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High-rise in trouble? Learning from Europe

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Abstract

Purpose

All over the world millions of people live in buildings and neighbourhoods following the principles of CIAM and Le Corbusier: high-rise 'residential machines' in a park reminiscent of a green sea. In Europe and the USA several of these neighbourhoods featuring this architectural design dream became a social nightmare. Nobody wanted to live there anymore and crime and fear of crime flourished which resulted in a stigma that is often long lasting and difficult to repair.

Design, methodology and approach

In this article two high-rise neighbourhoods build in a Corbusier-like fashion, in the outskirts of major cities, are put under the evaluation spot lights:

- Bijlmermeer located in Amsterdam, The Netherlands, with an abundance of landscaping, shrubs, green fields and one high density neighbourhood,
- Bellvitge located in Barcelona, Cataluña Spain, looking less like a park but more like a city with open air parking on ground level, many small shops, bars and restaurants.

Findings

Both neighbourhoods faced enormous problems in crime, incivilities, disorder and drug abuse. Fear of crime and feelings of insecurity were high. Both governments reacted by investing huge sums of money. In Bellvitge the investment was mainly in public transport, the public domain and new approaches in policing while keeping the high-rise buildings intact. In Bijlmermeer a large regeneration project supported the demolition of two-thirds of all apartments and the neighbourhood was rebuilt in low— to mid-rise fashion.

Research implications

This article follows the history of both neighbourhoods and describes the solutions that were implemented. Important lessons can be learned regarding current high-rise neighbourhoods and about the learning capacity of urban design and planning for urban management.

Practical implications

The article shows that urban planners, - designers and - managers are slow in learning from earlier mistakes. There is no structure and method to evaluate and learn.

Originally and value

The 'Western' high-rise wave faded away but nowadays has become a high-rise tsunami in Asia. Learning from European experience might be useful.

1. High-rise solutions for Europe and Asia: two examples

In 1933, a famous conference of world-leading urban planners and architects was held on a steamer in the Mediterranean sailing between France and Athens. The group gathered for the fourth time and was called CIAM (Congrès International d'Architecture Moderne). On the way, the architects discussed the theme of 'the functional city'. The results of this steaming conference were summarized 10 year later by the Swiss architect Le Corbusier in the Charter of Athens (La Charte d'Athènes). The charter is divided into analyses (observations) and recommendations (De Villeneuve-Esclapon Aubigny (baronne d') et all, 1943). CIAM was fighting against the extremely dense, polluted and unhealthy situation that existed in most cities. Light, air and space was seen as the solution—as well as the segregation of transportation routes for cars and dwellings that *"will rise in its own surroundings, in which it will enjoy sunshine, clear air, and silence."* And also decisions about urban density were seen as of the utmost importance: *"To determine the urban densities is to perform an administrative act heavy with consequences"* (CIAM 25; recommendation).

Nowadays there is still is a great deal of ignorance around this issue of urban density. It is often assumed that high-rise (HR) always equals high density (HD): HR=HD. This might be the case in some countries (mostly in Asia) and in city centres but it is certainly not the case in all suburban high-rise apartment blocks in most European countries. Take, for example, the Amsterdam neighbourhood of Bijlmermeer—a perfect example of Le Corbusier thinking put into practice. In Bijlmermeer, high-rise equals (very) low density compared to Bellvitge were the density is four times as high (refer to table 1).

In this respect the designers of Bijlmermeer followed the advice of the CIAM architects and planners who recommended this lower density since they opposed the existing malaise of damp, unhealthy cities built in extremely high density with narrow streets that did not allow for air, light and space:

"High buildings, set far apart from one another, must free the ground for broad verdant areas. Indeed, they will have to be situated at sufficiently great distances from one another, or else their height, far from being an improvement of the existing malaise, will actually worsen it." (CIAM 29; recommendation)

An abundance of public space is inevitable when the CIAM requirements 'low density'+ 'high-rise' is being followed. Most planner and designers, also 'not-CIAM- adepts', love public space. This also goes for most urban sociologists, local politicians and authorities: 'Public space? The more the better! Only urban managers might be a bit less naïve since they have to clean, repair and manage public space. Executive urban managers know that due to the high cost this abundant public space is often not very well surveyed nor well maintained and managed. Often there is simply too much public space causing a dispersion of people and residents, as well as the police and other officials - there are not many eyes surveying the public space, nor hands defending or maintaining that space and hence 'control' is a problem (Jacobs, 1961).

