Courtyard Housing Study

Djingis Khan and The Kingo Houses
Courtyard Housing: An Introduction

The courtyard housing typology has been in existence for almost as long as humans have been constructing their own dwellings. Examples of early courtyard houses have been traced back as far as 3000 b.c. In Iran and China. Societies from all over the world have held a deep rooted connection with this housing style for thousands of years. If you are willing to strip Architecture to its very core its rudimentary purpose is revealed, to provide shelter. This is a vital and necessary human need. In order to survive our species requires respite from the cold winter winds, wet spring months, and the long hot summer days. Architecture has nobly served this purpose for generations.

The desire to shelter ourselves from the uncaring natural forces of our environment is balanced with an undeniable need to connect with nature. Humans want to be safe from natures unpleasantness, but also delight in its beauty. Courtyard housing is our attempt to bridge this gap, pulling our houses out into nature to create outdoor rooms that both protect and expose. It is the purpose of this essay to explore a courtyard housing project in Lund, Sweden and compare it to a famous development from Helsingor, Denmark. I hope to reflect on the similarities and differences between these two approaches and illuminate the interesting contradiction and harmony.

Discussion Outline

The two areas of study in this paper are: Djingis Khan Community in Lund, Sweden and Jorn Utzon’s well known Kingo Housing from Helsingor, Denmark.

In both developments the housing structures were built with the intent to provide affordable housing, the Kingo Houses for low income workers and Djingis Khan for students. For this reason both examples provide an interesting comparison. Built projects are almost always influenced by the budgetary limitations of the developer. The strong focus on affordable units is a strong base point for a comparison. In order to better understand the differences and similarities between the two projects they will be analyzed along consistent categories: Response to Climate and Context, Division of Space, Difference and Repetition, and Social Consequences.
Djingis Khan Housing Introduction

The Djingis Khan neighbourhood is a residential development located within Östra Torn in Eastern Lund. The area was originally constructed in 1971-72 by AF Bostäder, a corporation that provides housing for students. Over time more student housing was developed in Lund and the number of students seeking residence in Djingis Khan dropped. At this point the houses were converted to tenant housing and put under the control of HSB (kooperativ bostadsrörelse i Sverige) which rented the units to non-students and families. This demographic is what composes the community to this day\(^2\).

The neighbourhood consists of 316 units that vary in room number (from 3-6 rooms) and size (from 80-125 M\(^2\))\(^2\). The configuration of the housing blocks is composed of 16 houses sharing a communal courtyard. There are 20 courtyards in total, facilitating all 316 houses. The houses were constructed using prefabricated modules, allowing the construction to happen at a very fast pace. The development is known for is repetitive structure and yellow painted wood panelling that gives the area a very distinct aesthetic.
Kingo Housing Introduction

Jorn Utzon was a Pritzker Prize winning Danish Architect, must known for the his design of the world famous Sydney Opera House in Australia. A few years before he won the Opera House competition Utzon became interested in the possibilities that courtyard housing offered. He pursued projects along this theme, but was unable to fully explore the idea until the Kingo Housing project in Helsingor, Denmark.

The project was launched when, in 1956, Utzon approached the Mayor of Helsingor and presented him with a proposal. The plan was to build low income courtyard housing at the same cost as existing, poorly done housing developments. After being persuaded by the enthusiastic Danish architect the Mayor provided Utzon with a nine acre tract of land in the Western edge of the city, behind the Montebello Observatory.

In his design Utzon took inspiration from the large chimneys and sloping roofs of traditional Danish farmhouses as well as the courtyard principles he extracted from Chinese and Islamic cultures. Utzon considered nature to be a vital component of the design process and was quoted as saying “If it grows naturally, the architecture will look after itself.” For Utzon, nature and architecture were inseparable.

The Kingo Houses provide an excellent illustration of this thinking. Each of the 63 L shaped buildings respond to their hilly site in a different way in an attempt to provide shelter from wind and maximize solar gains. Due to the success of the project it was quickly adopted as an effective and responsible model for subsidized housing throughout Europe.
Response to Climate and Context

It can be expected that when the construction of a housing development occurs, the context in which it is being placed plays a role in shaping the form and function of the scheme. Often factors such as proximity to public transit, climate patterns, topography, natural conservation and the demographics or expected residents are taken into consideration early in the design process. The surrounding conditions in both projects clearly had an impact in shaping the communities, and of course different contexts results in different outcomes.

