfilling and sustainable urban environment to the benefit of the community. The significant rates of questionnaire responses and further in-depth interviews (44% and 24% respectively) indicate that many people found the subject important. More than 75% listed ‘creation of pleasant environment’ and ‘promotion of relaxation’ as the most important aspects of gardening. (Dunnett and Qasim 2000, 42.) Other valuable factors were the satisfaction gained through producing neatness and tidiness in the garden, the impact of fresh air and exercise on health, positive effect of cultivating plants, creativity and self-expression, and social interaction with neighbours. Only a very marginal 10% did not value gardening. The more time people spent tending the garden, the higher they scored on the factors mentioned. (Dunnett and Qasim, 2000, 42.) On the community level, people thought that gardens contributed to the beauty of the environment, provided a welcome relief from the concrete and tarmac of

the city environment, and were safer and better for children. (Dunnett and Qasim, 2000, 43.)

The restorative effect of contact with nature within the urban environment and its ability to support recuperation from urban stress and strain, and improve quality of life, is theoretically discussed and analysed by e.g., R. Kaplan, according to whom the bits and pieces of urban nature are significant, because when the processes of fascination (effortless, relaxation producing attention) and coherence (continuation of predictable pattern, encompassing the imagined and the seen), which are essential for the effects of the natural context, are facilitated in the urban setting, they offer benefits of restorative experience similar to those normally associated with natural settings outside the urban sphere. (R. Kaplan 1984, 189.)

R. Kaplan writes that an essential component of gardening is the active interaction with the natural setting and that the effect of the content and process is likely to be greatest where interaction with nature is possible at several levels, the physical activity of working the soil, the observation of plants growing and the cognitive component of planning, which are all parts of the fascination. (R. Kaplan 1984, 194-196.)

A Survey published by the Gardeners' World Magazine in 2013, revealed that 80% of residential garden tenders were satisfied with their lives, compared to 67% of those with indoor-based hobbies, or no hobbies at all. Gardeners' outlook on life was found to be considerably more positive and the more hours people spent gardening, the more positive it was found to be. (Bradbury, 2013.)

The prominent psychiatrist and psychotherapist, Dr Sue Stuart-Smith who in 2015 published her book 'The Well Gardened Mind', suggested in an article published in 2014 by the British Telegraph, that at least in part, the psychological healing impact of gardening stems from the fact that it is a form of ritual that replaces lost rituals used in the past to help people navigate through life. In addition to creating beauty around us, gardening

also symbolically works within our minds. Discussing some of her work with patients suffering from recurrent depression and having difficulty forming positive relationships, she indicates that gardening gave this patient a source of stability and self-worth. Plants, which are far less frightening and challenging than fellow humans, help one feel good about oneself.

Gardening is nowadays used as means of therapy for people who suffer from various mental, emotional and social related problems. Research by the renowned UK charity Thrive (dedicated to helping people with mental health issues) and other such organisations indicate that gardening can help people through periods of difficulty in their lives, restore balance, happiness, confidence and health.

Two studies commissioned by Mind from the University of Essex are reported in the publication titled *Ecotherapy, Green Agenda for Mental Health*. In one project, surveyed people were involved in green exercise in local Mind groups, including gardening, walking, conservation work, running and cycling. The other project looked at the role which the environment played on the effectiveness of exercise for mental well-being. These studies confirm that participating in green exercise activities provides substantial benefits for physical and mental health. 90% of the participants reported increased self-esteem. They said that it was the combination of nature and exercise that had the greatest effect on them, and 94% said that green activities had benefited their mental health and helped decrease levels of depression, feelings of anger, tension, fatigue, and mood (Mind, *Ecotherapy* 2007, 2).

The section on Alzheimer's disease of a literature review by Wolf and Flora, titled *Mental Health and Function*, specifies that "...after gardening activities, dementia and stroke patients exhibited improved mobility and dexterity, increased confidence, and improved social skills dexterity" (Rappe 2005 and Ulrich 2002 in Wolf and Flora 2010.)



Besides the contribution of gardening activities to physical health, gardening also reduces stress. (Milligan, et al., 2004, in Cameron and Taylor 2008, 4).

In addition to the benefits of interaction with nature directly by being there and engaging in various activities, from viewing to sports, gardening offers direct contact with the elements of nature and the possibility of creation and self-expression.

Ecotherapy is an emerging form of therapy in which trained professionals use plants as a medium for several clinically defined goals. The activity takes place at a care institute's healing garden or at the practice garden of a horticultural therapist. These gardens are designed for the special demands of different target groups, and work or walk in them is intended to support healing processes. (Elings 2006, 43-44, 53.)

#### 5.3.1.3 The Impact of Contact with Nature on the Development of Children

The biophilia hypothesis claim that humans possess "an innate tendency to focus on life and lifelike processes...to explore and affiliate with life is a deep and complicated process in mental development...to the degree that we come to understand other organisms, we will place greater value on them, and on ourselves". (Wilson, 1984, 1, 2.) The human biological need to affiliate with natural systems and processes, particularly during the important formative childhood years, is critical to children's physical and mental health and well-being. (Kellert 2015, 1.) Kellert considers the modern, urban view, that progress and civilisation are measured in the distance from the natural world, to be a threat to the future of the human race. In their rush to embrace technology, people have forgotten that humans are biological, not technological beings, and that especially during childhood, human physical, emotional and intellectual well-being rely on the experience of and connection to nature. Kellert further writes that

“children need to experience nature in direct, indirect, and representational ways as an integral part of their everyday lives”. (Kellert 2015, 3.)

For many years the wrong-proven theory of Spencer that assumed that children needed to “burn off steam and excessive energy”, resulted in many playgrounds and school yards being non-green areas equipped with climbing and sports equipment and some looking more like parking lots – (White, 2004, 1), just like the one in the country town secondary school I attended.

It is only in recent times that a large proportion of the population lives in urban settings. Earlier, a good number of people did not live in urban centres and children had an intimate contact with nature. Children were not attracted and bound to electronic devices, and parents let children play and roam far more freely than children do these days. The modern, urban lifestyle is mostly responsible for the lack of opportunity children have for direct and spontaneous contact with nature. (Rivkin 1990, Chawla 1994, Kellert 2002, Pyle 2002, Kuo 2003, Malone 2004 in White 2004, 3.)

For children, the effect of the natural environment goes beyond the effect that it has on adults due to their greater plasticity and vulnerability. (Wells & Evans 2003, 312.) Research findings indicate that contact with nature generally improves children’s ability to concentrate and self-discipline (Wells 2000, Taylor 2002 in White 2004, 4), and especially in the case of children with ADHD to concentrate (Taylor 2001 in White 2004, 4). Playing in nature improved the motor fitness, coordination, balance and agility of children, and their play was found to be highly diverse, imaginative, and collaborative (Grahn, et al. 1997, Fjortoft 2000 and 2001, Moore & Wong 1997, Taylor et al. 1998, in White 2004, 4). It also improves their cognitive development, as well as their powers of observation and creativity (Pyle 2002, Crain 2001 in White 2004, 4), and boosts their imaginative ability (Cobb 1977 and Louv 1991 in White 2004, 5), while buffering the stress of life and helping children to deal with difficult times (Wells 2003 in White 2004, 5). It seems that play in diverse natural environment reduces or even eliminates bullying (Malone & Tranter 2003 in White 2004, 5), supports the development of positive feelings about each other (Moore

1996 in White 2004, 5), stimulates social interaction (Moore 1986, Bixler, Floyd & Hammutt 2002 in White 2004, 5), and the development of independence and autonomy (Bartlett 1996 in White 2004, 5).

A study of the impact of green spaces on the cognitive development in children found an improvement in cognitive development associated with surrounding greenness, particularly greenness at schools. The study, conducted in Barcelona, Spain in 2012-2013 observed for over 12-months progress in working memory and superior working memory and a reduction in inattentiveness. These were associated with total greenness within and surrounding school boundaries, and a total surrounding greenness index (of the home, commuting route and school). The benefit was said to be partially mediated by reduction in exposure to air pollution. (Dadvand et al., 2015, 7937.)

Gardening is said to be beneficial in reducing dementia, as is shown by a study performed in 2006 in Australian nursing homes (Simons et al. 2006 in Maller et al., 2008, 44). C. Lewis believes that vegetation in any setting has great potential for psychological healing. A natural setting viewed, is first a visual experience, which is transmitted to the brain and is processed and stored as a deeper level, meaningful experience. Lewis also points out that the benefits of gardening are not age-dependent. He theorises that plants heal via (a) observational mode, and (b) participatory mode. He stated that the experience gained through nurturing and being responsible for plants is more intense than that gained through observation alone, yet, both modes produce well-being. (C. Lewis, 1990, 1992, 1996 in Maller et al., 2008, 45.) Gardening was shown to assist in dealing with traumas experienced by refugees (Hodge 2003 in Maller et al., 2008, 46).

Gardens and gardening are known to be therapeutically beneficial for children with special needs and those with Autism Spectrum Disorder (ASD), ADD and ADHD, and are often used in treatment. The ability of children with attention deficit disorder (ADD) to concentrate and focus their attention was found to improve after spending time in nature. The

greenness of the play setting was related to the symptom severity, and the greener the play area of these children was, the milder their ADD symptoms were. According to the parents of the studied children, the children functioned better both while they were engaged in green activities and for some time after. Play during recess in a green environment and even a green view from the class window may provide the children's mind with a necessary rest and improve their ability to concentrate on their school work. (Taylor, Kuo and Sullivan, 2001, 54, 71, 73, 74.)

Autism, a broad spectrum disorder, is manifested across a wide spectrum of different symptoms. It affects the way children perceive and process their world. Three main areas affected in all cases to various degrees are social interaction and communication, sensory integration, and repetitive patterns of behaviour. About half of these children (and later on in life, adults) are non-verbal or cannot take part in a conversation with another person. These children have difficulties reading the expressions and feelings of other people, and find it difficult to express their own needs. They are often solitary and detached. Many suffer from Sensory Integration Dysfunction (SID) and are hypo or hyper sensitive to sensory stimuli such as sound, light, smells, tastes and texture or pain. Many are not able to filter input from external sources and are overwhelmed as they experience all at once. This can often cause them to undergo a meltdown. Many compulsively repeat movements and behaviours. They are often more interested in objects rather than in other people. Many of these difficulties are shared with other children with special needs and conditions. (Sachs and Vincenta 2010, 2-3.)

Play, especially in nature is important to children's learning and development in general. Research indicates that a creative and supportive natural environment can help children with ASD and special-needs to experience the world in a meaningful way. (Sachs and Vincenta 2010, 3.) Guidelines for the design of therapeutic gardens for autistic and other special-needs children are based on various studies and cumulative experience.

### 5.3.2 View of Nature – The impact of Passive Contact with Nature

Several studies link mere pictures of a natural environment and natural window view to positive recovery from surgery and to lesser incidence-rate of illness among prisoners. (Ulrich 1984, Kaplan and Kaplan 1989, Larsen et al 1998.)

Discussing the impact of the built environment on mental health, Evans refers to laboratory and field studies (S. Kaplan and R. Kaplan 1989, S. Kaplan, R. Kaplan and Ryan 1998, Kuo 2001, Parsons and Hartig 2000, Ulrich 1993) that demonstrated the link between the exposure to natural elements in the built environment, such as trees, water and natural landscapes and recovery from cognitive fatigue and stress, as well as from the effect of exposure to experimental and naturalistic stressors, and the association between viewing paintings and representations of nature and landscape as well as indoor plants (Kaplan and Kaplan 1989, 267, 269; Ulrich 1993, Larsen et al 1998), and ‘increased positive effect and comfort’ (Evans 2003, 545).

The various studies indicate that natural view has a significant restorative effect, which is explained by the ability of natural view to effectively reduce anxiety and stress. (Ulrich 1984, 1 (420.)) Referring to his earlier publications (1979, 1981 & 1983), Ulrich states that “Views of vegetation, and especially water, appear to sustain interest and attention more effectively than urban views of equivalent information rate. Because most natural views apparently elicit positive feelings, reduce fear in stressed subjects, hold interest, and may block or reduce stressful thoughts, they might also foster restoration from anxiety or stress”; and he concludes, “in comparison with the wall-view group, the patients with the tree view had shorter postoperative hospital stays, had fewer negative evaluative comments from nurses, took fewer moderate and strong analgesic doses, and had slightly lower scores for minor postsurgical complications”. (Ulrich 1984, 2 (421)).

Chang and Chen (2005) report on the effect of window view and indoor plants on human psychophysiological responses measured in the workplace environment, and indicate that “Participants were less nervous or anxious when watching a view of nature and/or when indoor plants were present. When neither the window view nor the indoor plants were shown, participants suffered the highest degree of tension and anxiety”. (Chang and Chen, 2005, 1358.) “Mounting evidence indicates that when in natural environments, and/or even when viewing natural environments, humans react positively in terms of 1) aesthetic and affective response (Ulrich 1983, 85-125), 2) psychological well-being (Ulrich 1979 1-34), 3) psychophysiological effects (Ulrich 1981), and 4) stress recovery” (Ulrich and Simons 1986, in Chang and Chen, 1358). They selected to study the case of the work-place because “many people spend a good deal of their waking, day-light hours in this environment, which is often stressful, tension-filled and fatiguing” (Chang and Chen, p 1358). A good deal of attention is paid to the plan of the building and the design of the interior, yet, a major factor that can influence health is the design of the immediate environment surrounding the building. Chang and Chen suggest that the landscape design of such sites should be carried out with the view from the window in mind and not just from an outside perspective.

Is the positive effect of nearby green space on health the result of the physical activity it facilitates (after all, as we have already mentioned, exercising and being active physically contributes to both physical and mental health), or is the impact of the green area on health a direct one?

Researchers have pointed at two major approaches to the question of the mechanism by which nature affect people positively – one is the possible metaphysical, evolutionary bond between humans and the natural environment that supported their survival, and the other is the instrumental approach, suggesting that our attraction to landscape is based on merely a means to an end. The outdoor is valued because it provides desired physical or emotional nourishment or recreation. (Rubinstein, 1997, pp 1-17.)



Roger Ulrich and a group of researchers (Ulrich et al.1991, 222-227) endeavoured to investigate the hypotheses of the psycho-evolutionary theory regarding the stress reducing and recovery effect of an unthreatening natural environment on stressed individuals. The faster and more complete recovery was observed after exposure to natural, rather than urban environment.

The association between the amount of green space in the nearby area and the state of health of the population of various socioeconomic and age groups, in varying level of urbanised environment, was demonstrated by several studies (Mitchell and Popham 2007, 681; Maas et al, 2006, 589-591). Although some variations were found between the age and education groups and the level of urbanisation of the area, over all, the percentage of green space in the nearby environment had a significant relation to perceived general health in all degrees of urbanity. A study conducted in New Zealand was looking for possible causative mechanisms that form this link, including the provision of physical activity, relief of stress and facilitation of social contacts. The study found that green neighbourhoods had a positive impact on mental health and the reduction of cardiovascular risk. Yet, physical activity did not fully explain the link between green space and state of health. (Richardson et al., 2013, 14.) A study conducted in Scotland concluded that physical activity may not be the main mechanism that serves to explain the association between green space and health, and noted that the link may be explained better by the direct effect of perceiving a natural environment on physiological and psychological health. (Ord et al 2013, 7.)

Rubinstein points at the need for a valid and reliable way to describe the value of open space, and measure the degree to which human emotional, cognitive and physiological needs were met by it. She raised questions related to the large variety of spaces which were considered 'open', from extensive wilderness and green belts outside cities down to urban 'pocket parks', private as well as community and roof gardens. She also questioned the usability of the results of studies by Kaplan and Kaplan

(Kaplan and Kaplan, 1989), and Ulrich (Ulrich 1983) – who used photographic material – for planning small urban spaces. Other studies centred on the use of public spaces with limited or moderate vegetation in highly built-up areas, and illustrate the power of such places in the reduction of stress, acting as a social facilitator and encouraging community cohesion. (Rubinstein, 1997, pp 1-17.)

#### 5.4 Nature as means of cultural expression

In the Western manner of thought, art is seen as an integral part of cultural expression and identity, but nature is nowadays seldom seen that way.

The Biophilia hypothesis is based on the assumption that knowledge about the natural world was at some point an evolutionary advantage that contributed to survival. (Kellert, 1997 in Maller et al., 2008, 24.) Kellert considers that the human need to be in contact with nature stems from psychological and neurological needs that are the product of our evolution, and some researchers consider that these needs are in a contradicting state with the results of technological progress. (Suzuki, 1997; Glensinning, 1995; Lewis, 1996, Gullone, 2000, in Maller et al., 2008, 25.) The idea that people can flourish apart from the rest of the living world is a most recent one, and faulty at that. It is presumed that satisfying our need for contact with nature may provide an effective way to reverse this harmful effect and improve human health. If so, healthcare professionals need to adopt a suitable, multidisciplinary, holistic and ecological approach to health. (Frumkin 2001, in Maller et al., 2008, 25.) One may consider the current trends in therapy, such as ecotherapy and the emerging practice of prescribing exercise and lifestyle-change to address medical concerns previously treated by medication and intervention, as supporting this assumption.

The effect of urban life on the human brain, discussed in Chapter 3.3.3, supports the idea that the modern environmental crisis is a symptom of the

rupture of the human emotional and spiritual relationship with the natural world. (Kellert and Wilson, 1993, in Maller et al., 2008, 25.)

The original teachings of most world religions, wrote David Suzuki (in his book 'The Sacred Balance: Rediscovering our Place in Nature', 1997), were originally based on "a deep reverence for nature and a profound understanding of the relationship between humans and the natural world". He considers that the current shift in view, which places the individual as a separate entity from nature, is the reason for the growing alienation which people feel towards their cultural and natural surroundings. (Suzuki, 1997, in Maller et al., 2008, 28.) A study in China demonstrated that elders considered that views of nature gave them peace of mind, and advanced their well-being and health. (Yeou-Lan, 1996, in Maller et al., 2008, 28.) The connectedness of Aborigines of Australia to country and kin, is integral to their sense of well-being. (Anderson, 1996, in Maller et al., 2008, 29.) Hinduism considers that humans are just a part of and belong to nature, along with all other elements. (Coward, 1997, in Maller et al., 2008, 28.)