The architect Habraken suggestsⁱ: *"We have drifted away from territorial patterns so that we tend to maximize public space, ignore territorial boundaries, have forgotten how to treat territorial edges and do not like gates. Territory is established by giving control to inhabitants."* Comparing the old inner city of Amsterdam with the Le Corbusier inspired new neighbourhood of Bijlmermeer, Habraken states: *"In modern times, architectural ideology came to deny all expression of boundaries. Space had*

to be continuous and was expected to flow in and out of buildings and open space. [...] Today, urbanists like to maximize public space because that is what they can work with."

Hence the CIAM ideas might have been right in the first place because cities were indeed too dense, polluted, noisy and unhealthy. But the CIAM solution might have been too extreme, resulting in simply too much public space that is impossible to survey and maintain. Too often the ordinary people, living in their beautiful and enlightened apartments in the CIAM high-rise 'habitation machines' were simply lost in a green ocean of public space. The lack of surveillance and no opportunity for feelings of territoriality to flourish resulted too often in feelings of insecurity and fear of crime. But even worse, these neighbourhoods were often plagued by too much real crimes such as robbery and violence.

2. Two case studies: Bijlmermeer and Bellvitge

We have studied two typical CIAM neighbourhoods: Bijlmermeer in Amsterdam, and Bellvitge in Barcelona. Bijlmermeer and Bellvitge both follow the CIAM high-rise principles but the Bellvitge neighbourhood is far more crowded (refer to table 1).

	Bellvitge ¹	Bijlmermeer ²
Dwellings	9,138	17,000
Inhabitants	32,605	41,700
Build-up area	0.73 km ²	5 km ²
Inhabitants/dwellings	3.6	2.4
Inhabitants km ²	44,600	8,300
Dwellings km ²	12,500	3,400

Table 1: Comparison of the density of Bellvitge and Bijlmermeer regarding number of dwellings, population and the size of build-up area.

In these case studies we have further explored the relation between the CIAM recommendations on low density and high-rise on the one hand and fear of crime, feelings of insecurity and crime on the other. Both neighbourhoods have suffered a lot from crime and fear of crime though somehow both high-rise estates managed to survive and overcome these problems. We can distinguish two roads to victory:

In de Bijlmermeer the solution was extreme and rather costly: demolishing two-thirds of the high-rise at a cost of about one and a half billion euros.

In Bellvitge the investment was mainly on the ground floor level in the public domain (drainage, water, streets and lighting), with a strong focus on new approaches to policing (community policing) and creating an inviting and friendly public space with a lot of little shops and restaurants.

Note 1 Figures by Aramburu, et al., 2009 for the year 1991

Note 2 Figures taken from the 'De Bijlmermonitor 2010' for the year 1994 (before renovation); the surface is an estimate (T93+T34 minus Venserpolder, Geerdinkhof, Groenhoven, Gouden Leeuw and Garstkamp)

Both of these European high-rise neighbourhoods were reviewed as case studies for the EU COST action TU 1203 (COST: COperation in Science and Technology, Transport and Urban development). A comparison between these two estates was made regarding measures and achieved results for crime and fear of crime.

These high-rise settlements are not isolated cases; at the time Bijlmermeer and Bellvitge were developed urban planners and – designers all around the world were planning high-rise buildings inspired by CIAM and Le Corbusier's urban concepts. The 'Western' high-rise wave faded away (Turkington et al, 2004) but nowadays has become a high-rise tsunami in Asia. Learning from European experience might thus be useful.

3. Foundation of the estates, building design and urban structure

In 1964 a high-rise neighbourhood for the working classes called Bellvitge was founded in the city of Hospitalet de Llobregat, near Barcelona (photo right). The construction of this estate commenced two years after the start of the development of Bijlmermeer, the high-rise settlement in the southeast of Amsterdam. Bellvitge and Bijlmermeer were both huge estates, newly developed in the 1960s, located in isolation on the periphery of the two European cities of Barcelona and Amsterdam. Although both housing developments were constructed around the same time and were designed as a 'functional town', the future of each settlement progressed completely different.