Djingis Khan is situated in what is now considered the North East outskirts of Lund. At the time of its construction in the 1970s the community would have been much more isolated. Most of the surrounding housing did not exist and the strongest connection to the rest of Lund was the wide and unattractive Neversvägen which lies just to the North. Despite having considerable tree cover to the South of the site, this new housing development is at the mercy of Lund’s notoriously strong winds that roll down the Northern elevated fields and come right through the development. With these factors in mind it becomes clear that the “inward” nature of the housing configuration is a conscious effort to shield the residents from the persistent Skåne wind and the close passing vehicle traffic. Each cluster of housing provides the residents with a quiet, protected space in which to sit, meet, or play in any weather (with an umbrella if it’s raining).

The distance from the city centre and the prevalence of automobile infrastructure around the site makes owning a car a preference in the neighbourhood (despite a bus stop just to the North). The clustering of units would make it very difficult to provide parking for each house, the solution was found by provide communal parking lots, much in the spirit of the community centred nature of the entire project. Although the houses are clustered together to protect from the wind a potential issue arises, that of solar access. To gain sunlight in the internal courtyards the houses were kept to two stories, allowing sun to reach in over roofs. The square internal courtyards are placed at a slight angle, allowing the sun to reach into the corners for more hours of the day. The orientation of the clusters is North/South which allows even the tight spaces between the clusters to get at least some light during the long winter months.

Despite the difficult weather considerations and surrounding infrastructure Djingis Khan was developed on a fairly flat piece of land, the Kingo Houses faced a different challenge. The nine acres that compose the site in Helsingor is hilly and surrounds a large pond in the middle. In a similar approach Utzon placed the houses on this landscape in a way that each building responded to its situation. He described this
approach as “like flowers on the branch of cherry tree, each turning toward the sun.”
http://architecture.about.com/library/blutzon-kingohousing.htm When laying out the Kingo Houses Utzon took great care to ensure that sunlight could penetrate each house, relying on Turkish custom of placing the houses at differing positions to protect solar access. Without the tight clustering seen in Djingis Khan, Utzon provided each house with a walled courtyard that gave each homeowner a comfortable space to sit outside without being exposed too much of an undesirable climate while still maintaining access to the sun.
Division of Space

For the purpose of this analysis the division of space will be broken down into three categories: public, semi-public and private. How these three spaces transition into each other is an important aspect of how a built space will function. The Djingis Khan and Kingo Houses are both housing developments without a true public function, therefore it is natural to assume the emphasis will be on the development of strong private and semi-public spaces. Even within the categories of private and semi-public small differences in the size provided and in what form they take can alter the community’s perception and use of the space.

The Djingis Khan community demonstrates a strong commitment to the semi-public realm. The defining feature of the development is the centralized core of internal courtyards. Each courtyard is shared between 16 houses, each unit with direct and unquestioned access to the space. In order for the community to function in an effective way the courtyards are free for residents to use. In order ensure that the semi-public courtyard still retains its comfortable and community oriented atmosphere, the North and South entrances are gated and pushed back from the public pathways by bicycle parking.

The houses lining the courtyard create a feeling of ownership over the space, making unwelcome guests feel uneasy and residents feel safe. When exploring the courtyards I felt the need to ask permission to walk around or take pictures, the demarcation between the courtyards and the pathways that surround it are sharp and noticeable. It becomes apparent that this division is an important aspect pertaining to the courtyards success, the residents of Djingis Khan can share their space with the neighbours without having to lose all sense of ownership.