Most indigenous cultures regard the world as spiritual and people as an integral part of nature, and advocate the need to understand and respect nature and live in harmony with it. (Metzner, 1995, in Maller et al., 2008, 28.) Yet, nowadays, many cultures and people have lost how to empathise and identify with non-human life. (Metzner 1995, in Maller et al., 2008, 29.) Interestingly, members of Western cultures (where separation from nature is nowadays deeply rooted), who primarily viewed themselves as separate from nature, reported, when in a natural environment, that they felt greater awareness of the surroundings, of themselves and a sense of unity with the world. (Mausner 1996, in Maller et al., 2008, 30.) One may argue that the increasing popularity of Wicca and similar practices on one hand, and extreme environmental activism on the other, may stem from the need to replace the Western religious practices that have lost the direct bond with nature. This idea seems to be supported by Letcher and Taylor, who considered that modern 'environmentalism' and 'eco-protest life-style'

show characteristics of spirituality and the zeal of religion. Lecher refers to the deep belief of many of the protesters in the sanctity of nature as “Eco-paganism”. (Letcher 2002; Taylor 2001, in Maller et al., 2008, 30.)

Ecopsychology (the popularity gaining nature-guided therapy) focuses on the notion of the alienation of humans from nature, its effects on health, and their correction. (Scull 2001; Burns 1998; Gullon 2000 in Maller et al., 2008, 59.) It is said to be a modern version of ancient views held by indigenous peoples on the relationship between humans and nature. Clinical ecopsychology, dealing with actual corrective measures, is based on the premise that many psychological and physical problems are caused by this alienation. Their remedy is found through the rebirth of the lost bond to the healing powers of nature, either through excursions into the wilderness or spending time with plants and animals (Scull, 2001; Roszak et al., 1995; Levinson, 1969 and 1983, Nasr, 1968; in Maller et al., 2008, 59). The authors conclude that the success of this type of therapy is the proof of the significant influence nature has on the psychological, spiritual, and physical health and well-being of human beings. (Maller et al., 2008, 66.)

## 5.5 Nature, Culture and Art - the Case of the Japanese Garden

*“... (humans) are all regarded as foolish and wise, good and bad, in equal measure, and Japanese art teaches us to laugh at ourselves so as not to feel superior to all other sentient beings with whom we share the earth.”  
(Addiss, 1996, 8-9)*

The Japanese garden, so attractive to many of us, is an integral part of the Japanese culture in a similar way to religion, literature, poetry, graphic art, painting, the theatre, music, architecture and more. The various types of Japanese gardens are all the product of a form of art directly linked to Japanese cultural values, world-view and symbolism. (Addiss, 1996, 10.)

Various elements in the concept of the Japanese garden make it a good case for examination as both a form of ‘art’ and ‘nature’, reflecting

society's world-view and values. The subject also lends itself well to the questions of the effect of nature and art on well-being and health. Take nature out of the Japanese view of the world and you will take away the basis to the entire culture. Take the garden out of the Japanese culture and you will have no Japanese culture left. Nature is the main pillar of the Japanese world-view and the garden is its expression.

The Japanese garden was greatly influenced by the Chinese Daoist poetic or scholar gardens, which migrated to Japan in the 6<sup>th</sup> century AD, bringing along its Confucian and Buddhist elements of symbolism. (Smith K. 2008, 43.) Themes such as the lake, island, rocks, the idealised image of nature, which had their roots in Chinese mythology, landscape and tradition, the landscape garden of the emperor and the smaller garden of the scholar received a local Japanese adaptation. (Barlow Rogers, 2001, 295.) The belief in Shinto kami spirits symbiotically coexists with Pure Land Buddhism, Zen, the integration of Zen principles into secular skills and forms of art, and the blending of Neo-Confucian with Zen motifs in the Japanese civilisation. (Smart, 1993, 131-132.)

Kami spirits are found in all worlds, 'Takamanohara - high heaven', 'Nakatsukuni - middle land' and 'Yomi - the underworld'. The kami of the 'middle land' are the kami of streams, rocks, mountains and sea which blend with ancestral and tutelary kami, and both further blend into the everyday life of people. Marking the border between the religious and mundane is also made difficult by the simultaneous presence of Japanese aestheticism and committed artistic endeavours in both realms. (Smart, 1993, 133.)

In the Judaeo-Christian hierarchy, Nature is at the very bottom, God, the creator and judge, is at the top, and Man, in charge of Nature, answers to God. Nature is the matter made by God to be used or exploited for the sake of man and God. Interestingly, many people in Western cultures are attracted to the high status of nature and emphasis on man's oneness with nature in Japanese culture and tradition (though not as many are familiar

with the religious aspects). In the kami religion, almost any dimension of nature may become sacred. For the Japanese, nature and its beauty intrinsically manifest the sacred, thus nature is kami. As a general principle of Shinto, man is basically one with nature, and the three: gods, man, and nature coexist equally on the same plane, rather than in a hierarchical ranking. (Earhart 1970, 1-3.) The view of nature as a cosmic order, in which man and kami cooperate intimately, reflects the early agrarian Japanese world view. It endured throughout Japanese history through preserved experience of harmony with nature in people's consciousness, in spite of major changes in the society, economy and way of life. (Earhart 1970, 8-9.)

Japanese art demonstrates deep understanding and respect for nature (including human nature), and for the natural materials from which works of art are created. It is said that Japanese art, often depicting nature in particular season or time has a sense of 'naturalness' about it. The technique of the artist may look spontaneous, but in fact this effect is the result of a lengthy, complex and sophisticated process. (Addiss, 1996, 8-9.)

Other important characteristics of the Japanese art are the ability to borrow elements from other cultures and give them a 'Japanese twist', the importance of 'space' (often left empty), asymmetrical compositions (said to suggest emotion), a sense of movement and change, the integration of opposites (considered valuable to human experience), and a sense of humour and playfulness. (Addiss, 1996, 8-9.) These characteristics are true for all forms of Japanese art, including all types of Japanese gardens.

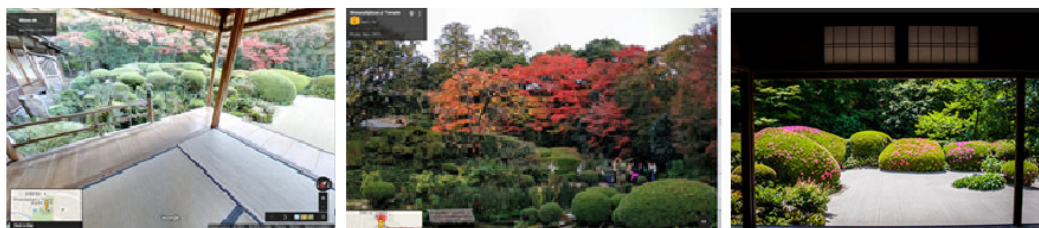
Japanese art should be looked at with the eyes as well as with the mind. (Addiss, 1996, 11.) Japanese gardens offer the unique aspect of being in, interacting with, and becoming part of the work of art itself. They can be viewed like paintings and prints from a single standpoint as total compositions, or from different angles, like sculptures and ceramics



(Addiss, 1996, 11), or dynamically as one moves within and experiences them with all the senses.

Both Shinto shrines and Buddhist temples offer humans a place upon Earth to be near their gods and the Truth. According to Shinto beliefs, spirits and 'kami' manifest themselves in all aspects of nature, including mountains, trees, rocks, and waterfalls, thus nature directly reflects the beauty and purity of the gods. (Addiss, 1996, 117.) The Japanese word 'niwa', ('a garden'), referred originally to a purified place for the worship of the gods, the gathering place of the gods, the central feature of which was a massive rock, the seat of the Shinto gods. (Mansfield, 2011, 10; Goto and Naka, 2015, 65.)

Based on their intended usage, gardens can be divided into religious and secular. The religious ones were part of temples (some secular gardens have later become temple gardens, e.g. the Shisendo formerly scholar garden), while secular ones were owned by royalty, nobles, military leaders, and scholars, and were intended for leisure, entertainment and recreation, as well as retreat, creation and contemplation.



**IMAGE 287 (1-2-3)**

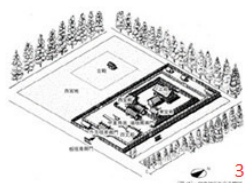
Shisendo garden,

(1) Google Earth Street View; (2) Panoramio, Kayo rin, (3) Panoramio, Akiko Morita/Flickr

Besides temple gardens, another important form of the Japanese garden was the scholar garden. The artistic-scholarly ideal was widely appreciated and pursued by the literati of Japan in their painting, calligraphy and gardens, which reflected their personal connection with the glories of nature. The symbols expressed through strokes of the brush surround them also in natural forms. "In this way, the scholar garden was not merely a pleasing arrangement of natural elements, but a setting conducive to the pursuits of mind and body". (Addis, 1996, 130.)

Japanese gardens are organic works of art, the effect of which changes through the time of day, the weather and season. Constructed mostly of organic material they are also susceptible to the passage of time and thus require continuous care and maintenance. (Addiss, 1996, 117.) Garden types can also be differentiated according to the historical periods in which they were introduced. The following table is intended to give a brief general overview of Japanese garden types by era of introduction.

**Pre 794** Early Shinto. Simple. Wooden structures surrounded by pebbled areas. For example the Ise Shrines, Shima peninsula. Ever since the 7<sup>th</sup> century AD, according to ancient Shinto tradition, every 20 years, a new shrine is built on the adjacent plot and the old one is demolished and white pebbles are strewn on the site and a single post, enclosed in a tiny hut is set in the centre. (Japan-Guide.com; Sacred-Destinations.com)



**IMAGE 279**

(1) Early Shinto shrine surrounded by pebbled area, Ise Shrine, (japan-guide.com)  
(2) In process, (Google Earth)  
(3) The result, (Architectural Institute of Japan)  
(4) The post in the centre of the empty plot, post demolition. (Google Earth Street View)

From the 6<sup>th</sup> century AD on Buddhist influence. Gardens as imperial palaces for recreation and entertainment.  
Ponds and streams as focal points. An attempt to reproduce famous landscapes. None survived.  
Archaeological finds at Nara. The East garden at Heijo Palace is a reconstruction (Japan-Guide.com).



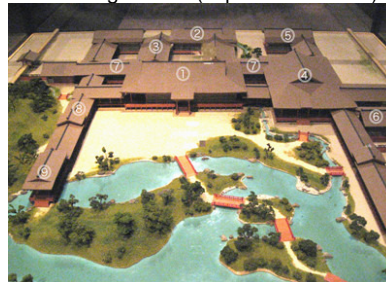
**IMAGE 280 (1-2)**

Early aristocratic pond garden  
East Palace Garden at Heijo Palace, Nara  
Photos (1) japan-guide.com (2) Google Earth Street View

**Heian 794-1185** Shinden gardens, built by aristocrats for party and recreation. Follow a Chinese concept – large ponds, islands connected by bridges, a gravelled plaza and pavilions extended over the water.  
None survived. Remaining ponds incorporated to later gardens. (Japan-Guide.com)



**IMAGE 281**  
Remains of a Shinden Garden, Osawa Pond at Daikakuji Temple in Kyoto (japan-guide.com)



**IMAGE 282**  
Miniature Model of Higashi-Sanjo Dono. Wikiwikiyarou, Wikipedia.com

Pure Land Buddhist gardens resembling Western Paradise of the Amida Buddha also became popular. Large ponds with lotus flowers and islands, and beautiful pavilions. Only partial examples survived. Byodoin and Motsuji Temples (Japan-Guide.com).



**IMAGE 283**  
Motsuji Temple (Google Earth)



**IMAGE 284**  
Pure Land Garden (Motsuji Temple in Hiraizumi)  
(japan-guide.com)



**IMAGE 285**  
Byodoin Temple (Google Earth Street View)

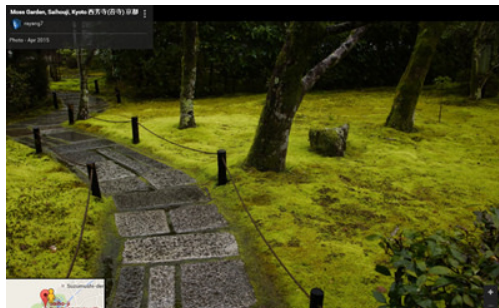
**Kamura &  
Muromachi  
1192-1573**

Zen Buddhism was favoured by the military rulers. According to Zen, one can achieve internal enlightenment through meditation and adherence to ascetic practice. Gardens were often attached to temple buildings for meditation. Smaller in area, minimalist in style, while retaining symbolic landscape elements, islands, ponds, bridges and waterfalls. Most extreme and minimalist version were Karesansui, dry gardens, where rocks, gravel and sand represented all these elements (Japan-Guide.com).



**IMAGE 286**  
Karesansui Dry Garden (Ryoan-ji Temple in Kyoto)  
(japan-guide.com)

Saiho-ji (Kokedera, the Moss temple) Temple garden was designed for plant-based meditation (120 types of moss). Soseki divided the garden to 2: classic pond centred garden and a smaller Karesansui, dry garden. Both parts serve the same purpose. (Japan-Guide.com; Addiss 1996, 119)



**IMAGE 287**  
Saiho-ji aka "Kokedera",  
(Panoramio/Rajang7)



**IMAGE 288**  
Saiho-ji aka "Kokedera" in autumn  
(Idaho University course material, LARC389)



**Azuchi-Momoyama  
1573-1603**

Chaniwa, tea ceremony (inspired by Zen Buddhism in 14<sup>th</sup> century AD) gardens, reached high point of refinement. Simple, utilitarian and rustic. Withdrawal from the world atmosphere. Steppingstone paths leading to teahouse, stone lanterns and a washbasin (*tsukubai*) for ritual cleansing (Japan-Guide.com)



**IMAGE 289**  
(asiawelcome.com)



**IMAGE 290**  
Tea Garden, Kotoin Temple in Kyoto (japan-guide.com)



**IMAGE 291**  
(asiawelcome.com)

**Edo  
1603-1867**

Ruling class preferred extravagant gardens for recreation purposes. Strolling gardens, ponds, islands and purpose-built hills to be viewed from a circular trail. (Japan-Guide.com)



**IMAGE 292**  
Koishikawa, Korakuen Strolling Garden, Tokyo  
(Google Earth Street View)



**IMAGE 293**  
Koishikawa Korakuen Strolling Garden  
(Google Earth Street View)



**IMAGE 294**  
Suizenji Strolling Garden, Kumamoto (japan-guide.com)

Small Tsuboniwa (2 tatami mats) gardens. Popular among the common urban population. Bring nature, light and fresh air into tiny courtyards in and between townhouses. Not meant to be entered. Few decorative elements. (Japan-Guide.com)



**IMAGE 295**  
Tsuboniwa, Mmerchant House, Naramachi (japan-guide.com)



**IMAGE 296**  
Kita-in, old Edo castle, Kawagoe (Guide-Japan)



**IMAGE 297**  
Wayside garden, Kawagoe (Guide-Japan)

**Modern  
Gardens  
1868-  
present**

Modernisation. Modern, western style city parks built. Several private strolling gardens opened to the general public. Some new strolling gardens had western gardening elements like flower beds, others traditional Japanese with a modern twist. (Japan-Guide.com)

The meticulously sculptured and tended Gardens of the Adachi Museum of Art in Shimane prefecture. Some parts are exhibited behind glass while others allow walking through. The founder of the museum, Adachi Zenko, a successful businessman, devoted himself to gardening until he died aged 91. He believed that the garden was also a picture, and his gardens are also described as living Japanese paintings. (Adachi Museum)



**IMAGE 298**  
Adachi Museum of Art (Google Earth Street View)



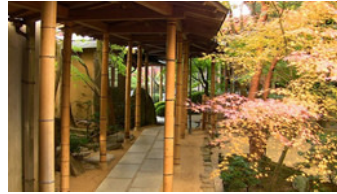
**IMAGE 299**  
Adachi Museum of Art (japan-guide.com)



**IMAGE 300**  
Adachi Museum of Art (Adachi Museum of Art)



**IMAGE 301**  
Adachi Museum of Art (Adachi Museum of Art)

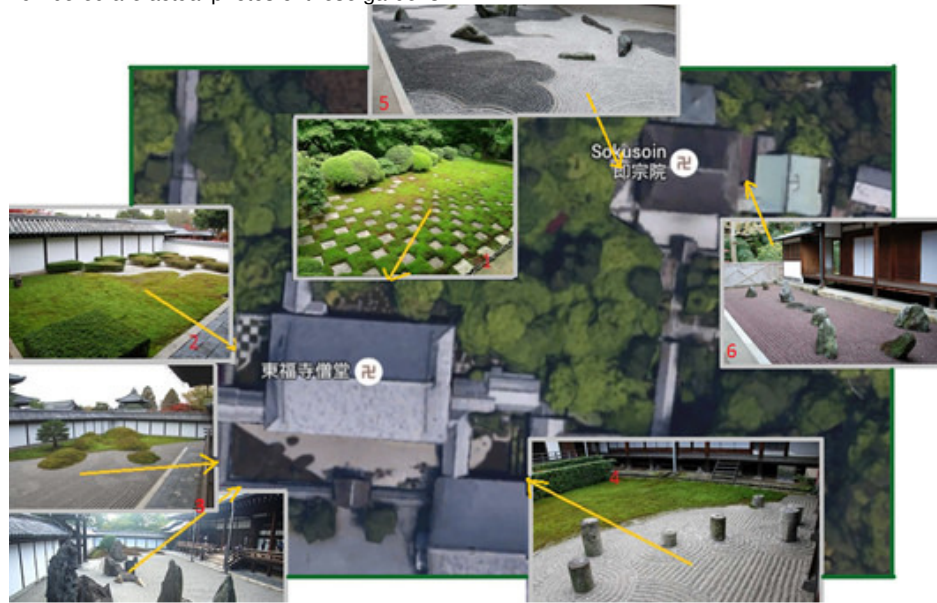


**IMAGE 302**  
Adachi Museum of Art (Japan Travel)



**IMAGE 303**  
Adachi Museum of Art (Adachi Museum of Art)

The current gardens of the Tofuku-ji Temple (1236) were rebuilt in 1939 and 1964 by Mirei Shigemori, and are an exquisite example for the application of classical Zen principles to modern Japanese garden design. Following is an aerial view of the parts of the grounds where these special gardens are and linked and numbered are actual photos of these gardens.