Bellvitge

Due to the industrial development of Cataluña (in those years mainly promoted by SEAT and the Telephone-company) a large number of people from other Spanish regions moved to the city of Barcelona (Aquilué & Stummvoll, 2014). More housing was needed and Bellvitge was constructed as a development of initially 7,000 dwellings for approximately 30,000 inhabitants.

Bellvitge was built on a flood plain of 2.8km² (only 0.73km² is urban residential). Building started in 1964 and construction work was finalized in the 80s (Associació de Veïns de Bellvitge, 2005). The urban design was based on prefabricated high-rise concrete-slabs of 15 floors high. The dwellings are on each floor connected to lift columns which structure a block. When the blocks of the first settlement of Bellvitge (South Bellvitge) was finished, there were no paved streets, public spaces, facilities (such as schools), or drainage systems in place. Only rectangular prefabricated high-rise slabs were visible in the landscape and floods were common during the wet seasons. The dwellings were for the owner-occupier market.

Bellvitge was completed in 1980 and consisted of 65 building blocks and 5 towers which contained 9,138 dwellings and 32,605 inhabitants. The density in the residential area was 44,600 inhabitants per km2 (residential area: 0.73Km2). In 1956 the area was planned for 7,000 dwelling but due to the pressure of private developers, which caused a lot of controversy among the first neighbours, the density was increased (table 1).

Bijlmermeer

Bijlmermeer was also built in the 1960s due to the Post-Second World War housing shortage. Lack of building during the Second World War and war damage; poor existing housing stock; migration to the large cities; and labour shortage which increased immigration caused a need for new housing construction. Bijlmermeer was a residential development at an unprecedented scale for the Netherlands; initially planned to be home to a 100,000 people, developed by the urban planners and architects of the city of Amsterdam for the social sector rental market.



Bellvitge

Construction of Bijlmermeer started in 1966 and was finished in 1975 when the last dwellings and shopping centres were completed. The area had 17,000 dwelling of which 13,000 were located in 31 large high-rise social housing. The urban structure of the settlement was comprised of 31 high-rise (10-floor) deck-access apartment blocks in a honeycomb pattern; between them there were large green spaces and bicycle or pedestrian routes. The car traffic was separated in elevated roads that created a high number of dark spooky viaducts which were perceived as unsafe.

Bijlmermeer was a high-rise settlement, but the density was very low. It was the opposite in Bellvitge were the density was - and still is - extremely high (table 1). In general the density of Bellvitge is approximately four times as high compared to Bijlmermeer. Even when the original plan for Bellvitge had been executed (7,000 dwellings) the density would have been approximately three times as high compared to Bijlmermeer.

When comparing the urban structure of both settlements, the main differences between the two high-rise developments were density (inhabitants and dwellings km2), the distance between the building blocks and the number of dwellings. The number of dwellings and the distance between the blocks was higher in Bijlmermeer and the density was lower. Furthermore, there was another variable; the separation of function regarding traffic. In Bijlmermeer there was a complete separation between cars (+1 level) and pedestrian and bicycle traffic on ground level. The main roads for cars were directly connected with the first floors of the buildings through the car parksⁱⁱ, while in Bellvitge cars and pedestrians were all at the ground level. Cars in Bijlmermeer were parked in parking garages connected to the roads. In Bellvitge cars were parked (and still are) in the spaces between blocks, where there was a high social control. In Bijlmermeer dwelling entrances were accessed through interconnecting corridors, whereas in Bellvitge the use of single lifts connected to only a few apartments on each floor provided higher social control in the limited common areas inside the buildings.

Bijlmermeer was an area completely developed by the urban planners and architects of the city of Amsterdam (Klundert, 2014), whereas Bellvitge was built by private investors. In Bellvitge, most inhabitants (low-income workers) owned their apartments while apartments in Bijlmermeer were mostly owned by housing associations and rented out in the social rent sector.

4. Socio-demographics

Jane Jacobs (1961) once remarked: *"We expect too much from new buildings and too little from ourselves."* Hence it is obviously important not only to look at the physical features of new neighbourhoods but also at the social dynamics.

