

Urban Space in the Post-industrial Era

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Introduction

The object of this report is to present some traits that have characterised the transformation of urban space in Western Europe since the turn to a post-industrial society by the end of the 20th century. I start however with a short description of how the use of urban space has been illustrated in models representing preindustrial and industrial times respectively.

Urban spatial models

Classical spatial models often illustrate the use of urban space by circles, zones and other geometrical figures. Gideon Sjoberg (1960) for example argued that in preindustrial cities, rich people lived with their servants in the city core, close to the main official buildings and the squares. People with fewer resources could not afford such expensive housing and had to settle down in more remote quarters. Handicraft production could as well have a more peripheral location because of the risk of fire and bad smelling. Merchants with their shops dominated in the central area. (Figure 1)

In industrial cities, on the other hand, the socio-geographical pattern was according to the Chicago School the opposite. (Burgess 1925) Thus, the better off inhabitants had their homes in villas in the outskirts of the city, and the poorest people lived close to the city centre. In the middle of the model, the city centre, we found the central business district (CBD) including shops of all kinds, restaurants, cafés, and offices, banks, theatres, and cinemas etcetera. In the next circle just outside the CBD followed an area reserved for manufacturing and wholesaling. Successively, new circles meant for housing were added. The social status of the inhabitants was supposed to increase with growing distance from city centre. Finally, the city was surrounded by a commuter zone. (Figure 2)

These two classical models have over the years been elaborated and modified in various ways. Cities not only grew in circles but also in sectors and segments often following transport routes for example public transport lines, main roads, metro stations, and railway lines. Each such zone has its own characteristics. Circles can be crossed by industrial areas, and activities that need a lot of space are normally found in the outskirts. Public hospitals, main post offices, and all kind of public administration offices can make up their own distinct zone often found in central or semi-central sites.

The most complex spatial patterns develop in metropolitan areas made up of several suburban municipalities besides the main city. The urban area is thus far wider than the city's administrative boundaries. Each of these suburban municipalities has its own community centre with shops, restaurants and various service facilities surrounded by housing districts. In principle, it is the same geographical pattern in the community centres as in the city centre but on a lower scale. An urban model of that kind is illustrated in figure 3.

Upper and lower classes can live quite close to the city centre but always clearly separated from each other. That has been the case in Stockholm for example (Map 1). The South side, Södermalm, housed previously the working class and a special working class culture evolved there. The flats were generally small and overcrowded. The upper classes lived with their servants in spacious apartments on the North-East side of Stockholm, Östermalm. Generally, the North side had a higher social status than the South even if it was a mix of classes. Likewise, in the periphery we can find exclusive housing areas as well as zones with lower class settlements, sometimes called "problem areas".

The same kind of social division, but with an east-west distinction, can be seen in Helsinki and Oslo. Rich people preferred in those cities to settle down in the west, and the working classes mainly had their homes in the east. (Turpeinen et. al. 2002, p. 112-117, Öidne 1973)

The switch to post-industrialism

The discussion has up to now mainly been concentrated on industrial cities. Anyhow, my concern is how the use of urban space has changed in Western Europe as a consequence of the switch to a post-industrial society. This process started during the second half of the 20th century. Some of its features are deindustrialisation, increasing globalisation, new communication technologies such as mobile phones, Internet and the so called social media. Another important aspect is growing cleavages between cities as well as within cities.

In Europe, urban growth has since the rise of the post-industrial society by the last decades of the 20th century been mainly concentrated to metropolitan areas and other large agglomerations. The majority of cities and towns have at the same time been shrinking. These new trends of urban development can be observed all over Europe. Urban growth centres have in Western Europe over the years shifted from the south to the north. In the 1950s and 1960s agglomerations in Spain and Italy were noticed for the quickest expansion. From the 1990s Scandinavia and Finland has taken over that role. Thus, Stockholm and Helsinki have since then been at the top of the urban growth league. But even some British and Dutch agglomerations have prospered together with cities in the northeast of Germany. Shrinking agglomerations have been concentrated to the south of Western Europe, but foremost to Eastern Europe. (Nilsson 2011a, 2015)

The post-industrial spatial development will here be illustrated by two Swedish examples, one from an expanding metropolis and another from a declining city. Stockholm, the Swedish

capital city, is my first case and it represents the prospering agglomerations of Northern Europe. Besides, I will demonstrate how spatial issues have been handled with in the shrinking city of Avesta.