**IMAGE 304**  
1. The Checkerboard garden (Ad Blankestijn)  
2. The garden outside the Abbott's Hall (Hojo) (Asano Noboru)  
3. South Garden of the Abbott's Hall (Alan Gleason; Piet M Patings)  
4. The Eastern Garden (Asano Noboru)  
5. Ryo-gin-tei – The Dragon Song Garden (Asano Noboru)  
6. The Northern Garden (Asano Noboru)

The aggressive westernisation and industrialisation of Japan brought also many western elements to the Japanese Garden design, which the Japanese transformed to express their own spirit. As an example, the gardens of the International House in Tokyo, built in a western style in 1955 (enlarged in 1976) were designed to satisfy a traditional Japanese taste. The use of the level roofs as roof gardens and lawns is clearly Western influenced, but for the Japanese roof garden (Addiss 1996, 133-134).



**IMAGE 305**  
International House in Tokyo, various views  
(TripAdvisor.co.uk; DR (Japan-experience); TripAdvisor.co.uk, Japan Times)

The Japanese art of gardening is well documented historically and thus offers a special opportunity to examine the relationship between three main elements of this work: nature and well-being, art and well-being, and

the central claim that art, in addition to nature, should be at the basis of and an essential part of the actual planning and design process of the urban environment, so that the latter will support well-being and health, mental and physical alike. Like in other forms of Japanese art, the elements of the Japanese garden are carefully selected, intended to create spiritual settings and evoke emotional responses in the viewers and visitors. Gardens are a human attempt to be one with nature and act in harmony with the power and beauty of the divine. (Addiss, 1996, 117-118.) According to Addiss, the desire to be surrounded by natural beauty is part of everyday life and when not available otherwise, the Japanese bring it into their homes in small, manageable portions in the form of bonsai and bonseki. (Addiss, 1996, 118.)

Buddhism, introduced to Japan in the 6<sup>th</sup> century intensified the link between nature and the spiritual values. The garden became a vehicle for the reconstruction of the Pure Land of the Amitabha Buddha upon Earth. The garden was structured using spiritually symbolic forms and plants. Kokedera's designer, the monk Soseki, commented in his book 'Dream Conversations' that some people create gardens to impress others, some to collect rare trees and rocks, some to inspire their poetry and some to clear their minds. (Addiss, 1996, 120.)

Japanese painting and gardening both are expressions of the culture, its values and world-view. The austere ink works of painter monks, for example Sesshū Tōyō (1420-1506), greatly influenced Zen aesthetics and Zen garden design. (Addiss 1996, 121.) Zen gardens are abstract and are intended to evoke contemplation. The elements used as well as their setting and relationships between them are meant to be symbolic. How these symbols are interpreted, depends greatly on the viewer, and opinions often vary.

Symbolic motifs play an important part in Japanese art in general and garden design in particular. Many of the meanings expressed through these symbols were introduced by religions that came via China, such as



Buddhism, Confucianism, and Taoism (Gunter, 2003, 11-12). Several nature-related topics are repeatedly used in the various branches of Japanese art. These ideas and symbols have further developed within the confined island nation's atmosphere and evolved into uniquely Japanese, and still impact everyday life in Japan in current times.

## 6 THE EFFECT OF ART ON HEALTH AND WELL-BEING

### 6.1 Art is good for you

There is a growing evidence-base which strongly supports the assumption that being in contact with art is beneficial in a variety of ways. Interaction with art can involve all the senses, and art can be consumed in various manners from being actively involved in creative activity to passively observing the creations of others.

Art-related activity has been used for medical and social-behavioural purposes, diagnostically as well as in treatment, through actively creating and sensorially interacting with art, be it thorough painting, sculpture, music, movement, writing, and so on, using touch, sight and sound.

Art is also developmentally beneficial, exposing people to new ideas and contributing to the development of social skills, tolerance and critical thinking.

The UK Department of Health and the Arts Council England, in their report titled 'The arts, health and well-being', defines 'Arts and Health' as "...arts-based activities that aim to improve individual and community health, and health-care delivery...". (Arts Council England, 2007, 5.) Such activities can, among other things, promote good health and well-being of communities and individuals, improve mental and emotional state of health of people, improve communication between medical staff, carers and patients, and humanise the treatment experience of healthcare staff. (Arts Council England, 2007, 5-6.) Integrating art into the mainstream health strategy and policy making, which is among the intended purposes of the above report, can be then extended further. We can ask, if art were to be made available in the public environment so that it were an integral part of the everyday surrounding, could it help to both assist in treating ailments caused by the urban environment or even prevent them?

Questions related to this idea are for example, how can art be made part of the public urban environment, what art can be made part of it, what art should be made part of it, and how could we go about measuring the impact, so as to be able to further develop it.

## 6.2 Art and the Brain

Although mostly used for psychotherapy, art therapy is in fact a mind-body form of intervention that employs the capacity of art to influence bodily functions and therefore symptoms. This is strongly supported by a growing body of findings in the field of neuroscience and psycho-neuroimmunology, which for several decades now has been providing information on the mechanisms through which art therapy works. As the validating data refers to images and not to the act of therapy itself, it in fact validates the claim that images influence emotions, thoughts and well-being, and that the body physically reacts to images even when one is not actively involved in their creation.

The link between mind and body, the idea that the mind affects the body, and vice versa, has been known (yet, not proven scientifically and not always accepted by Western culture) for thousands of years. The link between the mind and the body can be seen in the practice of meditation, yoga, prayer, and the use of the 'placebo effect' in medicine, in the consumption of digestible substances, whether 'food' or 'medicine', and the practice of physical activity to have an effect on the mind. We have always known about this two-way link, although the fact that the scientific proof was missing, at times, made it easier to doubt its validity.

Developments and findings in neuroscience, psycho-neuroimmunology and related fields shed light on the 'mind-body' link, the central effect of the mind on the body, and provide supporting evidence to what we have known all along, intuitively and through experience.

Advancement in medical technology make it possible to scientifically investigate the relationship between mind and body, the neurological and

physiological phenomena related to memory and internal image formation and display, which affect (in a two-way interaction) the brain and the body. (Malchiodi, in Malchiodi ed. 2003, 17.)

When people, adults or children, are engaged in art making, they are usually focused on their creation, as substantiated by Carl Jung. (Jung 1959 in DeLue, in Malchiodi ed.1999, 36.) A study conducted by DeLue used biofeedback to investigate whether a simple art task, such as drawing a mandala, could reduce stress and induce relaxation. The results were statistically significant for the children that were engaged in the creation of circular drawings compared to those relating to completing puzzles. (DeLue, in Malchiodi ed.1999, 33 and 37-38, 45.)

Images affect our emotions, and as studies indicate, different parts of the brain become active when we look at images of different facial expressions or form a mental image of an event or a relationship, hormonal levels fluctuate and cardiovascular and neurological functions are affected. (Sternberg 2001 in Malchiodi, in Malchiodi ed. 2003, 20.) Images affect the way we feel and our physiological reactions – they can evoke fear, anxiety, the desire to eat or pleasure (e.g., in cases of phobia, photos of the trigger objects or animals can induce the condition, while seeing photos of delicious foods can induce the desire to eat, and erotic imagery can cause sexual arousal), guided imagery is known to be effective in reducing symptoms and even inducing a healing process, and as demonstrated by Ulrich, the view in a photo or work of art had a positive effect on the well-being of hospital patients. (Malchiodi, in Malchiodi ed. 2003, 18.) According to Damasio, images viewed or imagined activate the visual cortex in a similar manner (Damasio 1995, 135), as anybody who has woken up startled by a dream is aware of the physical impact of imagery.

### 6.3 Creative Activity

Various studies indicate that engagement with creative activities can help reduce stress and anxiety, improve the condition of people suffering from depression, and ease the symptoms of people suffering from chronic diseases. (Stuckey & Nobel, 2010, 254.) Physicians concerned with the emotional component of patients' illness have found that the arts could help detect anxiety and depression (which can be the result of illness and treatment) and serve also as a therapeutic tool (Zeki, *Science* 2001; 293:51-1, in Staricoff & Loppert, 2003, 66.)

The application of visual art in therapy (drawing, clay moulding, etc.) can help patients process events, figure their meaning and express difficult experiences, and artistic self-expression may contribute to the reconstruction and maintenance of positive identity, for example, in patients diagnosed with cancer. (McMurray, Schwartz-Mirman, 2001; Reynolds, Prior, 2003; Puig et al., 2006; Ross et al. 2006, Walsh et al., 2004; Nainis et al, 2006; Samoray 2006, and Raynolds and Lim, 2007; in Stuckey & Nobel, 2010, 256.) The application of art therapy can shorten hospital stay (Kreitzer and Snyder, 2002; and Ulrich et al. 1993 in Stuckey & Nobel, 2010, 257), enhance emotional expression and psychological well-being, and decrease negative emotions (Puig et al., 2006 in Stuckey & Nobel, 2010, 257) and improve compliance with treatment regimens (Beck and Steer 1993, in Stuckey & Nobel, 2010, 258).

Art is a powerful communicative tool as it allows the non-verbal expression of thoughts and feelings. This quality, known intuitively ever since man started painting on the wall of caves and on the face of rocks, is especially useful in cases where the verbal expression is not possible, complex, difficult or emotionally demanding. Art is a language that possesses an "inherent ability to help people of all ages (to) explore emotions and beliefs, reduce stress, resolve problems and conflicts, and enhance their sense of well-being". (Malchiodi, in Malchiodi 2003, viii.) It is not about the

'quality' of the art created as judged against the work of people trained in the arts, but about the quality of the process and the outcome.

As mentioned already, art is a non-verbal language that can transcend language and, at least to an extent, also cultural barriers. It is not only a means of communicating emotions, feelings and thoughts to others, but a powerful channel for internal communication through subconscious processing. The experience gained through art therapy practice reveals the potency of art in psychotherapy and counselling. But if art can heal, it can certainly also help prevent the development and advancement of adverse conditions. The same mechanisms through which art remedies wrong are as valid in promoting and enhancing well-being.

#### 6.4 Tactile Art

Interacting with art ranges between being a spectator, through handling objects, to actual making of artistic creations. Thinking of art therapy, we often think of the actual making of artistic creations (in this case, for practical reasons, these will be limited to the creation of actual objects and paintings or drawings). And yet, both passive observation and handling of objects have been shown to have a therapeutic effect.

Object therapy is a relatively new area of research, in which museum object-handling is tested as means of enrichment activity for patients in hospitals, improving health and enhancing well-being through social interactions.

Museum objects are viewed as symbolic, and connecting with them triggers memories and emotions. A research project ('Heritage in Hospitals') is set to assess whether handling (art history and natural history) museum objects, which varied in their tactile, visual and kinaesthetic properties, had a positive impact on hospital patient well-being. On average, patients reported an increase in life satisfaction and health status following the handling of museum objects. (Chatterjee et al. 2009-2, 164.) The study demonstrated that handling (historical) museum



objects had a positive impact on patient self-reported well-being, life satisfaction and health status. Museum objects, it was figured, could be handled as either 'personal/reminiscence' (handling the objects assisted in counselling on issues of illness and loss, and helped to restore dignity and sense of identity, particularly through telling of life stories), or 'impersonal/educational' (information on the objects was first gotten through the actual handling and exploring the object, based on sensation and association), producing a positive effect on patients. (Chatterjee et al. 2009-2, 175.) Another study addressed the possible therapeutic benefits of object handling to subjective wellness and happiness of the elderly and psychiatric patients. It was found that wellness increased significantly in the elderly, while among psychiatric patients it decreased negative affect. (Thomson and Chatterjee, 2016, 349.)

Art can be and is often placed in the public domain – indoors or outdoors. Some of these pieces are intended to be interacted with through touch or active use. Tactile art – art intended to be experienced through touch, is often linked to the visually impaired, or to the manner in which young children learn, need not be limited to these groups and may enrich people of all ages and walks of life, as museum access consultant Andrew Alvarez wrote "...exploring artworks through touch can have beneficial outcomes for all of us, and can even help us to understand, and sometimes challenge, the visual judgments and verbal interpretations we rely on so heavily in the art museum", discussing the findings produced by projects he curated for leading museums. (Alvarez 2005.) People in general, not only children, learn through all senses, not only vision and hearing, and restrictions in touch normally stem from such issues as safety (of the artefact or work of art), cleanliness, and cultural norms. On the other hand, as Alvarez mentions, investigating objects through touch "increases attention and time spent with it, and thereby increases the chances of understanding and retaining information about the work". (Alvarez 2005.) Some works of art simply have to be touched to be well understood – an object may, as an intended quality, feel very different from the way it looks, or its meaning may be revealed through its function

– the look or the form may change, it may produce sound, etc. Alvarez mentioned in this context the interactive work *The Concrete Harmonium* by Malcolm Buchanan-Dick, which he said “provides a useful starting point for observing behavioral patterns among differing age groups within the family audience”. (Alvarez 2005.)

The possibility to touch and interact with an object promotes learning and understanding, and can also challenge our convictions regarding our visual preferences and illusions, which are often learnt and linked to cultural notions.

For any population, allowing the senses, including touch, to participate in the interaction with works of art increases the understanding of the work, of art in general, and has “the effect of breaking down the barriers that can arise from the distance placed between the viewer and the art”. (Alvarez 2005.)

Play is learning. Play and learning have been wrongly detached from one another. (White 2012, 5.) According to Vigotsky, play “contains all developmental tendencies in a condensed form and is itself a major source of development”. (Vygotsky 1978, 102 in White 2012, 31.) And yet, irrespective of the fact that we are fully aware of the importance of play for the development of children and for learning, children nowadays play less than children of their age did 20 years ago. (Elkind 2008 in White 2012, 5.) Play benefits cognitive, social, emotional and physical development (White 2012, 31). Therefore, the combination of play and interaction with art offers a double benefit for children.

Following are several examples to such works of art and projects, which were created with the intention of providing children an opportunity to interact with art and play in creative environments that are different from the catalogue standard playground furnishings they so often are offered.

## Art Story Gardens – Holon, Israel



**IMAGE 306**  
Chambaloo's Treasure garden, Holon. Story by Roni Heffer, Sculptor Noga Spector, Landscape architect Carmela Gabriel (Holon Municipality)

A unique environmental sculpturing project, the Art Story Gardens, a city-wide open-air interactive museum, was initiated in the early years of the new millennium in Holon, Israel.

The core idea is simple, yet the project has been proven

very successful and is still evolving. The parks, of different sizes, are scattered in the various neighbourhoods and sections of the 185,000 inhabitant city (Aharoni and Holon Municipality, 2008; Story Garden Project Holon website)



**IMAGE 307**  
The Lion with the Mane and the Giraffe Garden, Holon. Story by Dov Apflebaum, Sculptor Johannes (Jop) de Jong, Landscape architect Carmela Gabriel. (Holon Municipality)

Famous artists were commissioned to interpret popular children stories,

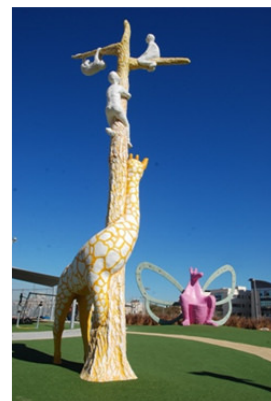


**IMAGE 308**  
Dudu's Dinosaur Story Garden, Holon. Story by Rachel Fleischon, Sculptor Miri Kolan, Landscape architect Carmela Gabriel (Holon Municipality)

mostly original, and some popular international ones, and create public art that could be interacted with through vision, sound, touch and play. The sculptures were created in various materials using different technics. There are some 50 gardens so far (Gan Sipur, Wikipedia).

The gardens, featuring figures from well-loved children books have been most popular for more than 15 years. The sculptures create a familiar surroundings, as the children who come to play in these parks are well familiar with the stories. They were intended not only to entertain the children and beautify the area, but to activate creative play and encourage children's interest in reading. A brief version of the story is presented in each garden, so that it can be read to children or by them right there.

The city has created a story reading sound file on youtube.com (Holon GIS) for the 'garden' stories, each with photos of the actual garden. Children (who nowadays are intensive Web-users at a very early age) can listen to each of them, and those who can read already, can listen and practice their reading (Lahav, iwomen.)



**IMAGE 309**  
Upon a Time You Were Two Monkeys, Story Garden, Holon. Story by David Grossman, Sculptor Lilach Pinkas Markman and Effie Hudjestan Landscape architect Karni Gerstein (Eli Neeman)

The gardens are well-loved as is attested by the many user videos loaded to such sites as youtube.com and the many user reviews posted on the web. The gardens are well treated by their young users and highly appreciated by all.



**IMAGE 310**  
The Chinese dragon, made of fiberglass vegetables, Skinner Park, Chicago, IL., USA  
Phil Schuster and Jennifer Gutowski  
(Chicago Public Art Group)

Another example of art enhancements to play environment is found in Chicago, IL, USA, where, in response to growing desire for creative places, the Chicago Park District has worked since 2004 with local groups, landscape firms and artists to create animal and other sculptures that children could climb on or use in their play. (Huebner 2011.)

## 6.5 Viewing Art

In search of an answer to the question whether the arts could play a meaningful role in the practice of medicine, a study was conducted in Chelsea and Westminster Hospital (London, UK), where the effects of integrated visual and performing arts onto health were measured in different clinical units of the facility. (Staricoff & Loppert, 2003, 63-79.) The study measured the attitude of patients, staff and visitors to works of visual and performing art, the impact of the Art Program on staff recruitment and retention, and tested measurable indicators of the impacts of the arts on clinical outcomes. The attitude of all three groups towards the works of visual and performance arts was overwhelmingly positive. The works of art and performances were pleasing, reduced stress levels and enhanced moods. Integrating the Arts into the clinical care environment was found to have a significant impact on measurable physiological indicators of levels of anxiety. It was also found that staff were concerned about their working environment and that the Art Program was a positive factor in staff recruitment and retention. (Staricoff & Loppert, 2003, 63-79.)

A random study of the effect of school tours to the art museum on desirable educational outcomes in children, determined a strong causal relationship between art education and a range of such outcomes. Students who took part in the field-trips exhibited stronger critical thinking skills, higher levels of social tolerance and interest in art and cultural institutions. The conclusions are that visiting an art museum exposes students to a diversity of ideas that challenge them with different perspectives on the human condition. (Bowen et al., 2014, 42.) Winner and Cooper reported a positive statistical relationship between studying arts and academic achievement, but they could not point at evidence to a causal relationship. (Winner and Cooper 2000, 58.) Still, "the College Board findings show that studying the arts for four years in high school is associated with higher SAT scores, compared to students who study no arts". (Winner and Cooper 2000, 63.) Transfer effects from one domain to the other are better expected with longer exposure to the arts. Winner and

Cooper also point at the use of multiple choice tests as inadequate for measuring the effect of exposure to arts. (Winner and Cooper 2000, 63.) More research is required to explore the possible spill-over effect and causality, especially in relation to achievement in other school subjects.