Bellvitge

Five decades ago when the first slabs of Bellvitge were laid, the first owners originated from other regions of Spain outside Barcelona and existed mainly out of young people (young families or couples) that wanted to start a new future in the newly developed industries of Barcelona. These

residents raised their families in Bellvitge and due to the lack of facilities they founded the Housing Association^{III} of Bellvitge^{IV} to fight for their rights and after the Franco Dictatorship they also became part of some well-known trade unions (Associació de Veïns de Bellvitge, 2005). In most of the cases, the ownership of the dwellings belonged to the same family decade after decade (Aquilué & Stummvoll, 2014).

Since 1990s the population of the neighbourhood began to decrease. According to the 1991 Census the population of Bellvitge was 32,605 inhabitants and ten years later (2001 Census) the population was 26,244. A decrease in population of approximately 20% but this never resulted in high numbers of vacant dwellings. During the 2000s the number of inhabitants was rather stable and in 2012 the population was 25,528 although the density was still high.

During the 2000s the population of the city of Hospitalet de Llobregat greatly increased due to immigration (mostly from Latin America and Africa). In the neighbourhood of Bellvitge the level of immigration was moderate and the percentage of foreign immigration was 16% lower in Bellvitge than in Hospitalet de Llobregat^v (Ajuntament de l'Hospitalet, 2001, 2003, and 2012).

Bijlmermeer

When Bijlmermeer was built the number of inhabitants grew quickly from 1969 to 1975. After this quick start the area did not expand as fast as the municipality expected. The influx of people existed less of middle class families than foreseen (mom-dad + 2.2 children). Most of the tenants were one-parent families, singles and couples without children (people who had problems to find a home elsewhere in the Netherlands due to a waiting list system). A large proportion of these residents came from outside the Netherlands. Many people came from Surinam and the Dutch Antilles which were former Dutch colonies. An influx of illegal immigrants created overpopulation in some of the blocks. The residents of Bijlmermeer often experienced problems with language, education, social and economic status, discrimination and isolation from other ethnic groups and unemployment was high (Wassenberg, 2006).

In Bellvitge the situation was opposite, the building disadvantages created a tight social cohesion among the residents originally from other Spanish regions.

In Bijlmermeer, the problems caused bad publicity and in the 1980s the percentage of vacant dwellings rose to 20-25%: one out of every four dwellings was deserted. Similarly to Bellvitge the population decreased since the 90s mainly because of an ageing population but due to the other type of ownership (privately owned individual apartments) this never resulted in a lot of deserted, empty and vacant dwellings. Ownership seems to be a crucial variable here.

5. Crime, conflict and fear

In both areas – Bijlmermeer as well as Bellvitge - crime and fear of crime were at some point common topics.

In spite of a positive social cohesion of the residents in Bellvitge, in the 1980s problems spiralled out of control, intensified by the economic crisis, and the neighbourhood acquired its bad image. The conflicts increased due to high unemployment and an increase of heroin addiction among young people. Crime rates, social disorder, violence, robberies, drug-use and vandalism increased significantly.

Similarly for the Netherlands in the 80th (rising crime and economic crises) and even more extreme for Bijlmermeer, next to the economic crisis, drug problems spiralled out of hand due to the displacement of drugs problems –mainly heroin – from the city centre to Bijlmermeer. But in Bijlmermeer there was more: less people than expected moved to Bijlmermeer; more singles instead of families; high percentage of population from outside the Netherlands arrived completely new in a cold, urbanized high-rise area; limited facilities such as shops and schools and limited public transport. A light rail (metro) connection between Bijlmermeer and Amsterdam city centre (central station) became operational only in the beginning of the 80th several years after the high-rise was ready. The paradox was that the better connection to the city centre caused more drug related problems in Bijlmermeer. All in all the neighbourhood had a higher crime rate (Dijk and Soomeren, 1986), higher levels of fear of crime and a terrible image among the Dutch population in the Netherlands (Hootsen, 2006). Stigmatizing publicity (papers, television, movies) did not do Bijlmermeer any good.

In Bijlmermeer the urban design did not help either. The large number of semi-public spaces (more than 80%), areas like entrances, alleys, corridors, storage spaces, galleries and parking spaces, turned into potential dangerous places (Wassenberg, 2013; Klundert, 2014).