Each house in the cluster has a “courtyard side” and a “back side”. The back side of the houses function quite differently. Here residents are provided a small piece of land where they can do as they wish. Many residents have built decks, patios or small conservatories that function as their back garden, and a more private and intimate outdoor transition space.
The Kingo Houses design places less emphasis on shared communal space and more on private courtyards. Each L-Shaped house features a high sheltering wall that prevents the wind and unwelcome glances from making their way into the courtyard. This wall functions to create an outside room that is clearly intended for the use of the homeowner. The placement of the homes along contour lines in combination with varying heights of the enclosing courtyard walls creates a isolated private space where the homeowners can enjoy their breakfast in the sun, or some evening drinks with friends. The semi-public sphere of the Kingo Houses is composed of subtle pathways cutting through the landscape and around the central pond. This approach fits with Utzon’s desire to make as light as touch as possible on the landscape.

Leaving the area around the pond as semi-public space allows the residents to share in the natural amenity that water provides. Whatever the season it is always an attractive option to take a walk around a natural body of water, in Utzon’s plan this right is protected by the natural buffer between the houses.
Djingis Khan and The Kingo Houses share a common goal, to provide quality housing at a reasonable price. Each project undertook a different path to reach this goal and finished with varied outcomes. One challenge that has faced designers of low income, mass housing projects is how to overcome the issue of repetition. Large housing developments all around the world are plagued with boring and monotonous environments as a result of “copy and pasted” building structures. The interesting thing about both of these projects is that they didn’t stray far from this model. Both embraced a single building typology and manoeuvred them around the site. Despite this approach it is my assertion that each of the housing projects has cultivated a sense of difference within their systematic repetition.

When glancing at the plans for the Djingis Khan community it is easy to assume that the repetitive layout would be quite boring to navigate on foot. A walk around the site quickly dispels this assumption. In the previous section the importance of the semi-public courtyards was discussed.

The evolution of these courtyards over time is a fascinating aspect of community. Each courtyard is “owned” by a different group of 16 home owners, it’s only natural that the people who live in these clusters will choose different ways to celebrate and use the area. Although each of the courtyards share very similar pieces of public furniture such as play equipment, benches, lunch tables, sand pits, bicycle racks and flower gardens there, is no sense of monotony when exploring them.
The most obvious reason for this is the overpowering sense of life that each courtyard holds. Stroll by any of the 16 courtyards and you can quickly get a window into the lives of the residents that surround it. A child’s toys lays upside down in the sand pit, an idle baby stroller rests against the wall and white Christmas lights wrap from tree to tree. It is evident even in the cool days of February that the residents of Djingis Khan embrace the courtyards make them their own at any chance they get.

The second element of diversity that is noticeable in the Djingis Khan neighbourhood is the “back side” of the housing clusters. As I mentioned in the previous section the back side of the housing clusters is used by the residents as their own private back garden. Over the years it is evident that the individual owners have constructed additions to their houses in order to satisfy their space requirements. Some houses, where the back garden is met by the afternoon sun, choose to make wooden decks where they place a few chairs and a table. Others less fortunate residents who are provided with less sunlight opt to build a new room onto the house, it could take the form of a solarium or a sheltered porch. If you are to take a walk in between two clusters, where the space between back gardens isn’t very wide, perhaps 5 metres at its narrowest, you can see the planted vegetable and flower gardens of the residents. The gardens and trees hide the narrow informal path that cuts through, discouraging passersby to take a shortcut through the more private areas of the community.

The Kingo Houses are composed of 63 identical L-Shaped structures that compose around the central pond. Unlike in Djingis Khan, Utzon relied heavily on the natural contours of the land to place his buildings. As a result the repetitive nature of the buildings is lost on the ground due to the varied angling of the structures. By taking this approach Utzon was able to provide each of the identical houses with unique contextual identity. Two community members may live in identical houses but how and when they use their private courtyards will vary depending on the intricacies of the houses placement. Utzon was able to use a natural justification to provide each household with its own identity, providing ecological and personal value to the inhabitants.
Social Consequences

Pleasant and desirable neighbourhoods are often defined by an important intangible quality, strong social connections. A community that has close ties, communicates well and shares in each others day to day lives can be an incredibly powerful thing. Creating a strong and functioning community is always a goal of the developer, but achieving it can be very difficult in practice. There is no doubt that the environments in which we spend our lives shape how we interact with other people. Two neighbours with side by side gardens with no fence will interact very differently than two neighbours with a 6 foot fence, these seemingly minute details can shape how a community connects and interacts on the bigger scale.