Experiences make people happier than material possessions, a study by Van Boven and Gilovich tells us. The reason for this, the researchers say, is because our revisiting of experiential purchases, such as visiting the museum (in other words, interacting visually with works of art and artefacts) or a hiking trip, are more open to positive reinterpretation, because they tend to be associated more with deeper personal meanings. They also form a more meaningful part of one's identity, and therefore contribute more than material purchases to successful social relationships, in manners which material goods cannot. (Van Boven and Gilovich, 2003, 1193.) The findings have implications not only for individual resource allocation, but for communities, which, if they want their citizens to live happier lives, need to invest in making experiences available to them. (Van Boven and Gilovich, 2003, 1201.)

Museums and galleries provide a place for learning besides institutionalised learning environments. Some offer a youngster-friendly approach and events, creating an environment that is warm and inviting, so that young people, who are not regular museum-goers, feel more part of what is on offer by the museum. This also makes the museum more of a place for community gathering. The 'Brick X Brick' program of the Miami Art Museum for middle school and high school students facilitated for them to create virtual façades for their neighbourhoods' buildings, through which they learnt about urban environments and their design, as well as about their own relationships with their environment and how "urban skins" can be customized and improved. (Spears, 2009.)

Museums are physical and social spaces where children (and others) can learn through their interactions on various levels with objects and ideas that they encounter there. A study conducted by Anderson et al. compared



learning by 4-7 year old children in four different environments: a natural and social-history museum, an art gallery, a science centre, and a hybrid art and social-history museum, as seen by the children themselves. Findings indicate that exhibits and programmatic experiences that are embedded in the common and familiar socio-cultural context of the child's world (linked to their customs, beliefs and values), and are delivered through child-familiar mediums such as play, storytelling and objects that the child is familiar with, are powerful mediators of memory, enjoyment and learning. (Anderson et al., 2002, 19.)

A study by Daniel Fujiwara looked into the impact of the arts on people's subjective well-being and health, using a valuation for well-being approach, estimating monetary values by looking at how a good or a service impacts on a person's well-being and finding the monetary equivalent of that impact (in place of a contingent valuation survey, which records willingness to pay). He found that visiting museums as well as participation in the arts and being audience to the arts had a positive impact on happiness and self-reported health, and that the magnitude of the effect was equivalent to that of participating in sports. (Fujiwara 2013, 7-9.)

A study that focused on the social and individual benefit of engagement with contemporary art to old people, with the reasoning that this often contested art will prompt them to engage, through their responses, in a process of identity construction. Among the aims of the study were the determination of the relationship between intellectual opportunities and well-being, and factors that determine the engagement of older people with modern art. (Newman and Goulding, 2013, 2-3.) It was found that participants gained knowledge and understanding of modern art, were mentally stimulated by the visits and the discussions that followed, developed social capital through the group discussions that followed visits, and used the knowledge for processing of current events in their life cycle. At the same time, it was found that cost and transportation, whether actual or supposed, were a barrier to participation (and therefore to independent

activity) and the misconception that high education and special knowledge was required to appreciate this kind of art. (Newman and Goulding, 2013, 1-4.)

## 7 ART IN THE URBAN ENVIRONMENT

The report of the Department of Health and the Arts Council England, specifies that the right physical environment is essential for an effective medical treatment, and calls for the involvement of artists in the process. Yet, it views art as a separate element from the architecture itself, as it indicates that artists' involvement would be through the commissioning of 'quality works of art' as part of the process of renovation and reconstruction of healthcare buildings. (Arts Council England, 2007, 13.)

The urban environment has been shown to have a damaging effect on public and individual health, causing and increasing stress and related conditions. Art, having a profoundly positive effect on individual health, and thus on of the public, may offer a potent and effective means, which together with the nature in the urban environment, could be able to alleviate these effects and even counteract to prevent them from forming.

Some people, especially adults and young adults find it difficult to enter a museum for various reasons, especially if they were not brought up visiting them. But does the artwork have to be placed in a museum to have an effect on people? To an extent, it may, especially if it needs to be protected from the elements, from touching and 'adoptive' hands, or when the context, the type or the medium dictates where it has to be placed. Nevertheless, many works of art can be placed in public environments indoors or outdoors, or even be designed to fit in those locations, or still have the location designed to contain them, as is the case with some gardens and plazas.

What art can do in a museum, it can do in other settings too, and as bringing people to art is often more difficult than bringing art to people, placing works of art in the public domain is an effective means for removing possible barriers created by lack of familiarity with art. It also has the advantage of interacting with anyone who notices it, and therefore its impact is widespread in comparison to that of the work in the museum.

Art can be found in various forms in the public domain, and it would have been logical that the next step, should be its examination and the review and discussion of its impact on people's well-being.

Generally speaking, the results of my intensive search for reference material left the impression that far more work has been done on nature in general and specifically in the urban environment. Available material on the effect of art dealt exclusively with either special groups, such as children, patients, the elderly, people with special needs, prisoners, and so forth, and the interaction with art was limited to enclosed places and such which were purposely intended for the display of art.

Research into both, the general question of the impact of public art (or even environmental art) and its characteristics, as well as further research into e.g., particular locations, types of art and population groups, is necessary for the deeper understanding of what impact art in the public domain can have on the well-being and health of city dwellers and the mechanisms of this impact.

Even though the results of such research are not available at this moment, one can safely assume that what we know so far about the impact of art on well-being provides sufficient grounds to its incorporation into the urban environment.

### 7.1 Percent-for-Art and Art-in-Architecture

'Percent-for-Art' is an international scheme adopted by various countries at different points in time in the early decades of the 20<sup>th</sup> century. According to Oulu City Museum of Art, the history of the principle in Finland starts in the 1920s. (Kekäläinen & Oulu Museum of Art.) It is currently practiced mainly on a municipal level, where each location, country or city makes its own particular rules, such as what percentage of the budget of a construction project should be reserved for such art. The GSA Art-in-Architecture Program, ran by the US government General Services Administration, oversees the commissioning of artworks for new federal

buildings. These artworks “enhance the civic meaning of federal architecture and showcase the vibrancy of American visual arts”. Half a percent of the estimated construction costs of each new federal government building is dedicated according to this program to commission artworks from artists. (GSA portal/Art in Architecture Policies and Procedures Document.)

“Finns want more art in their daily life”, wrote Silja Massa, in Helsingin Sanomat (Massa, 2014), reporting on the results of a study ordered by the “Prosentti taiteelle”, a promotion project for the Percent-for-Art scheme financed by the Finnish Ministry of Education and conducted by TNS Gallup. The results of the survey indicate that 70% of the respondents wanted to see artworks in daily surroundings, such as the work place, residence areas and schools. Respondents were of the opinion that art would improve the safety of their environment and make it more pleasant to live in. Most respondents also considered art to have a positive effect on the value of property. People indicated (in a declining order of importance) that beautiful



**IMAGE 312**  
Linden, Olavi Lanu, 1985  
(Google Earth Street View)



**IMAGE 311**  
Willow, by Olavi Lanu 1991, Lahti,  
(Wikimedia Commons)

buildings were of national importance, art brought about experiences, that art created stimuli in the educational environment and finally, that art improved the habitability and safety of the environment. Although the general impression received when reading the survey is that the residents of Finland favoured artworks in public places, the phrasing of the telephone survey questions could refer to both outdoor and indoor public locations, such as schools, public services, shopping centres and

the like. (TNS Gallup 2014, 6-7.) How is the principle realised in effect? Most of the works indicated on the map of the Oulu Museum of Art are located indoors in schools, hospitals and gyms. (Oulu, public art map.) In addition to the more traditional commemorative statues, examples for

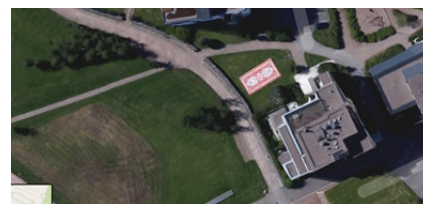


**IMAGE 313**  
Gländtan by Annika Bergvik-Forsander, 2009, Arabianranta, (Google Earth Street View)

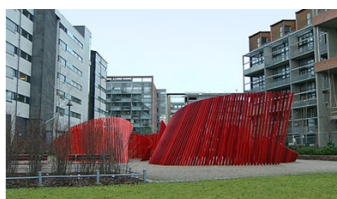
works placed outdoors can be found, for example in Lahti, where several works by the local sculptor Olavi Lanu are found in street corners and public places, and a dedicated open park in the natural forest on the steep hill (which hinders visiting the place) overseeing the Vesijärvi lake. The works are mainly monochromatic sculptures made to look like natural materials and depict an amalgamation of

the human figure and nature.

Arabianranta (Arabia Shore) area is a newly built mixed area of residence, university and office space, on the shore of Vanhakaupunki district, up to the mouth of the Vantaa River. The development of the area (0.67 km<sup>2</sup>) is part of the building



**IMAGE 314**  
Arabia's carpet, by Elina Aalto, 2006, Arabianranta (Google Earth)



**IMAGE 315**  
Sirocco, Kivi and Tuuli Sotamaa 2010  
Helsinki, Arabianranta (Yle)

plan of the undeveloped shorelines of Helsinki, initiated already in the 1980s. The City of Helsinki, which owns most of the land on which houses were built, set for the developers certain criteria, including the condition that 1-2% of the construction costs

were to be budgeted for works of art that were to be placed in stairwells and yards. The art coordinator of the project brought together the selected developers, designers, architects and artists at the planning stage. (Kangasoja and Schulman, in Kangasoja and Schulman ed. 2007, 17-19.)



**IMAGE 316**  
Herbaario, by Eeva Kaisa and Timo Berry, 2010, Arabianranta (Google Earth Street View)

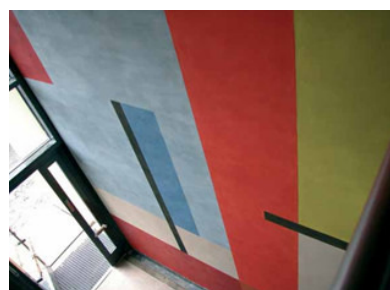




**IMAGE 317 and 318**

Tapio Wirkkala Park, Arabianranta, Robert Wilson, 2012, (Raksakamera), The Park in winter 2012-2013 (Heikki Kastemaa)

Some of the works of art which were incorporated into the yards of Arabianranta district, some of the buildings, and several street corners are displayed here. The one building that looks like a work of art, The Heltec department of audio-visual communication is not part of the percent-for-art program.



**IMAGE 319**

Andante Candante Festivo and Andantino, by Ritva Määttä-Valkama, 2004, Helsinki, Arabianranta (Jyrki Valkama)



**IMAGE 320**

Heltech AV, the building of Stadi Vocational College, Department of Audiovisual Communication, Arabianranta. Designed by Pentti Kareoja / Ark-House arkitehdit, 2002 (Google Earth)



**IMAGE 321 (1+2)**

Timo Heino, A line drawn on the water, 2014, Kalasatama, Helsinki. (Hannu Asikainen; Maija Toivanen)



**IMAGE**  
Leinelä day-care centre  
(Google Maps, Street View)



**IMAGE**  
A block of flats in Leinelä, Vantaa  
(Google Maps, Street View)



**IMAGE 322**  
Siberian jay, by Villu Jaanisoo, 2016,  
Kalasatama, Helsinki,  
Photo: Heikki Pölönen, (@hesep)

Other areas which are being currently developed and where artworks are incorporated in accordance with the percent-for-art principle are Kalasatama (the reclaimed fishing docks) and Leinelä, Vantaa.

When implementing a program as percent-for-art, it is not the artists or their works that impact the plan of the area, the atmosphere created, the type of buildings, their locations or even their appearance or the materials used in their construction. In the end of the process, although works of art may be

created for a specific location, be it a rock-face in the street, a street corner, a courtyard or a stairwell, and in some dialogue with the planners and designers, it still remains a marginal player.

To achieve maximal impact, artworks need to have a meaning for the people that interact with them, and be planned and deployed as an integral part of their environment, as just “being there” makes them into mere elements of decoration.

When common yards are designed as special gardens, they must still function as yards where people can go about their normal daily actions, those that people of all ages and walks of life would use their common yard for, and above all, it should bring people together and not only serve

as a showcase, to look at through the window or balcony, but be over cautious not to harm the artistic impression – which puts a constraint on the artist to come up with an artwork or a yard, that could retain its artistic impression irrespective or even as a result of its daily active use.

## 7.2 Parks – from Locations for Arts to Works of Art

From an art perspective, parks in the urban environment can be either a location where works of art can be placed, serving as a background, or backdrop, a setting which enhances these works, or it may be that the garden is an artwork in its own right. Examples for the first are open-air or mixed type museum parks, such as Hakone in Japan, which allows people to encounter sculptures in a natural setting. The 70,000 m<sup>2</sup> park houses several galleries, which exhibit works by famous Japanese and other artists, such as Picasso, Brancusi, Giacometti, Rosso, and others, and more than 100 sculptures and art installations, which are displayed outdoors on lawns, platforms and plazas, by Henry Moore, August Rodin, Niki de Saint Phale, Antony Gormly, and others.



**IMAGE 323**

The Hakone Open Air Museum, site map.



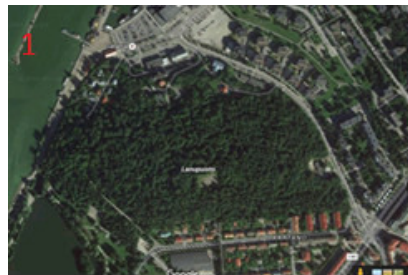


**IMAGE 324**  
Hakone Open Air Museum



**IMAGE 325**  
Hakone Open Air Museum

Other parks are an integral part of the works they form a backdrop for, such as the Lanu Park in Lahti, Finland, where the various sculptures, although made of artificial materials, look as if they grew out of the site itself and resemble its trees and rocks in their texture.



**IMAGE 326**  
(1) Olavi Lanu Park in Lahti is located in a thicket on a high hill in Lahti City Centre (Google Earth)  
Some of the exhibits, (2) Grey January, (3) a winding Tree, (4) a heap of felled poles (5) Support

A park may be a work of art in its own rights, as is the case with traditional Japanese gardens, or in the work of Charles Jencks' Northumberlandia, The Lady of the North, in Cramlington, Northumberland, northeast England. She is dwelling on 46 acres of community park, featuring 4 miles of foot paths around and over her. Made of rock, clay and soil, she is 100



**IMAGE 327**  
Northumberlandia, The Lady of the North, by Charles Jencks (Google Earth)

feet high and a quarter of a mile long. She was born in 2004 when the Blagdon Estate and the Banks Group applied for a permit to dig for coal and clay, which gave an opportunity for the creation of this unique art form from the left-overs of the mine. This is in fact a 'restoration first' project, producing a new landscape for the community to enjoy while the mine is operational. Allowed to develop naturally and mature with minimal interference, she is the largest human figure on the planet. (Northumberlandia, The Lady of the North.)

And of course, the urban environment still houses (unless for some reason removed before modern architecture) previously set monuments and decorated buildings and gardens.



**IMAGE 328**  
Strollers along the pathways of Northumberlandia, The Lady of the North, by Charles Jencks (SteveT. 2012, Panoramio)

## 8 REDESIGNING PUBLIC PLACES – REHABILITATING THE CITY

In an interview given to Jared Green, of the American Society of Landscape Architecture, Martha Schwartz commented that, although quite many grand, if not strange-looking, public buildings keep on being built in various corners of the Globe, (sculptured, awkwardly designed, or just climbing to heights, clad by bright and reflective glass), one of the major challenges faced today, is the need to make our growing cities maintained and managed as sustainable and attractive places, that would have a positive effect on the global environment instead of being a major burden, in both physical terms, and above all in social, cultural and economic terms. (Green, 2014.)

Developing already existing areas of the city can be done in various ways. One can consider or employ a highly radical approach of total demolition of entire areas of existing buildings and relocating their dwellers, to be built and replaced by all-new, highly modern systems, in the manner suggested, at the time, by Le Corbusier; or largely alter existing settings, as suggested by Alvar Aalto; or integrate into the city fabric areas which were left unbuilt, or such that can be reassigned as they are no longer needed for their originally designated usage. Most of the construction and development that takes place nowadays in built-up areas is done on the scale between area reassignment (such as industrial areas turned residential or commercial, modification of existing locations and structures, and their assignment for different use, and industrial buildings made into residential or commercial ones), preservation and renovation of old sections and structures of historical and cultural importance, retaining visual coherence of such areas, or, as is sometimes the case, making a vital change by relatively modest, yet well thought investments.

The economic boom of the 1990s in Dublin resulted in a high demand for (especially affordable) housing, which drove many to move to the suburbs. Following this, the Dublin Docklands Development Authority developed a plan to transform the derelict 5-square kilometre Eastern Docklands district



into a sustainable and vibrant new residential area in the city (Waugh 2011, 22). The DDDA devised a plan for reclamation of the formerly industrial and slum area, combined with high quality architecture and public realm design. The Grand Canal Theatre by Daniel Libeskind and the adjacent



**IMAGE 329**

Dublin Docks area with the Grand Canal Theatre and Square in the Centre. (Google Earth)

Grand Canal Square by Martha Schwartz were to “signal the rebirth of the district and announce the Docklands as a new destination in the city”. (Waugh, in Waugh 2011, 23.)

The 10,000m<sup>2</sup> square was intended to give Dublin Docklands a clear and

recognisable identity that would give the new district an image and attract investment in the neighbourhood. It was therefore built way before many of the other sections of the area. The idea was to extend the lines of the angular theatre building to the surrounding site, so that the building and the landscape would be united into one larger public space that would have a cohesive identity. On the ground, these lines create a fragmented network across the plaza, connecting the buildings within the square and reaching out into the surrounding streets. (Waugh in Waugh 2011, 29.)



**IMAGE 330**

Dublin Grand Canal Square, Martha Schwartz, 2007 (Martha Schwartz Partners)

The design was inspired by the history of the area and the existing landscape. It was meant to create excitement in people and encourage them to believe in the possible development of the derelict area. (Krzykowski, 2008.) The 'red carpet' leads to the theatre but also leads out to the canal, inviting people to reconnect with their water-front. This outreaching section has proven highly popular with visitors to the square. The green carpet is paying tribute to the river estuary that once lay beneath the reclaimed land. It runs in an opposite direction to the red carpet, and thanks to the raised planters, which are surrounded by benches, offers a more relaxed experience of the site. The red carpet and poles, as well as the green carpet, planters and bright green benches, add colour and light to the otherwise grey city. (Waugh in Waugh 2011, 30-31.)