"The image of the Bijlmermeer as the city of the future deteriorated: the dream of a functional town became a nightmare of vacant dwellings, drug abuse and a crime ridden area." (Soomeren, 1995/11)

6. Measures and their effects

In both cases the local governments decided that major action to address the problems in Bijlmermeer and Bellvitge was needed.

In 1986 Barcelona gained the candidature to be the site of the Olympic Games 1992. Local governments of the Metropolitan Area and the National Government decided to improve the city, their structures and their safety and security problems. The city of Hospitalet received funding and invested this in some degraded neighbourhoods such as Bellvitge. They improved the drainage system, reconstructed the water management system to prevent floods, built a new metro station, developed public space and extended the public transport system. The local population, who were organized into the Housing Association of Bellvitge, continued their fight during these years to make

sure the money was well spent and the planned facilities were built. Bellvitge became a wellconnected neighbourhood with attractive public spaces between the building blocks (Aquilué & Stummvoll, 2014).

All over the Metropolitan Area a plan against drug-dealing and heroin was implemented. In 1985, 'the National Plan against Drugs' was approved by the Spanish Government, which acted in both sense repressive and therapeutic. The policies against drug became harder and the legal punishment e.g. for drug trading became more severe. On the other hand, new facilities and services for the addicts were implemented; such as daily centres for drug addicts and health programmes, which involved social care (Instituto de Criminología, 1986).

In Amsterdam the drug approach was similar though probably more a health centred approach (e.g. methadone) with day care facilities for drug addicts coupled with a very strict policies and policing on (hard) drugs trading (and easy going on soft drugs like weed and hashish^{vi}).

In Bellvitge/Hospitalet Local Police concentrated their efforts on Community Policing Activities, which included public order management in close cooperation with departments of the municipality and connections established with the social services, the public services and the community associations.

In Bijlmermeer the police activities over the years are more or less the same as in Bellvitge/Hospitalet. Furthermore there were two intensive and integrated attempts of improving the area: a first still rather light sweep of improvements followed by a second really intense one: demolishment.

Firstly, between 1985 and the beginning of the 1990s, a set of measures was implemented in the high-rise area of Bijlmermeer, based on the CPTED^{vii} ideas: Crime Prevention Through Environmental Design (Jeffery, 1971; Newman, 1972; Kube, 1982; Crowe, 2013). Most of them were related to the improvement of the physical and technical environment: apartments were split up into smaller units; rents were lowered; some parts of the buildings (car parks and storage spaces) were demolished or converted into homes; some public areas were converted into plots of land; parking was made possible at ground level; anti-burglary devices were installed; lighting was improved; and some of the long galleries were closed.

Most of these measures were successful and it became more difficult to commit vandalism and behave disorderly (Soomeren, 1995). But the continuous increase of unemployment (particularly in this low-income neighbourhood) and the rise of some types of crime such as burglary and the problems of drug abuse (heroin) did not result in the expected improvement.

At the beginning of 1990s a plan was formulated to improve the situation in Bijlmermeer (Wassenberg, 2006). The renewal process was based on two elements: spatial renewal and social renewal.

It was decided that a large part of the high-rise blocks was to be demolished: 6,500 of the 13,000 high-rise dwellings. The demolished apartments were to be replaced by low-rise or mid-rise housing,

with 30% council/social housing and 70% in the private sector. Furthermore, the remaining high-rise blocks were renovated; the interior and elevated walkways were removed and ground-floor storage areas were replaced by housing. An important change was the demolition or change of use of car parks and lowering the main roads to ground level. In that respect the 'new Bijlmermeer' resembles more Bellvitge.



Bijlmermeer, H-buurt1



Bijlmermeer, H-buurt2

The second element was the social renewal, which worked on the socio-economic aspect of Bijlmermeer degradation. There were measures implemented for reducing unemployment, immigrants received training in Dutch language, new social and cultural facilities were created, three primary schools were restructured and important changes in the managerial system of the housing association were introduced. The approach in Bijlmermeer was extremely well monitored in a yearly – later on bi yearly - evaluation/monitoring assessment (Soomeren, Bijlmermonitor; Klundert, 2014; Wassenberg, 2013)

The measures implemented in both cases, Bellvitge and Bijlmermeer, were quite different. In Bellvitge the focus was not exactly on renewal but on building facilities that were initially planned but never built, improving public transport and thereby connection to the city and enhancing the public spaces. The renewal of Bijlmermeer followed a different path. It was decided to demolish two-third of the high-rise buildings and most of the parking garages. The elevated primary roads were lowered, and the demolished high-rise flats were replaced with low-rise or mid-rise buildings.