Stockholm – an expansive metropolis

The post-industrial growth of Stockholm started by the end of the 1970s, and was preceded by decades of stagnation and population decline. But suddenly the former anti-urbanism from the 1960s turned into a renaissance for the city and especially for the inner city. The number of inhabitants rose from 650,000 in 1980 to 750,000 at the turn of the century, and further on to almost 850,000 in 2010. These figures are for the administrative city of Stockholm. The urban region, or metropolitan area, housed 1.3 million in the 1970s and over 1.8 million people in 2010. Growth was much stronger in the inner city than in the outskirts. The most attractive area was the South side (Södermalm) with a population rise from 75,000 inhabitants in 1980 to over 100,000 in year 2000. (Nilsson 2002, Statistical Yearbook of Stockholm)

A growing preference for living in the inner city is one factor behind this development. Deindustrialisation and new ideas of urban planning have as well been essential. When old factories closed down or moved away from central sites, the space could be used for other purposes, like housing. In urban planning there was a return to high-rise buildings in a dense and compact form. Previously, Stockholm had expanded in the outskirts, by adding new layers of rather small-scale housing to the already existing. The new planning strategy, called New Urbanism, gave priority to inward expansion, not outward as before.

Besides, Stockholm went through a process of gentrification which was not least visible at the South Side (Södermalm). This former working-class district was taken over by middle-class and upper-class people often representing media and culture. Other parts of Stockholm had the same kind of changes as well. (Lilja 2011) Gentrification was speeded up by political decisions and a new housing policy. When the city council in the early 1970s decided to abolish the rental regulations and started to sell out municipally owned apartments a new housing market was opened. The demand was high and prices rose quickly. New groups of wealthy people moved in and took over the old working class quarters.

The city authorities of Stockholm had to cope with all strains that follow as a consequence of strong expansion, such as housing shortage, the need for investments in new and enlarged infrastructure, more space for dynamic industries, and the marketing of the city as an attractive site. Several housing projects have been realised on the South Side to meet the high demand for living in that area. The most well-known neighbourhoods are the South Station District (Södra stationsområdet), the Hammarby Water Front Area (Hammarby sjöstad), and the Northern Hammarby Harbour (Norra Hammarbyhamnen). (Map 1, 2)

The South Station was originally a railway station for passenger traffic. In the 1970s, however, the area was rather unpleasant and mainly used as a shunting area for goods trains.

The open tracks occupied a substantial part of valuable land that was attractive for other purposes. After years of discussion the city council finally decided to build a new station and a deck over the tracks. An area plan was approved in 1984. It allowed the erection of 3,000 flats in 6 to 8-storey buildings surrounded by open spaces and greenery. The neighbourhood was linked to the square Medborgarplatsen with its market hall, shops, restaurants, cafés, and cinemas. (Andersson 1998)

The Hammarby Waterfront Area was previously a harbour and small-scale manufacturing area. In the 1990s it was transformed to a highly attractive neighbourhood close to the edge of the quay. A tramway line connects the area with the metro system. It is also possible to take a ferry line to central Stockholm, and if you come by car a motorway give you quick access. (Andersson 1998)

Northern Hammarby Harbour is as well a former harbour and industrial area that has been regenerated to a popular neighbourhood. In a similar way old industrial districts in the outskirts of Stockholm have been restructured to attractive residential areas. Other measures to get more housing in the central city have been to rebuild parking houses to apartments, and add an attic storey to already existing dwelling-houses. (Wolodarski 2003)