**IMAGE 331**  
Dublin Grand Canal Square, Martha Schwartz, 2007  
(Martha Schwartz Partners)

The trees, which could not be supported by the structure of the plaza, which includes underground parking, were replaced by the 7-metre high red dancing-light poles. A water feature and 2 stair-pavilions and several rows of uneven stone benches along the water front complete the area. The popular plaza, which opens onto a unique non-tidal body of water, is in use by people of all ages and from all walks of life at any time of the day. (Waugh in Waugh 2011, 30-31, 39, Krzykowski, 2008.)

The old, Jugend-style part of Katajanokka was built in the end of the 1800s and the early years of the 1900s. The houses, all in the typical style of the time (see chapter 4.2.7), were built densely around and within courtyards. Despite being built at about the same time and in the same building style, standing wall-to-wall along the streets, no two houses are the same. They are painted in different colours, each house with its own Jugend elements and decorations. The fact that they were designed by

different architects (Katajanokka, Wikipedia) ensured that they would not form a monotonous continuum, which we so often find in more modern districts. The variation between the houses while keeping with the general style, makes old Katajanokka streets picturesque and being of a 'human scale', the atmosphere is welcoming.



**IMAGE 332 (1-4)**

1 Seaman Lodge in Helsinki, Finland, built in 1907. Source: Kyläkirjaston Kuvalehti 7/1907.

The building was hit by a bomb in 1944 and was demolished, and later replaced in 1960 by a new building.

2 Linnankatu 3, 1960, Seaman Lodge, (Google Maps, Street View)

3 The empty lot on Linnankatu 3, Helsinki, Kantti (user on taloforum.fi), 31.07.2015

4 Proposed plan's rendered image for Linnankatu 3, Helsinki, to which the Helsinki City Museum's statement refers. Huttunen-Lipasti-Pakkanen

The old section is almost totally separated from the new one by the buildings of the Ministry of Foreign Affairs (Merikasarmi, Planned by Engel, early 1800s), with only two exceptions to the rule. One is the building on Kruunuvuorenkatu that lost its neighbouring Jugend building to a WW2 bomb and now shares a common wall with a prefabricated, brick and concrete-board building, some 3 floors its lower, built in the early 1980s. The other (on Linnankatu) is the now demolished Seaman Lodge, which in 1960s replaced the original Jugend Seaman Lodge (1904) that was hit by a bomb in 1944.

A proposal plan for an apartment building on the lot of the original Seaman Lodge was produced by consultant architects Huttunen-Lipasti-Pakkanen. Because the area is listed as 'significant built heritage', the Helsinki City



Museum was asked to give its statement on the plan. In its statement, Helsinki City Museum stressed that the proposed plan was not suitable for the historically important area as it did not sufficiently take into consideration all the factors required. The statement stressed that:

*“a new build should integrate well into the townscape of the old part of Katajanokka, and its roof, the architectural projections and the particular details should not purposefully deviate from those of the style of the area. Nationally significant historic-cultural environments are carefully selected representative sites of the historical development of Finland. Development in these areas should be carried out in adherence to and emphasis of their original characteristics and special features. New building should not be out of keep with the special historic-cultural characteristics of the area” (Helsinki City Museum Statement #12058, 17.08.2011).*

The new part of Katajanokka was mainly built in the 1980s (but for the southern curved corner of Katajanokanranta street built in mid-2000s and the Euro Hostel building which dates back to the early 1960s) and is a unified red brick and concrete sheet apartment blocks, organized in half courtyards. The only point where the two parts meet is in Kruunuvuori Street, where the entire courtyard of building number 13, hit by a bomb in 1944, was rebuilt in the 1980s. Unfortunately, there was no attempt to either make the new buildings fit with the old ones or at least create a clear, yet fluid separation between the areas at this point. Seemingly, the Helsinki City Museum was not consulted at the time.



**IMAGE 333 (1-2)**

(L) Katajanokka by period of building: Yellow-1800s, Red – Jugend, Green – 1980-2005, (SH. Myllys, Google Maps), (R) Helsinki City, Planning Department, (Master Plan Proposal 25.11.2014)

The Eastern, new part of the island, with its brown brick and light shade concrete houses, built in the 1980s, was planned without any attempt at making it an integral part

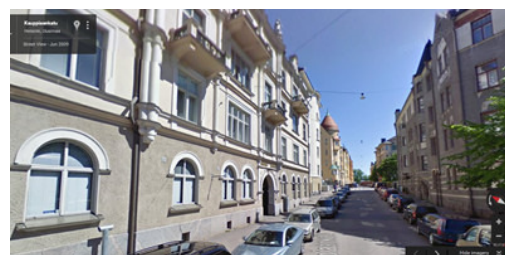
of the pre-existing early 1800s grand buildings by Engel, housing nowadays the Ministry of Foreign Affairs, which it borders on, or the

Jugend section, on the western side of the island. The positive point is the “green belt” in the front of the buildings that softens the look of the street in summer (the low plants are mostly deciduous).

In 2014 a proposal was made to expand the new area by building more houses and a large underground parking facility on the parking lots and park areas along the south-eastern and north-eastern shores, preserving only a narrow green line on the south-eastern shore and a bit of green on the north-eastern shore. The plan met fierce opposition by the residents of the area, especially by people who bought their apartments because of the sea-view and paid accordingly, but not limited to home-owners alone. (Hakkarainen and Oksanen, 2015.)



**IMAGE 334**  
New Katajanokka (Google Maps, Street View)



**IMAGE 335**  
Jugend Katajanokka, (Google Maps, Street View)

An urban applied art installation, named “Worede” (flowers in Kurdish), in the relatively neglected Valero Square in Jerusalem, seems to have made a difference and helped address the lack of pedestrian engagement in the site, which although well located by a busy tram station and a busy



**IMAGE 336**  
“Worede” at Valero Square, Jerusalem, Dor Kedmi

market, was mostly dormant. The four huge poppy flowers wave in the wind and open up to offer shade in the sun and light the place at night when a person stands underneath. The four pneumatic flowers that react to movement and sound were created by HQ-Architects (Valero Square

Installation, City of Jerusalem). People get curious and their attention engaged by the interactive flowers.

As this example shows, art installations, especially interactive and practical ones can effectively change the behaviour and attitude of people in the city towards locations that were previously neglected, by positively engaging people and changing their perception of the space. (Biggs, 2015.)

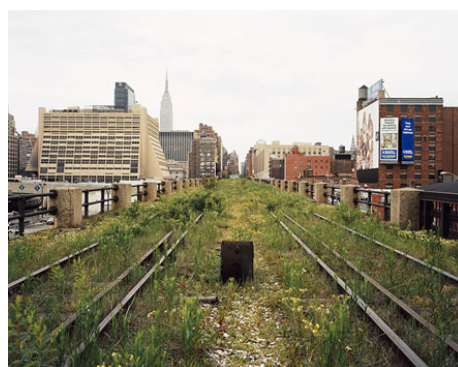
High Line Park, New York, is a very interesting case in which the salvation and repurposing of an old upper railway line in the heart of the city gave birth to a public multipurpose space, a park, a walk-way, a monumental, yet gentle environmental artwork in its own rights.

The line was originally built in 1934 as part of the West Side Improvement Project, and ran originally from West 34<sup>th</sup> Street to St John's Park Terminal. It ran through the centre of blocks, rather than over the avenue, and was used for freight traffic to and from Manhattan's largest industrial district. The last train ran on the line in 1980. The remaining part of the derelict, abandoned, freight railway left erect, about half of the total length, stretches nowadays between the corner of Washington Street and Gansevoort Street up to West 34<sup>th</sup> Street. (Friends of the High Line.)



**IMAGE 337**

The High Line in 1934 at West and Spring Street corner (now demolished) (New York Public Library/Collection of the New York Historical Society Negative # 3252)



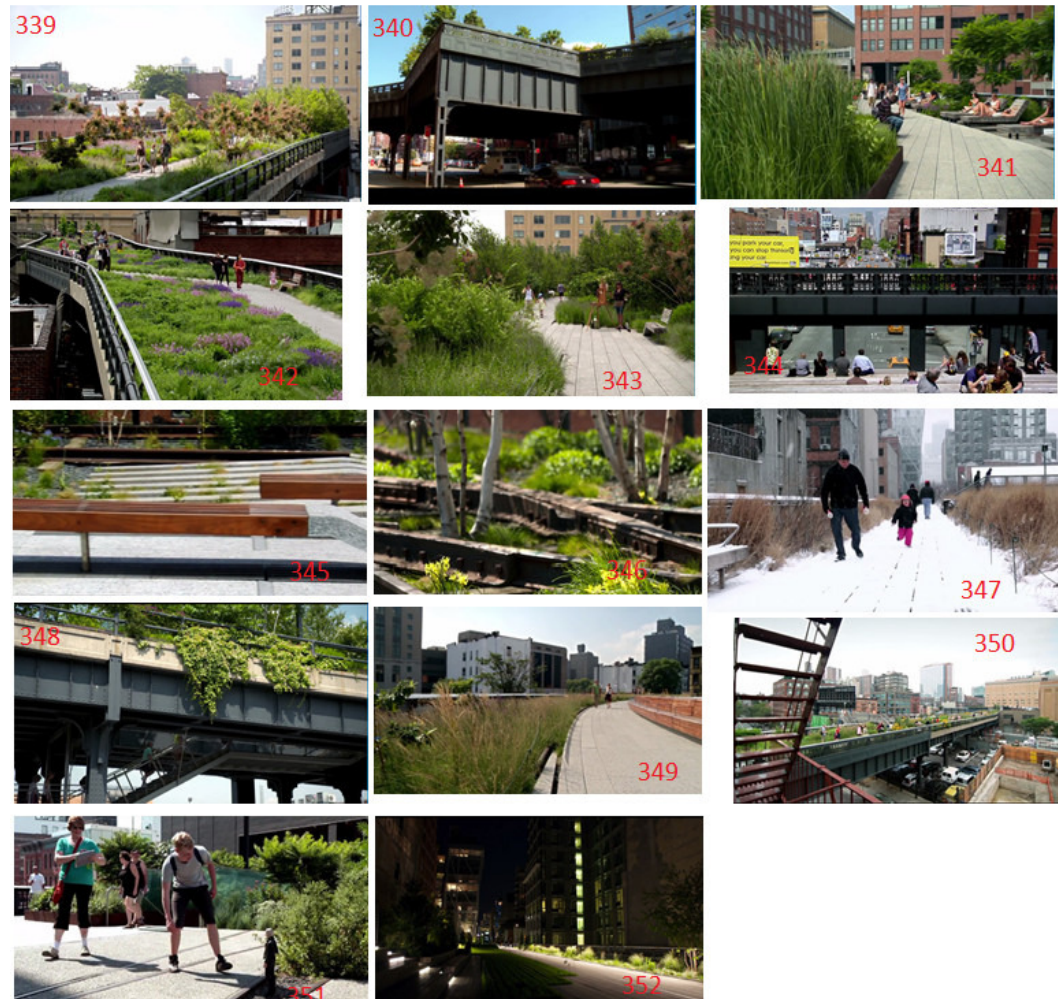
**IMAGE 338**

Highline – an abandoned urban upper railway line. Before it all began (Joel Sternfelt)

The role of the local residents and activists in the entire process was crucial. This remaining part of the line was saved from demolition thanks to a local resident and enthusiast that took the matter to court. The advocacy



organisation, Friends of the High Line (founded in 1999) conducted a feasibility study, and following its results, organised a planning competition and selected James Corner Field Operations (a landscape architecture firm), Diller Scofidio + Renfro, and Piet Oudolf (planting designer) to carry out the work. The Park was completed in three stages, the last of which, at the Rail Yards, opened to the public in 2014. (Friends of the High Line.)



**IMAGE 339 – IMAGE 352**

HISHLINE PARK NEW YORK, Great Museums: Elevated Thinking: The High Line in New York City, 2014 (GMTV) – various corners at various time of the year

Planting design was inspired by the plants that grew in the natural meadow that developed on the derelict line throughout the 25 years it was left to its vices. “The species of perennials, grasses, shrubs and trees were chosen for their hardiness, sustainability, and textural and colour variation, with a focus on native species. Many of the species that originally grew on

the High Line's rail bed are incorporated into the park's landscape".  
(Friends of the High Line.)

The park is highly appreciated by the New York residents and by tourists. The location is open most days from 7:00 – 22:00. There are several entrance points, many equipped with an elevator, which make the site wheelchair accessible. The park is managed by attendants that ensure that rules of conduct are observed. In addition to the free use of the park to all, the Association arranges various events, guided tours, and day camps for children. Artworks are presented in various corners and among the vegetation, and are on display for one year, and then replaced by new ones. The Park offers views of the city – in a way the city itself is the exhibit – from an unusual angle, but also invaluable garden views for those living and working along the park, and the option to visit, lounge on the many seats and benches, and enjoy it as if it were their own communal back yard, thus improving their quality of life and well-being. People take long strolls, watch flora and fauna, watch life in the city, have coffee at the café, take photos, look at artworks, and sunbathe. (Friends of the High Line.)

Building the park cost some 100 million dollars, but has generated 2 milliard (2 billion US) dollars in private investment, said Amanda M. Burden, NYC Planning Commissioner. (Great Museums, 2014.)

The park is a museum, but not a nostalgic one. The very clever landscape architects and garden and planting designer (that made it appear natural and wild, while it is all planned and planted) scripted a slow path, in which they kept part of the old elements, some of the old functions (the sun beds roll on the old rails) and the plants that took root in the abandoned site, the rails and the Art Deco metal structure, and carefully introduced a new 'twist' and complementary elements, which turned it into a very special communal site. The park has had a huge social impact, creating a sense of ownership in the people of New York, and especially the people of Chelsea. Most of the time it is a very busy place with people relaxing,

walking and looking at the city views in all seasons. The park is like a world-within-a-world that turns New York to another, better place; an escape from the normal bustle of the city, but not an escape from the city. (Great Museums, 2014.)

Jan Gehl was mentioned in various points of this paper, maybe because his ideas touch upon the most important, most essential element in urban planning – the city is for people, because without people, the city is not needed at all. High or low built, wide-spread or limited in space, having fast or slow traffic, in the plains or in the hills, the city is built for people and should be made to their measure – to sustain them and in no way it should be made to harm them.

To make the city an inviting place, a ‘home’, where people feel safe, comfortable, in control of themselves and their surroundings, and have a sense of belonging, it has to be built to their scale – in all respects, and where it is already built to an inhumane scale, it needs to be brought as close as possible to the ‘human level’.



**IMAGE 353**

Highrise buildings – the city, Life between Buildings, Gehl & Lau, (screen capture)

The fact stands, to feel well, people need human contact and touch. From the earlier part of the 20<sup>th</sup> century on, cities were planned from a bird's-eye (or helicopter) perspective, and needed to be built larger and faster, which technology made possible. At this point, says Gehl, life was forgotten – people were left out of the equation. The vast empty areas between the large blocks-of-flats in the park (or parking area) á la Le Corbusier, left

little possibility for people to get and act together. Cities turned into a place where monumental buildings were built and a growing volume of traffic moved faster and faster, hindering people from moving by foot or cycling. (Gehl, TEDx event 2015.)

Cities have changed, but people's needs have not. The human figures decorating rendered images of architectural sites are not there in reality. Planners and architects have forgotten how to prioritise when planning the city and its buildings, says Gehl. The result is often a lifeless city. (Gehl, Melbourne, 2013.).

To bring back life to the city, the planners must pay attention to the manner in which people interact and function. Gehl lists these elements as those that make life in cities flourish: people see the city at eye-level, details exist, which can be distinguished at walking (or cycling) pace, climate needs to be (or made) comfortable, areas have multiple uses, the senses are stimulated in various ways, and there is a middle ground where the indoors and outdoors meet. All these allow life to flow naturally. (Gehl, Copenhagen, 2013.).



**IMAGE 354**  
Map of Melbourne Downtown Laneways by Sarah Oberklaid showing increase in active and accessible laneways since 1993



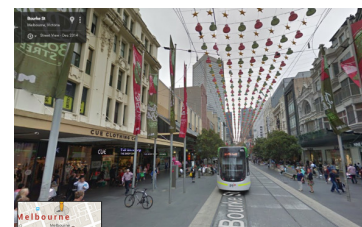
**IMAGE 355**  
Downtown Melbourne, a revitalized laneway  
Google Maps Street View

For almost half a century Jan Gehl has based his teaching and planning on his many years of research of the way in which people behaved in cities. Gehl's approach and method have proven to be valid and valuable means in the process of urban rehabilitation and making cities into better places for people to live in. Jan Gehl considers that the role of his team is to change the mind-set of decision makers and those in charge of planning and design (that wish to make their cities a better place) about the way cities should be looked at, thought about, and as a result, about the way in which they could be improved.

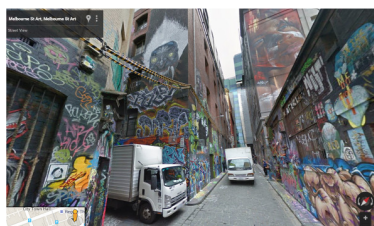


A project that owes its success to this change of mind-set is the rehabilitation of Downtown Melbourne (the business district). The streets of this area are arranged in a grid with many narrow alleys between tall buildings, with no public squares. The area was in decline ever since the 1970s, losing residents and business to better appealing parts of the city, and the alleys were used mostly for garbage disposal. (Gehl Architects/Cases/Melbourne.) Already in 1987 the city realised it needed a plan to stop the exodus of residents and commerce and revitalising the inner-city. The objectives were to reinforce the positive characteristics of the area and treating the negative ones. It opted for a greener, better lit and pedestrian friendly solution. (Oberklaid 2015).

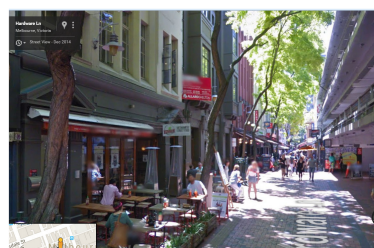
In 1994 Jan Gehl worked with the city council using his city-social-life survey methodology to analyse the challenges and identify the potential of the city centre. This methodology provides not only data to work from but also serve as a valid tool for following the development and measuring success of such development projects. (Gehl Architects/Cased/Melbourne.)