Whereas in Bellvitge the high-rise buildings resisted the test of crime and drug-dealing, in Bijlmermeer they did not.

The effects of these completely different approaches were in both cases positive and the crime rates and the fear of crime decreased. The image of both neighbourhoods was also improved though both neighbourhoods are still stigmatized. More information can be found in the two case studies (Aquilué Junyent et al. (2014) and Soomeren et al. (2014).

In Bellvitge generation after generation stayed in the same neighbourhood due to the social cohesion and ownership of the properties, while in Bijlmermeer the population was constantly changing. Currently the population in Bellvitge is still decreasing but in Bijlmermeer an increase of population is seen due to the measures that were undertaken.

7. Conclusions and discussion

Two cases: conclusions

Two high-rise neighbourhoods; both build in a Corbusier-like fashion. One low density (Bijlmermeer, Amsterdam, The Netherlands) with an abundance of park landscaping, bushes, shrubs, green fields and one high density neighbourhood (Bellvitge, Barcelona, Cataluña, Spain) looking less like a park but more like a city (parking on ground level in open air, a lot of small shops, bars and restaurants).

In one neighbourhood (Bellvitge) all apartments were privately owned thus building a 'community of high interest' (Newman, 1980) with involvement of the residents (territoriality). Actually, the high social cohesion and sense of community in Bellvitge was a feature since the foundation of this neighbourhood; it's a feature which is still present. In Bijlmermeer all apartments were rented out by distant managed housing associations to people who couldn't find a house elsewhere because of the long waiting lists for public housing.

Both neighbourhoods faced enormous problems in crime, incivilities, disorder and drug abuse. Furthermore fear of crime and feelings of insecurity were high in both neighbourhoods. Both reacted by investing a lot of money. In Bellvitge the investment was mainly in the public transport, the public domain (drainage, water, streets and lighting) and – for Spain/Cataluña - new approaches in policing (Aquilué & Stummvoll, 2014).

This type of approach was also used in Bijlmermeer but proportionally the investment in demolishing still good and valuable apartments and rebuilding dwellings in low/mid-rise buildings was far higher: in the end 6500 flats were demolished and rebuild in low- to midrise fashion. This large scale demolishing of buildings was not only because of crime issues but also because there was simply too much of this non-traditional and unpopular high-rise for the Amsterdam regional housing market^{viii}. The Dutch solved that problem but it was an extremely costly – and in that respect 'un-Dutch' – solution: costing one and a half billion euro.

Lessons learned

One of the important lessons learned is that there are obviously more – at least two – roads to victory. Both high-rise neighbourhoods have been able to overcome their problems of crime and fear of crime/feelings of insecurity^{ix}. In both cases the solutions have been quite costly though the Bijlmermeer solution - knocking more than half of a rather new neighbourhood down and rebuild it in low/mid-rise - was extremely costly: one and a half billion euros.

Whatever the costs involved, the overwhelmingly important lesson in both two cases is that a wrong design is extremely costly in maintenance and management. Hence it's worthwhile to invest in good urban planning design to make place management easier and better.

A few differences between Bellvitge and Bijlmermeer are remarkable:

Ownership of houses - and thus also 'ownership' of the public space – is obviously very important comparing the cases of Bijlmermeer (rent) and Bellvitge (privately owned). In Bellvitge there was - and still is - a strong 'community of interest' of home owners who look beyond their own apartment and also have a strong vested interest in the public space. This is even more important in Bellvitge

since 'my own car' is parked in the public space near the apartments. In Bijlmermeer cars were stowed away in closed parking buildings far away from the apartment buildings.