On the discussion of social life in Djingis Khan the conversation again moves to the internal courtyards. When walking around the neighbourhood it was quite common to see mothers and children socializing in the sun. The structure of the clusters means that each homeowner is forced to share a space with 15 other people, these are people that you would see on a day to day basis, as you go out to do some shopping, or sit on the bench with a coffee, the bonds of community are almost surely to form. I believe that when a group of people take responsibility over a space, whether it is a courtyard, a garden or sports field, important social connections are made that go beyond simply maintaining an area. These deeper connections are what make a community special, it pushes people to take pride in their houses and the spaces in between.

An excellent example of this process in action was in the early days of Djingis Kahn. When the development was first constructed the postal service refused to deliver letters to the individual houses, opting instead to drop all the mail at one end of the community. Unsatisfied with this solution the residents decided to all chip in a small amount of money per household to hire their own personal mail man. The mail man would sort and deliver the mail to the doorstep of each resident.
This self-organized mail service ran effectively for one year until the official post service gave in and extended service to the doorstep. On the last day of the postman’s route, the community gathered a marching band to follow him around, celebrating his efforts in a friendly and pleasant way. This is perhaps a small example, but I think it demonstrates something much more important, the power of a group of people to overcome problems together and in doing so creating relationships and friendships that last years.

As I have mentioned in previous sections, Utzon’s design of the Kingo Houses placed a strong emphasis on the right of each individual to have and protect their own private space, a quality lacking in many low-income housing projects. The houses function extremely well in this regard.

The question that can be raised is how well does the project function in terms of social cohesion? Most, if not all, of the social mingling in the neighborhood would occur in the communal land surrounding the pond. This is the place where families and friends would meet each other on sunny days while enjoying the pleasant landscape. One of the major strengths of the Kingo design is how the landscape is brought to the very threshold of the houses. In almost any weather, a beautiful landscape will be embraced and utilized by people, Utzon encourages them to enjoy the natural and spend time with each other while doing it.
In conclusion, I think that the Djingis Khan and Kingo Houses provide extremely valuable insight into the practice of housing design in the courtyard context. The motivation for both projects came from a similar place, to help house people in an affordable but effective way. To achieve the desired the results the two projects took different routes and ended with very different places to live. Djingis Khan with its quick, modular construction ended up transforming into an attractive and strong community. Its cozy courtyards and yellow clad housing quickly enchants a passerby. The Kingo Houses demonstrate a very early example of environmental consideration in housing design, taking great care to provide people with a fantastic place to live while also minimizing the footprint on the landscape. The way that Utzon was able to fuse the natural landscape with the built environment in an affordable way is a considerable achievement, it is no surprise his approach was embraced by so many others after the fact.

After studying these two diverse and compelling projects I find myself reflecting on some important aspects of housing design.

Firstly, the need to work in harmony with the natural landscape, to embrace what it provides and protect against its less desirable features. The Kingo Houses with their shielding walls and contoured layout and the Djingis Khan wind protected clusters are both excellent examples of this principle. Secondly, how vital the three spheres of public space are in determining the perception and usability of a project are. The Kingo Houses are able to provide 63 homeowners with their own comfortable private space while also introducing nature almost directly into their houses. The Djingis Khan community rallies around 16 internal courtyards to form a strong and resilient community that anyone would love to be a part of.

Thirdly, mass produced housing doesn’t have to be monotonous and boring. With a sharp idea and simple application small variations in a project can lead to a fantastic amount of diversity that gives a neighbourhood depth and variety, two traits that will pay dividends for the residents and developers for years to come.

Lastly, how important it is to lay the foundation for a strong community. The Kingo Houses are built around an attractive natural landscape in which social cohesion can occur, bonding the residents through a shared celebration of its natural beauty. The Djingis Khan development hands over a small courtyard to 16 households and expects them to maintain and share the space. Not only does it work, but it pushes people further into a strong social bonds that form a truly resilient and interesting community.
Bibliography