**IMAGE 356**  
Downtown Melbourne main street  
Google Maps Street View



**IMAGE 357**  
Downtown Melbourne street art in one of the dedicated laneways  
Google Maps Street View



**IMAGE 358**  
Downtown Melbourne, a revitalized laneway  
Google Maps Street View

Rob Adams, the director of City Design of Melbourne worked with the survey data and recommendations of Gehl and achieved several impressive urban improvements. A second survey Gehl Architects conducted in 2004 clearly showed that the steps taken by the city council to improve the quality of space and life in the city has worked. There was a 40% increase during the day and a double figure at night visiting these streets, and as more people spent their time there, the area also experienced an economic turnaround. (Gehl Architects/Cased/Melbourne).

Strolling the streets and alleys using Street View in Google Maps, one can spot several alleys which were opened to street artists, which created an ever changing attraction for visitors. Other lanes were turned into shopping arcades, dotted with restaurants and other attractive spots to visit and spend time at. The traffic is kept on a few larger streets, while the rest of the area is pedestrian and cyclist friendly, and it is obvious that many people enjoy this fact.



**IMAGE 359**  
NY City, Times Square  
Life between Buildings, Gehl & Lau documentary

Another city that decided to adopt the Gehl way of thinking and method was New York City. The city added since 2007 over 35,000 m<sup>2</sup> of extra public space, including essential changes along

Broadway, which was also closed to traffic between 47<sup>th</sup> Street and 42<sup>nd</sup> Street (the Times Square area). This was done as an experiment, but due to its success was made permanent. The change in mind-set required only



**IMAGE 360**  
NY City, Herald Square  
Life between Buildings, Gehl & Lau documentary

a relatively small investment on the ground. The areas reclaimed from traffic act nowadays as urban living-rooms, inviting people to linger, take in views of the city and people, meeting and

interacting. (Life between Buildings, Gehl & Lau documentary). Traffic on Broadway and several other streets was reduced to a single lane by turning lanes on both sides into parking space and expanding sidewalks. Shade and sitting opportunities were provided, and the Citibike bike-share program offers bikes for hire. (NYC Citibike.)



## 9 URBAN PLANNING AND DESIGN – A DISCUSSION

Before there was a plan, there were buildings, so, at least in part, for historical reasons, of the various elements involved in the creation of the urban environment, 'building architecture' came first. Architects (previously, master builders) used, in the past, to handle (mostly for elite clients) the entire sphere, including not only the structure and its environment, close and far, but also the interior and objects.

Unlike building architecture with its long and rich history, urban planning as an independent discipline is only about 100 years old. Landscape architecture, although linked to a much longer history of garden design, is not much older as a discipline of public planning. It finds itself often relegated with the planning of parks and green roofs, but need it be confined to greenery, when it is capable and needs to deal with the design of the urban landscape and its aesthetics as a whole.

The need for specialisation in an era of data growing exponentially, coupled with various academic and political forces, drove architecture, urban planning and landscape architecture into distinct and separate professional orientations with separate organisations, disciplines, and academic programmes, and the further division which was needed for efficient problem-solving.

In general, and especially for the purpose of this work, I consider that these disciplines are each only part of the whole, and that as such, should operate closely together, mutually completing and enriching one another.

Only when brought together, do the different elements of the human built-up environment (separated to facilitate efficient problem solving) form a proper solution. Without thorough cooperation, the gaps between the parts will only deepen and shall always be noticeable, and in turn, will have a negative impact on the main reason for the existence of towns – humans. The lesson of the 'Moses vs. Jacobs' case must be learnt. When elements

are out of balance and problems are not identified in time, they may grow well out of hand.

The work of all the disciplines involved in the development of the urban space is interdependent and needs to be viewed in a social, psychological, cultural, environmental, technological, and historical context. The plan of any of the aspects of the built-up environment must take into consideration the existing elements and those that are known to come to exist in the foreseeable future. When projects for the improvement of street and traffic quality of an existing urban area are rendered, it is not rare to find that the existing structures along the roads are represented by characterless “boxes”. This is only one example of how the division mentioned earlier creates a dysfunctionality by which both planner and reviewer are affected and misled in the evaluation of the effect of the plan.

Urban planning and design is facing a continuous paradoxical challenge. On one hand, cities are meant to serve people and provide them with an appropriate and healthy living environment that offers a balance between physical, mental, and social well-being, while on the other hand, the negative impact of the urban environment on the well-being and mental health of city dwellers is significant. In view of the fact that the great majority of the Globe’s ever-growing population is destined to live in urban settings, it is essential for us to find how planning and designing the urban environment can serve to correct, remedy and possibly prevent as much as possible of this impact.

A great deal of research, work and good intention go into making the city a better place for people, and yet the problem of well-being and mental health persists and even intensifies. We are ticking all the boxes and yet..., which means that we need to examine the way we do things. Our technology is advanced, engineering highly skilled, we provide better quality healthcare to more people than ever before, more products are available to more people, and yet, the result is not the one desired. What

are we doing wrong and is there a factor that has regressed instead of advancing with the others? What is missing from the big picture?

Scientific evidence strongly indicates that both nature and art-based interventions are highly efficient in the treatment of physiological and psychological conditions, similar to those intensified and brought about by the urban environment. Therefore, it is only logical that both 'Nature' and 'Art' should be integrated as basic concepts into urban planning and design, a process that needs to always start from people, their needs and their basic characteristics.

The various forms in which nature is present in the city have a positive effect on the psychological well-being of city dwellers and their physical health. Nature in the urban setting has in itself an aesthetic and artistic value, in its colours, smells, textures, its configuration, and in the creative opportunities it offers in the building of private, community and public green spaces. These spaces also allow for interaction with natural elements and other humans. Such green spaces often serve as the location and background for works of art or are works of art in their own rights.

Unlike 'greening', which is nowadays an accepted practice and its various benefits are widely known, besides the question of (visual) townscape or 'the art of relationship' (Cullen 1971, 7-8), or the art of architecture (on the scale between primary objective of artistic self-expression by the architect – the building as a sculpture – and a total work of engineering), art in the urban setting (as experienced by the city dweller and visitor) is mostly confined to works of art placed in the public domain or to artistically-related landscaping. Judged by results (on a global scale), 'Art' is not an integral part of actual urban planning, and is often considered an added value that can be left out when savings are sought.

Design is a dimension of planning which is endlessly debated by the parties involved. (Punter & Carmona 2007, 1-2). Design, in the broad sense and approach, was the element that was mostly eliminated from

**IMAGE 361 (1-4)**

1. The Farnsworth House, Mies van der Rohe, 1945-51 (National Trust for Historic Preservation)
2. The Glass House, Johnson House, Philip Johnson, 1949, (National Trust for Historic Preservation)
3. Stokhusgade Infill, Holscher Arkitekter AS, 2006-2007, Photo Peter Nørby
4. M-Huset Ørestad Boulevard, by PLOT, 2005, Google Earth Street View

planning because it was considered a superficial phenomenon that had only little bearing on land-use planning. The thought is that functionally, the project or town, can do without 'decoration'. But is design merely decoration? And is decoration really a superficial matter. At times an idea crosses the mind that we have gotten lost in the misunderstanding and misinterpretation of the process of the search for the essence – one that was at the time led by modernists and minimalists. It is one thing to give one's consent to be part of an experiment,

which by definition is meant for a set time, and another to be forced to live everyday life within such an experiment not being aware of the fact and being led to believe that everything is done for one's best.

The above group of 'glass boxes' will serve as an example. The first two glass buildings in the group were designed by 1940s modernist architects and were clearly intended as experiments in minimalism. The two others are family apartments. Even though number 3 was designed by the architect who lives there, and even if this may have been meant as an experiment by the professionals in the family, their children did not choose to live in an exposed mini glass box. The fourth one was surely not intended to be an experiment in any manner. Unlike the floors of the apartment in Stokhusgade, that are perched on top of the building, and are above the tallest floor of its neighbouring buildings (although it would not be right to say that one could not see what takes place on the top floor, even from the street level), the M house of the VM group of houses (one can see this fact only from the air, high enough above buildings, if then) are in full view of the people living in their neighbouring Mountain building. The same applies to the larger, city scale.

Unlike the case of the extreme Zen-Buddhist set, the one empty of any earthly objects that could hinder meditation, which is strongly linked to a cultural and philosophical world, the Modernist-Minimalist one is an imitation that lacks the innate background, the cultural aspect. The Zen-Buddhist space of contemplation is not the one where the everyday life takes place and neither is the time spent there belong to the 'mundane'. So is the time one spends in a museum; we visit there, interact with the exhibits, but we do not live there. The idea of depriving one of stimuli is used most successfully in control situations – like putting a prisoner in confinement – and is a form of punishment. In case such punishment exceeds a certain time limit, it can result in mental health issues, because it creates detachment and makes time and place 'unreal'.

### 9.1 Aesthetics and Organisation

Aesthetic needs are located high on Maslow's scale. They motivate people to self-expression in pleasing ways, decorating and maintaining one's personal space, adorning oneself and tending to one's appearance. (Maslow 1970 in Hilgard et al. 1975, 334.) People anywhere strive to put their mark and arrange their immediate surroundings. The need to decorate one's own space is universal, and limitation of the possibility is in fact means of social control (from homes to prison cells). Sense of control centrally affects stress levels and wellness, and lack of control is associated with depression, passivity, elevated blood pressure and reduced immune functioning. (Steptoe and Appels 1989 in Ulrich 1991, in Marberry 1995, 91.)

It is known that the way the interior space is organised and designed impact the senses of its users and their state of mind, and businesses would hire specialists to arrange theirs so as to suit their business purposes. Work environment too is set and organised so as to enhance the productivity of workers. (Llewelyn-Bowen, 2003.) When people can afford it, they often hire the services of interior design savvies to create for them either status-enhancing, fashionable or highly individual spaces,

while the rest of us simply acquire an enormous amount of design and decoration elements, and keep alive a 'ginormous' economy.

We paint our walls or decorate them with patterned wall-paper, hang curtains and drapes, pictures and decorative objects, cover our floors with tiles and carpeting material, and fill the space with furniture, furnishings and items whose sole purpose is decoration. Where we have a yard, we most often plant it to please the eye. We are pleased with the colours of plants and add our garden furniture and furnishings to facilitate spending time in and enjoying the private outdoors. A private garden is most often also a source of creative gardening activity for the owner – combining creative design activity with contact with nature. When the yard is owned by a company, as is the case with blocks of flats, the dwellers seldom have a say in the design or a chance to be part of the creative maintenance. Neither do they have much say in what concerns the look of the external shell of the building or the public spaces within. (Kopec 2006, 125, 130.) Where the individual is lacking control over the design and maintenance of the environment – in the public domain or where their liberties are limited – the function and responsibility are in the hands of the designer, the planner and the administrator. The more uniform such environments are the more intensified the sense of lack of control becomes.

## 9.2 Townscape

In 1980 Bob Jarvis purported that 'Townscape' and the British emphasis on external and visual form was linked to the 'artistic' tradition in urban design and emanated from Camillo Sitte's writings. According to Jarvis, Le Corbusier, "the aesthetic antithesis of Sitte", too was "principally concerned with the visual and formal qualities of cityscape". (Jarvis 1980 in Punter & Carmona 2007, 72.)

Cullen, the leading voice on townscape, defined it as 'the art of relationship' that takes all the elements that create the urban environment,



buildings, trees, nature, water, traffic, advertisements etc., and weaves them together to create a 'drama'. (Cullen 1971, 7-8.) Cullen stated that his writings were intended to show that there was an 'art of environment', which, if understood and practised, could prevent design 'disasters', but this art, he wrote "has got lost on the way, the environment gladiators have cast lots for it and parted it amongst them. On the one hand it has devolved into cobbles and conservation, and on the other it has hived off into outrage and visual pollution". (Cullen 1971, 193.)

Cullen's theory of 'cityscape' was criticised by Jarvis for being an uninhibitedly personal and expressive response to space, and that it left out the plurality of meanings that constituted public perceptions of townscapes and places. (Jarvis 1980 in Punter & Carmona 2007, 72.)

Cullen's idea of Townscape clearly borrows from Sitte and no doubt is based on visual perception. His way of writing and the examples he uses also support the claim that his point of view is more personal than general.

The quality of a place is normally judged by its visual-perceptual quality, yet, our perception is multisensory and not limited to vision alone. We grasp the ambience of a place immediately as we enter it, and do so with all our senses. "An atmospheric perception also involves judgements beyond the five Aristotelian senses, such as sensations of orientation, gravity, balance, stability, motion, duration, continuity, scale and illumination". (Pallasmaa 2014, 231.) The atmosphere created in a place – private or public, indoors or outdoors – through its physical qualities of structure, organisation, material, texture, colour and light, smell and sound, evoke emotions, is responsible to one's state of mind, and may well affect one's emotional well-being.

The urban environment is not only made of matter and buildings, it is made of people, their perceptions, memories, experiences, actions, interactions and intentions. The ability to preserve the old and incorporate the new in a way that would create a harmonious human environment is important. It is not about the architect's or the designers' great ideas and

brilliant designs, but about the people that are to use the place. What makes the place appeal to its users goes far beyond and far deeper than the visual effect, the structure or the materials and the technology used. The visual appearance of the built environment is only one of the means for creation of the end-product, and may also be considered a by-product of that.

*“Public places such as plazas, neighbourhoods and compounds make salient community and culturally relevant symbols and experiences. Places are, therefore, repositories and contexts within which interpersonal, community, and cultural relationships occur, and it is to those social relationships, not just to place qua place, to which people are attached” (Low and Altman in Low and Altman 1992, 7).*

### 9.3 ‘People Systems’ and the ‘Human Scale’

Jan Gehl emphasises the importance of the functionality of the urban site in human and social terms, stressing that the produced environment should match and fit the human-scale, enable essential communication, making the public domain into the vehicle for social interactions on all levels; while Martha Schwartz, one of the current leading names in landscape architecture, advocates the importance of the ‘urban landscape’ and ‘soft sustainability factors’, which involve creating through careful and inspired design “a sense of place, identity and belonging, in order to develop sustainable communities” and a place that attracts people, eliciting significance and creating vitality. (Schwartz, 2008.)

Both Gehl and Schwartz advocate rather similar ideas, arriving at them from different angles of the same reality, viewed not from above the planning desk, but down on the ground, through the eyes of the people for whom the place is created and designed.

With an on-going migration to cities, that need not only to adequately house and provide services to the growing population, but also to avoid the repetition of past mistakes, growing cities are a major environmental

issue. They can be built so that they have either a positive effect on the global environment or a further negative one.

Martha Schwartz stresses the importance of teamwork in resolving complex urban issues, where the broader picture must be considered, as urban issues cannot be resolved through building alone. She considers that people are currently less interested in building iconic buildings (some architects would beg to differ, at least if we look at the creations they erect) and more interested in figuring ways to fix their city, manage its growth and build it. When planning, she advocates, it is essential to take into consideration the finite environmental holding capacity of the site, and the social, cultural, and economically-based systems, the 'soft systems'. (Green 2014.) What Schwartz means is, that not only cities need to be built for people, their senses and their scale, but that cities need to become and to offer an aesthetically pleasing environment to attract people.

According to Schwartz, landscape architecture should not be limited to the greenery corner, where it often finds itself, because it is not considered 'functional'. Her view is that design (i.e., aesthetics) is not just 'the cherry on the cake', but can do for the urban environment what it does to industrial products – add value. Design (for a good while marginalised by an engineering-dominated approach) can improve and enhance the urban environment, which is shaped not only by technical or science-based systems, but by what people think, feel, and do. For that reason, the design of the city must employ both 'natural' and the 'people' systems alike. "A project designed without an understanding of these domains will not be able to resolve a landscape that is balanced, nor will it last long", in other words, will not be sustainable. (Greene 2014.)

There is a clear link between the quality of the design of the urban space and the sustainability of the city. When people find the place that they live in to be aesthetically appealing to their senses, it contributes further to the emotional attachment and sense of belonging they develop to this place –

which means that they care about the place and would contribute to its maintenance and development. (Copek 2006, 130.) When such attachment is not formed, because the place does not elicit positive emotions and does not allow people to lower their guard, it will not be valued and will be let to fall into disrepair.

Yet, according to Swartz, this close relationship between design and sustainability is not sufficiently appreciated in the process of urban planning. Design can create desirability through streets, spaces, and neighbourhoods that attract people and that people care about. Desirability creates value, which in turn attracts both economical and emotional investment by people. “The Design and Functionality of a city cannot and should not be seen as separate factors. Design does function on many levels. Without it, one cannot really create a liveable city and cannot compete in a globalized world.” (Greene, 2014). To that, Gehl would add that the beautiful place must fit the human-scale and cater to the basic functions people want to perform with other people – meet, interact and form social contacts. Both are right and both have valid and proven claims, still better when combined.

As exemplified by the case of the High Line Park, design makes a place desirable and can turn a derelict location into a fashionable and a highly desirable one. (Burden in Great Museums 2014.) Such places attract people to spend time (and money) there, attract investment, invigorate the economy, and in the case of the city as a whole, people moving to reside there also become tax payers and involved citizens. (Green, 2014).

## 9.4 Environmental Proportions



**IMAGE 362**  
432 Park Avenue NYC  
Google Maps Street  
View

The tallest residential building in New York City (2nd tallest globally) is 432 Park Avenue, 426m high (completed 2015). Burj Khalifa in Dubai (UAE) (completed 2010), listed as an office/residential/hotel combined usage building, is 828m high. Jeddah Tower (listed as a residential/serviced apartments/hotel combined usage



**IMAGE 363**  
Burj Khalifa Dubai City  
Photo: David Rayward,  
Google

building) is expected to be completed in 2019 in Saudi Arabia, and will be 1,000m high (The Council of Tall Buildings and Urban Habitat), and this is not the end of the rush to the skies.

The Grand Canyon Skywalk point is situated at 1,219m above the river bed (Grand Canyon West.) Visiting the nature reserve, people are thrilled with the sublime views and the sheer scale of the ravines. Walking on the glass floor, people sense the thrill and feel the adrenalin rush. It is an experience, like a bungee jump off a bridge, but unless extreme sport junkies, people do not engage in cliff-hanging, bungee jumping or sky-diving on a regular basis, and even athletes need a recovery period between performances.