Car – and traffic management do focus our attention on another issue: the **monotonous public space**. Compared to lively Bellvitge with its roads and cars on ground level, lots of little shops, bars and restaurants Bijlmermeer was a dull grey monotonous neighbourhood. In Bijlmermeer the buildings were indeed like grey ships floating in a park-like green ocean. A preference for many planners and (landscape) architects but most people would become frightful and would feel insecure in such an ocean; especially on a rainy day after dark. Residents like to see others and like to be seen. A concentration of diversity (people, shops, restaurants) is what appeals to most people (Soomeren et al. 2014).

One last conclusion is that high-rise is not so much the villain of the piece but probably **low density is the most vicious villain of them all**. Low density results often in deserted public space and hence feelings of insecurity, fear of crime and also real crime (Anom, 2008). Furthermore low density usually consumes territory in an unsustainable manner, which also may extremely expensive to build both facilities and infrastructure.

The legacy of Le Corbusier: problems ahead in Asia?

The legacy of Le Corbusier is widespread. In **Europe** the French banlieues come to mind, in Eastern Europe the communist era building blocks are examples of a central planning doctrine (Lukas, 2007) and also in the UK and USA several estates are notorious. In London e.g. the Holy Estate in East London, the Aylesbury Estate and its neighbouring Heygate Estate have had continuous negative publicity. These last two estates have both been, against the wishes of the residents, repeatedly negatively depicted in several films and documentaries (Campkin, 2013). Both areas are currently part of a large regeneration project.



Heygate estate

The photo shows the former Heygate estate in South-London which was demolished in November 2014. In the **USA** the Pruitt-Igoe public housing complex in St. Louis is a notorious example.



Pruitt-Igoe

It was completed in 1955 and was showing signs of degradation and vacancies soon after construction and has not stood the test of time: demolition started in 1972 and the complete site was cleared in 1976. The root causes of the existing problems of poverty, segregation, stigmatisation and crime are all still discussed. Was it the architecture, the scale of the high-rise, the extremely sober design and the mono functionality, or was it (also) the economic situation in St Louis, the white flight, political reasons or unemployment?

The enthusiasm for high-rise residential buildings has shifted to Asia.



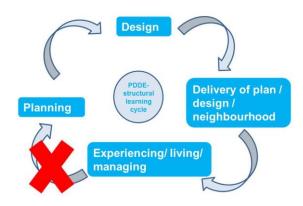
Asia

Here the principles of Le Corbusier are still applied, although the functionality of the design seems even more pronounced and the towers are higher; in Hong Kong, Seoul and other Asian capitals up to 50 floors high. High-rise living in Asia is seen in a far more positive light than in Europe (Yuen, 2011). The Asian high-rise often reaches very high density and most of it is privately owned. Our Bijlmermeer-Bellvitge comparison (Soomeren, 2014) shows that this is very important and it might lower the risk for crime and fear of crime/feelings of insecurity. On the other hand the lack of diversity and the monotonous design might be a serious risk in the long run when social bonds, values and norms become a bit more relaxed. And Asian high-rise in trouble, is not one neighbourhood in trouble – like Bijlmermeer and Bellvitge. There might be huge trouble ahead in that case: Like the man at the bar of the Titanic: "I asked for ice in my whiskey but this is ridiculous...".

8. Epilogue: do planners and designers learn?

Do designers and planners learn from earlier plan implementation? In general this seems to be a difficult task (Pressman and Wildavky, 1973) but certainly in the case of urban planning and design real structural learning seems to be as difficult. In his foreword to an earlier EU funded research in which researchers from five European cities worked together on the Crime Prevention Carousel, a book on crime in relation to high-rise housing estates with participating cities Budapest, Bristol, Berlin, Krakow and Amsterdam, architect Nico Zimmerman remarks: "*After nearly a hundred years of renewal in architecture and urban building it may be a cause for wonder that the unacceptable innercity forms which were then rejected* (PvS: by CIAM) *have become an inspiration for urban planners in their search for new diversity and shapes in the compact city. It illustrates the temporary blindness that invariably accompanies revolutionary ideas. While innovation sometimes leads to improvement <i>it is nearly always also coupled with rejection of what was essentially valuable and needed to be cherished.*" In short: the CIAM planners and designers could in a revolutionary way keep on building until – and even decades after - a simple journalist from Greenwich Village appeared on the stage: Jane Jacobs who cherished diversity, eyes on the street and mainly people before buildings and living before building (Jacobs, 1961).