**IMAGE 364**  
Grand Canyon Skywalk, Google Earth

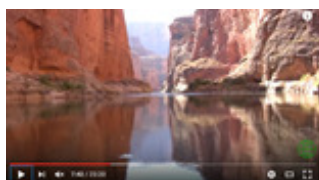
Glass is a strong material and technology is advancing continuously, but irrespective of what manufacturers and construction professionals advocate, accidents do happen. Take for example the lawyer, Garry Hoy, who fell in 1993 off the 24<sup>th</sup> floor when demonstrating the strength of the window-wall glass, in his Toronto office (Bruce DeMara, 1993), and the 4m by 3m window that fell off the 18<sup>th</sup> floor of a glass tower in New York when a worker hit it by accident in 2014. (Sandoval & Tracy, 2014.) In my search



**IMAGE 365**  
Broken window on the 18<sup>th</sup> floor,  
NY, photo: *New York Daily News*

for material for this paper I have not come across research publications on the issue of stress or stress hormone levels of residents of such towers. Yet, in light of the increasing number of residential glass towers around the Globe, and taking into consideration the likely restrictions on life-style in such buildings, for safety reasons as well as privacy, in addition to the known psychological impacts of life in apartment blocks and high-rises in general, I believe that such research is needed.

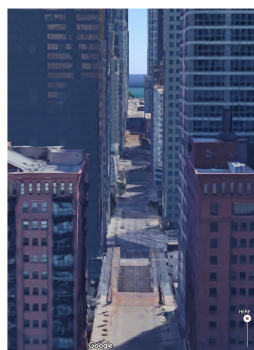
Throughout history people have created small, intimate, safe and friendly places. (Life between Buildings documentary, Gehl & Lau.) People are not giants and naturally move by walking on the ground. In the same manner that life at great heights is unnatural to people and their behaviour, so is the artificial canyon-effect created, especially in larger urban centres, by



**IMAGE 366**  
Grand Canyon – a natural canyon  
'Inside the grand canyon'; Youtube, by Amazing places on our planet



**IMAGE 367**  
Lifting one's eyes up on West 75<sup>th</sup> Street  
New York City,  
Google Earth Street View



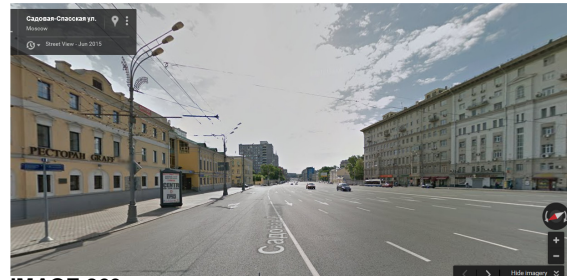
**IMAGE 368**  
Human-made canyon  
Downtown Chicago  
Google Earth

extremely tall buildings side by side along grid-stretched streets, and the competition with motorised traffic for space to move and act in. No matter how broad the streets are, the extreme height of these buildings would have required a gap between them proportionally far larger than a street can logically be to avoid this

effect and allow for sunlight to enter. Unlike natural curving canyons, which are full of interesting features, the urban boxy ones are grey and boring,



and together with multi-lane monstrous roads planned to allow for the flow of a large number of vehicles, create an alienating effect and are a source of urban stress.



**IMAGE 369**

A main street in Moscow, Google Earth, Street View

People feel most comfortable in moderate size places – where the walls do not close in on them, but delimit the space enough so that they do not feel over-exposed. Vast open spaces are intimidating and a disadvantage from a defensive point of view. When the impression, structure and function of a city go against human senses, it can be a very unpleasant place for people to live in.



**IMAGE 370**

Singapore

A confusion of scale: Are these buildings intended for the same species, asked Jan Gehl  
Life between Buildings – documentary, Jan Gehl & Lau



**IMAGE 371**

Large and uninviting urban spaces

Life between Buildings – documentary, Jan Gehl & Lau

Cities were originally meant for walking, but were taken over by car traffic that needed roads to move on and space to be parked at. The more cars, the more roads are dedicated to them and less

space is reserved for slower traffic. The more the city was planned for cars, the less it facilitated walking and the less detailed its townscape became. Unlike pedestrians, drivers need signs to be large and simplified so that they could be noticed and understood at the speed of the moving car. Not only signs became simplified, buildings did too. They have turned into large blocks – if details could not be perceived, they were no longer needed. (Gehl 2010, 43-44.)

Walking, cycling and using public transportation (when all these are made available and safe) allow people to be part of the city – which was created for them in the first place. If people could walk, cycle and travel efficiently and affordably by well-planned public transportation systems, far less cars would need to travel in the streets. One result of such a scenario is that the vista could once again be made to fit slow movement and become detailed, multi-featured, colourful and pleasing.

## 9.5 Climate and Colours

The conditions outdoors keep changing. Climate must have a bearing on the design of the public environment. It affects the hue of the natural light, the number of light hours, the colour of the sky at different times of the year, the flora and its state, colours, visibility due to the weather, the weather – temperatures, relative humidity, heat-stress and cold-stress levels, how dry or rainy seasons are, the amount of snow and ice and how long they stay on the ground, wind, fog – all affecting the amount of time and the manner in which the outdoors can be used.

The planning of locations, where weather conditions may significantly affect the possibility of using the outdoors in various manners and by various groups of the population, must consider constraints put by elements such as the weather in different seasons, the duration of seasons, extreme temperature (high or low), wind, snow and rain fall, microclimate, etc. For example, the placement, height, shape, material and other characteristics of structural elements need to prevent the creation of wind-tunnels and wind-whirls, promote a microclimate that is favourable to spending time outdoors, provide adequate shading and light, allow for adequate aerial ventilation and cooling, and contribute to the prevention of noise and pollution.

Most rendered visualisations depict the planned building or location surrounded by people in the peak season. Apart from being inaccurate in respect to the number of users the location may have, this also completely

disregards the way the location may look during different seasons, especially in winter. Besides usability, winter may also affect the visual aspect of a location by factors such as snow, hue of light, angle of the sun, and wind direction and force.

To encourage and promote life in the city throughout the year, cities need to provide suitable places for spontaneous gathering and interaction. Public areas, playgrounds, squares and plazas in sun-drenched locations need to offer shade, ventilation, sitting opportunities and drinking fountains. In the same way, in colder or wet climate, the urban environment needs to cater for activity in the public realm – outdoors, public indoors and demi-zones (between the outdoors and indoors). In his lecture, Jan Gehl (2013, EFC AGA lecture) provided examples for people in the Nordic area sitting in street cafés in winter thanks to “micro climate” created at the location, and protection and heating provided to customers. (Gehl 2010, 174-175.) Of course we do not always have to go as far as heating the outdoors if a microclimate cannot be easily created, and need to provide opportunities for meeting and interacting indoors or in demi-zone public spaces, but the more people live in housing configurations that do not facilitate natural interaction, the more the public domain should compensate for and provide such possibilities.



**IMAGE 372**  
Santorini in November 2015 (Kajetano Panoramio)

Thanks to modernist and brutalist

architecture, and the concrete-glass design culture (and air pollution), the



**IMAGE 373**  
Houses in Tromsø, Norway, (getintotravel)

city colour palette has turned monochrome grey. In parts of the Globe where the light is relatively pale, this intensifies the effect. Lighter colours, especially white, fit better on the landscape where the light



**IMAGE 376 (1-2)**

1. Lahti, Vuorikatu 2011, August, (Google Earth Street View)  
2. Lieksa in Winter, (Norma Baker, Panoramio,)

is bright and the skies are relatively clear, and the ground and vegetation is visible throughout the year. Stronger colours are needed where the light is pale and the ground gets covered in a grey-to-white layer for a significant part of the year. White, beige, and grey structures fit well into the setting of lush summer greenery, but tend to vanish in the white-to-grey winter background, be it snow, the pale light and the cloudy sky.



**IMAGE 374**

Puu-Valilla, Helsinki, Vanajantie,  
(Pekka Laitinen, Panoramio)

According to architect Marjatta Uusitalo of Helsinki City Townscape unit, the common Finnish street-view is subdued and the most popular house colours (as per leading paint manufacturers) are white and different shades of (including dark) grey. Although people are



**IMAGE 375 (1-2)**

1 Vantaa, Kartanonkoski, Google Maps, Street-view  
2 Kolmas Linja street, Helsinki, Google Maps, Street View

mostly used to pale shades and drab street views, building regulations are



often more liberal and in many municipalities would allow for far more cheerful street-views. When strong colours are used, one can safely assume that this was intended by the planners as is the case in Kartanonkoski, Vantaa. (Sorjanen, HS, 26.07.2015.)

Building officials are mostly concerned with the street-view being 'harmonious', although in some municipalities officials tend to interpret the term 'harmonious' as a limited array of pale and light shades of certain colours and would grant a building permit only to houses that are to be painted accordingly. These colours are used for privately owned family houses, but blocks of flats, for one reason or another, end up looking like a large block of mostly white, dull grey, or dark bricks, although they do not need to be that way.

The misinterpretation of the term 'harmonious' is often also applied to style, to the point that areas not built by the same developer, end up looking rather like 'a copy-paste affair', where all houses are built in the same style and are painted the same shades.



**IMAGE 377 (1-2)**

Typical Finnish urban winter views.

1. Topeliuksenkatu, Helsinki, (Laura A, Flickr, January 2009),

2. Tampere, suburb, (Antti Eintola/Yle)



The new brick buildings on Aleksis Kivi Street, Helsinki (see photos on page 188) are a shy attempt at using colours combined with mainly brick walls,

which is not well visible from the street as the colour is well above the usual viewing level of a pedestrian, or well-hidden between buildings deep in the half courtyards and internal passages between the buildings. The view from above is far more exciting, but unlike the planners, most people do not fly over the city on a daily basis. The view surely enlivens the vista for those living on the higher floors and to an extent those living in the

complex generally, but for the street, the buildings form mainly a relatively long and solid brick block.

What seems to be often forgotten is the need to ensure usability and visibility throughout the year. Many a project is photographically presented in its 'summer dress' (and the same is right for rendered images), yet, summer is only one of four seasons in Finland, so that the three others are often ignored, unless we include photos of the bright colours of leaves in autumn (but bare trees, whether in autumn or spring are not considered 'photogenic').

"Buildings are not built only for sunny summer days" (Prof. Koiso-Kanttila in Kastemaa 2013), and the same should be expected from a work of public art, as it too should not be created only to be enjoyed in clear days. (Kastemaa 2013.) Unfortunately, Kastemaa's visit to Arabianranta in February 2013 revealed that not only many of the artworks and installations placed in Arabianranta were not meant to be enjoyed during



**IMAGE 378 (1-2)**

Piers, by Samuli Naamanka, 2007, in summer and in winter  
(Heikki Kastemaa)



winter, because they spend that time "hibernating", buried under a thick blanket of snow, people in Arabianranta do not

in fact see these works as part of their everyday life as they do not care to make the effort and clear the snow off these works. Either people do not care, or they are so effectively trained to see the yard and the public areas around as off-limit for them (and the responsibility as that of the real-estate maintenance services). 'Tapio Wirkkala' park is a theatrical setting, and judged by its plan, was meant to create a home-in-the-garden atmosphere. Yet, it offers no sitting options at any time of the year and therefore does not encourage people to spend time there. Kastemaa's photo showed a few footprints near the installation, and when I asked friends living in the area how the park was used, they replied that it was crossed through. The upright, tall standing and strongly colourful elements of the installation by



Howard Smith in Kaj Franck Street are well visible also in winter and enliven with their colours the otherwise cold, wintery scene.

One should consider how beautiful Tapio Wirkkala Park could look in winter, if the snow were removed carefully from the relatively small area, especially with the lights on at night, or the colourful magic Persian carpet against the bright white snow. There cannot really be anything stopping people from clearing the snow carefully but their own indifference. It can be safely concluded that percent-for-art is not sufficiently effective in terms of bonding people to their living environment and making it their own. As one of the local residents replied when interviewed, the works of art have remained stand-offish, aloof, and are not always noticed, while another said he appreciated the fact that works of art were included in the area.



**IMAGE 379 (1-2)**

The site before the project, Rio de Janeiro, 8 years of Haas&Hahn, YouTube, Seven Halsema Rio Cruzeiro, by Haas&Hahn, Rio de Janeiro, 2009, Photo: favelapainting.com

The use of colour can enliven any derelict neighbourhood, as indicated by the projects lead by artists Jeroen Koolhaas and Dre Urhahn (known as Haas&Hahn). Ever since 2005 they have been creating several such projects in Rio de Janeiro, from single murals to the painting of entire streets and squares. In these projects, the people of the local community



**IMAGE 380 (1-2)**

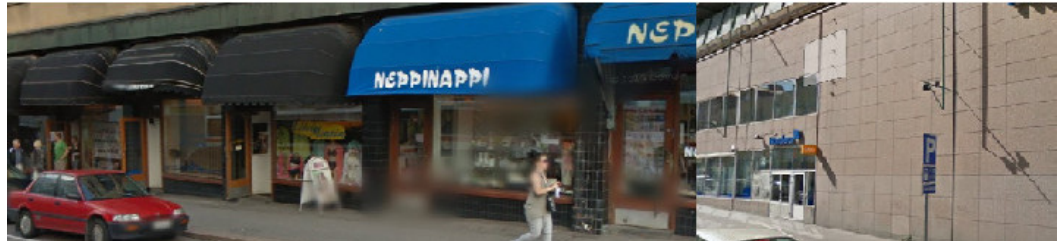
Before and After, Praca Cantao, by Haas&Hahn, Santa Martha, Rio de Janeiro, 2010, Photo: Favelapainting.com

take active part in the actual painting process, which gives them training, some income and a sense of real belonging and ownership of their environment. These projects influenced public opinion in Brazil and generated great interest in the world. The impact of the first project on the community inspired the project of painting of 24 houses. Houses were plastered before painting, which immediately elevated the appearance of the building, and painting was done by the people of the community. As the narrator of the film says, beauty and pride in the community can be achieved by something as simple as a splash of paint, and has proven just as important as education and healthcare (Haas&Hahn, 2014; Seven Halsema, 2013).

#### 9.6 Variety, Style, History, Identity

People need variety and are said to be healthier when they have variety in their environment. Monotonous architecture creates a boring surrounding, and a boring environment burdens people emotionally. This has been shown to negatively affect the psychological state of urban pedestrians. Faced by blank façades, test participants described the site as “bland, monotonous and passionless”, which was supported by their physiological data. (Ellard 2015, 109.) Sight is the most highly developed of our senses. (Hasson et al. 2008, 13; Hagen 2012, 35.) Jan Gehl writes that before the city space is made attractive through design, (which he says, is a quality in itself), priority must be given to the functional ‘human’ aspects – security, climate, and opportunities for staying. (Gehl 2010, 176.) Unlike more recently built locations (starting of the rise of modernism, and from then on), in older pedestrian oriented locations, buildings matched the human scale. Buildings were decorated and detailed, units were relatively small and so were the distances between them. Goods were on display and the space provided stimuli. For the pedestrian, interesting scenes would change continuously as one walked down the street. (Gehl et al. 2006, 34 and 36.)

Gehl stresses the essential difference between the detailed 'pedestrian' street or space and the extremely simplified, dull, colourless, long street-side blocks created by modern architecture. Small, individual shops

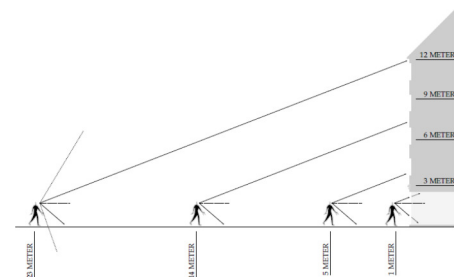


**IMAGE 381 (1-2)**

Shop fronts in Lahti, Finland, old vs modernist, Google Maps Street View

become the exception even within shopping malls, while large units, mainly belonging to chain-stores dominate the street view.

According to the environmental psychologist and neuroscientist Colin Ellard, "...streetscapes and buildings that ignore our need for sensory variety cut against the grain of ancient evolutionary impulses for novelty and will likely not lead to



**IMAGE 382**

Effective viewing distances while walking in the city  
Gehl et al. 2006, 33

comfort, happiness or optimal functionality for future human populations". (Ellard, 2015.) Ellard advises planners and designers to make the part of the city that is at human eye-level interesting (when standing upright and moving the eyes up  $55^\circ$  and down  $80^\circ$ , at the most (Gehl 2010, 39)). Ellard writes that a simple change to the way the bottom 3 metres look, can have a significant effect on pedestrian behaviour. People are attracted to a street where façades are open and lively, they are stimulated in a positive manner and want to spend time in the place (Ellard, 2015), while according to Gehl, the ground floors of all buildings are important. The requirements for façade design become more demanding, especially the side that is facing the street. Ground floors serve a variety of purposes to different people and often serve as transition zones between the indoors

and the outdoor public space. People interact with the ground floors visually while walking by. (Gehl et al. 2006, 29-30.)

The scene is boring also when the pattern is repetitive and is reflected in several large structures within the same area. Even when buildings were still decorated, and their external walls were not upright-shooting blank slates, extremely long terraces, as one can find in certain parts of London or similar repetitive large blocks as in Haussmann's Paris, can create a relatively tiring scene. Blocks of flats built in Finnish cities in the 1930s and 1940s were already strictly deprived of decorations and their walls lost their bays, cornices, gables and columns. Their colours faded, the differences between them were further reduced to the point that when placed side by side they could create a single endless, more than a 100m long wall of undefined shade of beige, eight or more storeys high, covered by regimented, featureless, relatively small windows, and a few entrance doors. Some buildings from the 1960s occasionally feature recessed balconies or small Juliet-style protrusions. Some of the lengthy blocks are situated perpendicularly in relation to the road like they do in a typical modernist Finnish suburb. Later built structures were often made to follow these features, probably in a misguided attempt to 'harmonise' the street view.

Even when building with modern techniques, one can ensure greater variety by using building-guidelines that encourage ground floor activities, and making the visible metres look interesting and the sidewalks inviting. Building guidelines can be used to ensure that new long buildings are made to look 'shorter'. For example, long structures can be made to look shorter by using structural-decorative and/or visual elements, such as clear change of colour, material, textures, variations in depth, position, height, and avoiding simple and obvious systematic repetition. These do not always need to be costly and/or extravagant, because the effect created is the essential issue. I suppose that the thinking process needs to be that of amalgamating different pieces into a conglomerate rather than taking a block and splitting it into parts.