In the case of Bijlmermeer the main planner for the following Amsterdam New town IJburg Igor Roovers – who was also involved in Bijlmermeer for several years - draws an even harsher conclusion: *"We never learn any lessons, we should, but we do not take enough time to reflect"*. In an interview (Soomeren et al, 2014) Igor Roovers indicates that it would be an advantage if all people in charge of such large projects were interviewed to evaluate and publish their findings. Although during the interview Igor Roovers clearly showed that he – as well as other designers and planners – had learned of earlier experiences (like Bijlmermeer), these learning experiences seem to stay rather implicitly with only one designer or one planner. So it is individual learning and not collective learning. There is no structural collective ex-post evaluation experience laid down for future projects and future generations. In that respect planners, designers and architects are still artist delivering huge pieces of art in which several thousands of people have to live. After having designed and delivered one piece of art – a neighbourhood or even a new Chinese city – they 'job-hop' to a new revolutionary artistic high light leaving their designs to the residents and urban managers. There is no structural learning cycle which ploughs back the knowledge and experiences from residents, users and urban managers to planners and designers.



PDDE-structural learning cycle

It would be too simple to blame only urban planners and designers from this. It would also be too simple to blame urban managers for this. What is lacking is the will, the structure and the methods to structurally evaluate and learn from experience. We might blame politicians for this serious defect. On the other hand: politicians are in charge only for 5 to 10 years at most. An important democratic rule of thumb we have learned the hard way experiencing dictatorship. The circle from planning, design to management and really building practical experience by 'living (in) the plan and design' overarches any democratic live cycle of a politician. A glitch in the system?

Indeed, it seems that residents, users and urban managers have to learn by themselves.

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The text of this article is based on two case studies:

- Inés Aquilué Junyent and Guenter Stummvoll: Bellvitge: Unexpected Success Against all Odds (COST-action TU 1203 case study)
- Paul van Soomeren, Willemijn van de Klundert and Justin de Kleuver: High-rise in trouble; Dream, nightmare and awakening: the case of Bijlmermeer in Amsterdam (COST-action TU 1203 case study).

Check for the research on Bijlmermeer and the research on Bellvitge:

http://costtu1203.eu/downloads/cost-tu1203s-results/

Note vi https://www.government.nl/topics/drugs/contents/how-does-the-law-distinguish-between-soft-and-hard-drugs Note vii CPTED: Crime Prevention through Environmental Design. Although also measure in the social domain and the domain of management were taken most of the measures are of a rather simple physical first generation CPTED approach **Note viii** Eerste saneringsaanvraag (1991) en Tweede saneringsaanvraag (1995) Woningbouwcorporatie Nieuw Amsterdam/Centraal Fonds voor de Volkshuisvesting

Note ix As can be seen in the Bijlmermonitor and as was presented to the local government in 2011: <u>http://www.veilig-ontwerp-beheer.nl/activiteiten/nederland/SVOBbijlmerjuni2011Compatibiliteitsmodus.pdf</u> (slide18)

Note i See Habraken, 2000. Habraken is an emeritus professor at MIT; he gave a lecture at the annual ICA conference in Amsterdam 2003 (International CPTED Association); this lecture was never published but the quote is taken from the related interview with Habraken: http://www.veilig-ontwerp-beheer.nl/publicaties/security-and-the-built-

environment/view?searchterm=habraken

Note ii The car owners routing in Bijlmermeer: drive from +1 level road (cars only) to parking garage building, walk through public covered corridor to a lift, go up and walk to your apartment.

Note iii In the Netherlands housing associations (run by managers and paid by the state) let dwellings to tenants. This Bellvitge Housing association represents the collective of owners of the privately owned flats.

Note iv Housing Association of Bellvitge had its own facsimile, published during the 70s, whose authors were *Luchadores Anticapitalistas de Bellvitge*. The publications title was *Bellvitge en lucha informa...* (Bellvitge in fight informs...).

Note v All demographic data could be found in the statistical year-books of l'Hospitalet del Llobregat. See: http://www.l-h.cat/laciutat/265286_1.aspx?id=1