Finland moved away from building city courtyards in the post-war years of the reconstruction era, and became a devotee of the Finnish modernist version, namely the Town in the Forest, the first of which was the small area of Sunila in Kotka, planned by Alvar Aalto for the workers of the Ahlström pulp mill.

Courtyards were reintroduced gradually through the 1970s and 1980s. In 1966 Kivinen and Mikkola studied the master plan for Helsinki and the town plan of its centre, and came to the conclusion that Finland had yet to produce a better solution than city courtyards (Tuomi 2005, 209). These courtyards seem to be the way to go still today, but the mistake of treating the street as secondary is still 'alive and kicking'. While the inner yards of the newly built Arabianranta area in Helsinki are designed with care and have artworks installed within, in most cases the street-view mostly resembles an older style urban development, where the outer shell of the building forms a continuous protective wall, keeping the outside strictly away from the beautiful inner courtyards.



**IMAGE 383 (1-2)**

Arabianranta – the street shell of one of the courtyards and an aerial photo of 4 designer yards  
Goosle Earth and Helsinki City Map Service

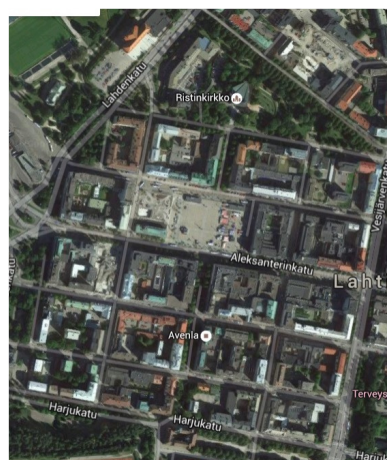
Variety is born naturally, if in the course of time not all old buildings are torn down, so that the different periods in the city's history are present as part of the contemporary cityscape. This presence of memories and people and actions bygone, is the source of a sense of permanence, stability, and continuity. It is the symbolic presence of the roots of the community and its members, an obvious source for place attachment through heritage.

If place identity is defined as the manner in which people incorporate a place into the larger concept of their own identities or sense of self (Kopec 2006, 62), the presence of a physical part, an icon of a history that one

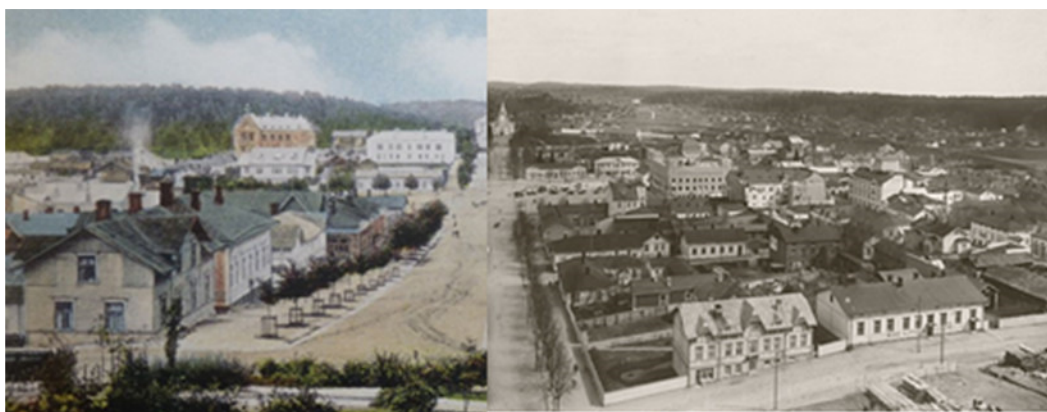


considers oneself part of, is a direct link to one's heritage, identity and self. Such locations have a subconscious effect on one's sense of belonging and one's emotional and psychological stability. "Place features serve as icons for meaning that contribute significantly to one's place identity, which is part of one's self identity. Place icons serve as symbols of people's memories and values ... when these icons are encountered, they may evoke the valued memories and/or other associations, and thereby evoke a sense of place". (Hull et al. 1994, 118.)

A place deprived of the presence of its historical structures is a place deprived of its heritage, a place without roots. Such a place cannot offer a sense of 'home', belonging and stability as one with its roots visible and tangible. Because the place does not 'belong' to the person, the person living there does not feel a sense of belonging. If we know that the place had such icons, but they were let to fall to disrepair or just removed before new ones, the message is clear - the place as a whole lacks in value, importance and attachment to the community.



**IMAGE 384**  
The current area of the old grid part of Lahti, Google Earth



**IMAGE 385-386**

Combined panoramic view - Lahti 1907, the old wooden church, demolished in the 1970s is behind the market square. Photo: Pertti Hammar's collection and Lahti City Museum of History

In the end of the 19<sup>th</sup> century, Lahti village belonged to the municipality of Hollola. The wooden village burnt down in summer 1877, and was rebuilt



and received dependent market town rights from the tsar in 1878. It became an independent town in 1905. At that point the town had 2,779 inhabitants. (Lahti History, Wikipedia.) At the time it was mainly a wooden town, but between 1907 and 1914 it developed further and many new houses were built in stone and wooden houses were modified, enlarged and renovated. (Lahti Museum pages.) Only two of the wooden houses that formed the heart of Lahti in the past were still left in the centre of the city in 2015, and both were at risk of being demolished.

In October 2013 the newspaper *Etelä-Suomen Sanomat* asked if the wooden building known as Oscar's Yard (Häme Street 17, built some time before 1890) was going to be preserved or would it be replaced by a block of flats. Oscar's yard city block includes also the mixed purpose building on Rautatie Street 18 (1928-1929), and the low commercial building known as Piironki (the Chest, 1920 and 1924) on Rautatie Street 18, and a stable building (1902) in the inner yard. (Kauppinen, 2014; Mantere, 2013.)



**IMAGE 387**

Lahti, Häme Street 17 Oskarin piha (Oscar's Yard), one of two last original wooden buildings in central Lahti  
Google Earth Street View

The consortium of heirs of Oskari Rajanen, the current owner of the buildings, applied for a change in the town plan so that a block of flats could be built instead of the wooden house and the stable building, extra floors built on top of the low building known as Piironki, and have the corner building undergo a complete renovation. The question before the board was whether to mark the said buildings as protected in the town plan. The practice in Lahti City is that possible protection of sites is considered only when the town plan is undergoing a change. As a result none of the buildings in question had been listed as protected. (Mantere 2013.) The group of heirs was clearly motivated by a potential significant

financial gain. As long as changes to the plan are not initiated by the city, such processes will always revolve around issues of economic gain as opposed to cultural values. A rather fierce struggle rose around the city block, and various bodies and interest groups were involved, and the site was enrolled in the Europa Nostra heritage awards competition for threatened sites. (Aidantausta, 2015.) In the end a common solution was found between the group of heirs, the city and the planners, and although a permit was granted for the building of a new eight storey apartment block, only the old and dilapidated stable building would be lost. The architect of the new building said that “practically, 99 percent of the structures in the block will be protected”. The entrepreneur that keeps the Café at the wooden building negotiated to buy the building from the group of heirs and had a significant role in the process and the final decision. The three buildings got marked as protected in the town plan. (Lemminkäinen, in Uuskallio, 2015.) Unfortunately, if a compromise could not be reached, the consortium would have withdrawn their application and the buildings would have not gotten marked as protected.

Unfortunately, when buildings are not declared protected, owners who are better concerned with financial benefits than with cultural heritage have been known to let the buildings’ condition deteriorate and finally have them torn down because of safety concerns, and get the site built anew in a profitable manner. Declaring a building as protected in the town plan does not always guarantee its actual protection because although the owner of such a building is responsible for its maintenance, failing to do so seldom leads to sanctions. Another problem is the general attitude in Finland towards conservation. Protection is seen as unnecessary and bothersome. Instead of conserving the old, it is preferred to build anew in the name of progress. (Saukkoriippi 2013, 2, 37.)

History and variety go hand in hand, that is, in those places that care to preserve their history and therefore their identity. True, not every old building needs to be preserved just because it is old. It needs to have a general value at community and social level to be worth being conserved.

An interesting process going on at the moment is the active global as well as local debate regarding the conservation of Brutalist buildings, a subject people are highly divided about. While some would have preferred that those buildings were never built in the first place and would like to see them demolished en masse (one has to remember that concrete does not age well and that many Brutalist buildings, lacking maintenance, are at a fairly bad state and are a sad view to look at), others consider them important, if not beautiful, and argue for the preservation of many of them.

While the building stock in the centres of larger cities and towns in Finland retained (to an extent) buildings from different historical periods, many centres of country-towns have hardly retained any of theirs. Some have a couple of buildings going back to the beginning of the last century (but for churches), but the bulk of their building stock is from the post-war reconstruction era and later. Without familiarising oneself with their historical records, one would not be able to guess that their roots as an official parish go back as far as 500 years, and more. Many of these towns closely resemble one another because most of their administrative centres and public-service buildings were planned by the same architects or those who adopted their style. Additionally, they all sport the same shops (dominated by nation-wide chains), the same block of flats from the 1950s, 1960s and 1970s, the same newer, engineer planned blocks of flats, terrace houses and single family ones – the standardised house model of the post-war era such as the ‘rintamamiestalo’, the white brick clad bungalows and the wooden clad modern models. Unless one is personally familiar with the details of their townview they could easily get mixed up.

The post-war era coincided with the time Modernism was made globally popular. The old decorated and decadent past was to make room and be removed before the new and modern. Finland was going through a wave of rebuilding, both physically and socially. Aalto, who is viewed as the father of the Finnish version of Modernism, incorporating vernacular natural symbolism into his architectural language, suggested major

changes in Helsinki, which would have required large demolition work before rebuilding, and he was not alone.

Where larger towns and cities were already built mostly in stone and mortar, country towns were predominantly wooden built. The wave of modernisation in the 1960s is generally viewed as the main cause for the annihilation of the Finnish wooden town tradition (El Harouny 2008 part 2, 179.) The new Finnish identity was linked to architectural new icons already in the independence stage (national romanticism and monumentalism), and even more so in the post WW2 rebuilding and urbanisation phase. Architecture, as much as it was a means for enhancing the Finnish image and identity on the international stage, was means for its enhancement at home. (Nikula 2006, 11.)

When old buildings are systematically 'eradicated', the result is a cultural void. The historical aspect of the variety of the building stock of a town or city is also the basis for its character and identity.

Al-Kodmany and Ali discuss the placemaking problem created by skyscrapers, or the contribution of glass skyscrapers to cultural identity, which first reads like an oxymoron. Not surprisingly, skyscrapers are not famous for their contribution for 'placemaking', they write (Al-Kodmany, 2001, Jencks, 2008, Huh, 2005 in Al-Kodmany and Ali, 2012, 44), and attempt to "explore ways to improve placemaking by incorporating cultural cues in the design of skyscrapers". (Al-Kodmany and Ali, 2012, 44.) Can Skyscrapers incorporate the vernacular design language and contribute to the cultural identity? The cases examined are the Petronas Towers in Kuala Lumpur, Malaysia, the Jin Mao Tower in Shanghai, China, the Urban Forest Tower in Chongqing, China, the Taipei 101, in Taiwan, the Shreepati Skies in Mumbai, India, the Naga Towers in Gandhinagar, India, Burj Al-Arab in Dubai, Burj Khalifa in Dubai, and the Nakheel Tower in Dubai. According to them, today's skyscrapers combine art and architecture, yet, they are in no way faultless. These examples show an attempt to depart from the basic prototype of steel-and-glass tower, by

attempting to provide visual references to local cultural symbolism. (Al-Kodmany and Ali, 2012, 57.) They point that although the symbols may suit the locale, they are superficially selected and used, and at times not even noticeable. These skyscrapers are also criticised for being out of scale, out of context and out of place, dwarfing their neighbours, low or high, and largely violating human scale, and for being extravagant, monumental, excessive and even ostentatious (Dupre, 2008, Lepik, 2008, in Al-Kodmany and Ali, 2012, 58). The superficiality of the symbolism used hints at possible lack of local knowledge and repetition of familiar Western style. Do the materials, used in the construction of skyscrapers have in them the ability to deliver a more refined contribution to placemaking, or is the mostly unsuccessful use of symbolism the result of the wish to build higher and brighter, larger, technologically advanced, striking and unique by all means and for any price? The recent urban blueprint by the Chinese government "...demands that urban architecture be "suitable, economic, green and pleasing to the eye", in contrast to the "oversized, xenocentric, weird" buildings devoid of character or cultural heritage". (Zhen & Gan, 2016.) What is left to be seen is how the Chinese State would relate to more buildings in the form of Chinese Teapots or Chinese Coins. It is clear that steel and glass do not lend themselves to the style as well as concrete, and as for the ideas for these architectural sculptures, the designers would have done better to choose more suitable materials and scale, and make less obviously naïve choices.

### 9.7 The Responsibility for Designing the Public Space

Areas in common use, whether indoors or outdoors, anything outside the door of the apartment in a block of flats, smaller structures of multifamily dwellings, or the gate of the semi-private space of one's own yard, if one lives in a house that has a yard, is outside one's personal territory, and hence one's ability to have an impact on its design is limited.

The design of public places, streets, squares, plazas, spaces within public buildings and common areas of any apartment buildings (once a political,

administrative or management decision has taken place), is the responsibility of the designer (and planner), who, in turn, are dependent on limitations set by building codes and regulations, as well as the decisions of planning and design municipal officials, and boards. Most municipal building codes are closely based on the relevant laws, and city boards are political bodies whose members are mostly not specialists of urban planning and design. The power of these factors combined is in effect rather absolute in relation to that of the user of the space (which only seldom becomes part of the process by reacting and providing feedback to plans published). On the other hand, designers and planners are not acting alone and their decisions are influenced by team members as well as by private and public decision makers. Politics and economy often place constraints on designers and planners. Nevertheless, although these may force them to alter their designs and plans, they still have in their arsenal many tools, methods and solutions that can assist them in correcting problems through the use of alternative solutions. Communicating the details of alternative solutions to decision-makers and clients is therefore an essential skill designers and planners must acquire and develop.

The street or square, the public (outdoors) room is a space that is defined by the (external) walls of the buildings surrounding it (or the lack of them) and creates an atmosphere, which affects the mood of the people that act within it. For this reason, to a large extent, the same aesthetic design rules should apply to a public area of any sort or scale, indoors or out, as they do to an enclosed private space.



## 10 CONCLUSIONS

After travelling this long route, was the initial question answered? Where is the art in all that?

The evidence to the ill-effect of the urban environment on people's mental (and physical) health and well-being now lies before us. We explored how 'the city' (globally) got to its current state and this was described and illustrated in detail. Architecture in the broad sense, we learnt, has always been linked to the world of art and the artistic thinking of its time. The shift, which has given way to the rise of architecture devoid of art (artless art), was in fact the artistic search for the core and essence of art.

The detachment and disassociation between artistic thinking and architecture seemingly have been the fruit of the continuous demand for conceptual thinking put on the intellect by the need to conduct mundane life in a museum display. Living in a constant internal debate is not only hard on the brain, it can lead to mental issues. It is like taking the installation "144 Magnesium Square" by Carl Andre out of the museum of modern art and placing it for a day in a hardware store (this was in fact done at Rapid Hardware, in Liverpool) or moving Duchamp's "Fountain" and placing it in a public toilet (also done in Liverpool). The solution was a conceptual shift to artless architecture. That is, the "Fountain" became a urinal.

Art may have been put to rest but the need for art has not, and some architects seem to attempt to redefine the instructions set by the grand masters of "less is more" and "decoration is a crime", creating 'building sculptures' in various mediums. As they do so out of context and place, the result is mostly awkward.

We have shown that both nature and art are valid means for alleviating and even preventing the problems of mental health and well-being, such as those which are intensified and even brought about by the urban environment. As for these reasons, nature is nowadays made an integral

part of city planning and design. It is only logical to do the same with art. We have also got to the conclusion that the need for art is a basic human need, and as already said, when thrown through the door, it keeps coming back through the walls. What remains is to figure how artistic thinking, what I called “the artistic element”, can be revived and made legitimate and proud in urban design.

Before we end the discussion on the issue of art, let us remind ourselves that neither the city, nor architecture, planning, design, or even art are the core of this discussion. The city, architecture, planning, design and art (in this context) are all meant for one purpose only – to serve and support people and to guarantee their well-being.

Art, a complex term, has often been defined narrowly, where it should have been defined in a far broader sense. Art in the urban context does not mean placing a piece of art in the otherwise grey, white or shiny, dull environment that we keep creating. Neither is it placing works of art in gardens or open-air museums. Not that such works of art may do any harm, but they are not only insufficient, they miss the point. They are like putting a pot of flowers in a prison cell or a derelict house – a ring of gold in the snout of a pig, and like one, they may emphasise the negative aspects of the environment even when (for a while) they may enliven it with a bit of colour. It is the cell or the house and the person in it that we need to deal with, not the flower pot.

Is art then in the vistas, streetscapes and townscapes? It may be in part, but that alone too is insufficient. It is certainly not only a visual effect, although a visual effect can have a positive influence.

The ‘artistic element’ in the environment needs to be far more inclusive to produce the effect required. We named the public domain ‘a room’ or ‘a space’, delimited and defined by the structures and elements surrounding it. Like a space or a room, the manner in which it is organised, including all factors: its walls, floor and ‘ceiling’, the elements and objects within, the materials, the surfaces, the textures, the air, the light, the sound, the

smells, the scale, the levels, the relationships, weather elements, temperature, movement, all take part in creating the space, within which people act and interact.

Get these wrong and you hinder human action and interaction, and negatively affect their well-being. But if you manage to arrange these factors right you are likely to facilitate human action, interaction and well-being. This can be done on any level, from the smallest space to the entire city (although the chance is, that on the level of the entire city, flight may be needed to see it all at once, and that will be wrong because it will be external to the space and merely visual, and we have seen what planning on the board from a bird's-eye view or from helicopters can do to cities and to people). Planning and design has to use the people living in the city as the point of departure. It must also be done at their eye-level. The view from above is in fact irrelevant and redundant because it does not serve the people in the city, unless they are perched in their glass cage at the top of their tower.

We use all our senses to grasp an overall sensation of a place. A work of art that will produce well-being is one that will address all our senses, perception, sensations and basic needs.

The 'artistic element' in terms of urban environmental design is one that produces an environment in which the main actor, people, feel comfortable, and can act and interact with ease. The 'artistic element' in urban design does not need to challenge people conceptually, as a matter of fact, people, for whom the environment is created are an active part of this dynamic and ever evolving 'work of art'.

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