Together with the gentrification process these new housing districts have totally changed the social composition of the inhabitants. The old working-class district of the South Side was up to the 1960s one of the most social segregated parts of Stockholm. Nowadays, the South Side has the same social distribution of its inhabitants as Stockholm in average. In that respect there is no social segregation at all. Anyhow, most housing areas in Stockholm were more segregated in 2010 than at the end of industrial era. The rise of the post-industrial city has thus meant increasing social cleavages. This process has been further reinforced by the changed housing policies, such as the abolition of rental regulations and selling out of public property but also a new view on housing. (Nilsson 2014)

The Swedish welfare social housing programme formulated in the 1940s was over-given in the 1990s. Housing was not any longer perceived mainly as a public utility, but as a source of tax revenues. Public support for housing was therefore reduced at the same time as housing taxes increased. Consequently, the cost for living rose which theoretically should be financed by reduced personal income taxes. Tenement houses were most exposed for the increasing costs, which resulted in higher rents and reduced demand. The tenants who should pay the increasing rents got only a small share of the reduced income taxes, and their economic situation became therefore worse.

Many of the new post-industrial working places have been very flexible in their choice of location, and they do not need so much space as many of the old industrial firms did. The new post-industrial firms can therefore localise to settings there people want to live, i.e. centrally in large agglomerations. Some firms have no employees at all, it is just the owner. The demand for office space is therefore rather low. You can for example have your working-

place at home or wherever you are. Others share office space with colleagues. Small firms in post-industrial dynamic branches are well represented in the inner city. For people engaged by larger firms working on distance has been more frequent. The new communication technologies, including computers, mobile phones and internet connections, have made these new patterns possible.

At the same time there is a tendency that space-consuming activities move away to more peripheral sites. Large shopping malls have for example been built on several places outside central Stockholm. Together they can serve a population much larger than that of the entire metropolitan area. Such external shopping centres can be combined with new sports arenas, which has recently been the case in for example Stockholm and Malmö. Even office buildings can be found nearby. In Stockholm big banking companies have for example moved their head offices to more peripheral locations.

The construction of new sports arenas has probably been accelerated by new claims to get permission for organising international championships and world cups, and even for national top games. Arenas can also be used for pop concerts and various kinds of entertainments. Music, sports and entertainments have as well as culture in general turned out to be important growth factors in the post-industrial economy.

New sports arenas as well as new opera houses and other cultural buildings have also become important ingredients for the marketing of the post-industrial city. Their role for branding and as trademarks can be further underlined by spectacular architecture. Congress centres, hotels, office building and residential houses can as well attract attention through an unusual architectural style. One recent example from central Stockholm is Stockholm Waterfront Congress Centre which combines conference facilities with hotel and offices. Sports arenas have often got more peripheral and semi-central locations, for example Friends Arena, Tele2 Arena and previously the Globe. The Tele2 Arena and the Globe are located in the same neighbourhood together with some other stadiums, which is the former slaughterhouse area, and nowadays constitute an arena district.

Post-industrialism has thus been characterised by an inner city revival and migration streams to central quarters. The same tendency of densification of housing and shopping can also be observed around community centres in the suburban municipalities around Stockholm. Parallel to this trend shops and other facilities have been set up in more remote sites. Zones reserved for manufacturing and wholesaling has moved still further away from city centres.

The densification processes and inner city revival have been followed by an increasing interest for by-cycling and measures to reduce the number of motor cars in the city centre. Town planning measures have been directed to favour pedestrians and cyclists on behalf of cars. Trams have at the same time got a renaissance and more resources have been allocated to public transport in general. If industrialism was a period for motor cars supported by town

planning, post-industrialism can perhaps be the time for by-cycling, at least for shorter distances in the cities.

In industrial times people commuted from their suburban homes to the city centre for working, shopping, and amusements. Today we can also identify a reverse trend. People living in the city centre can commute to the outskirts for shopping and perhaps even working. But of course commuting to the city centre is still very frequent.

Social segregation has increased during post-industrialism. Middle and upper classes have taken over the inner city. Besides, there is a tendency to branch specialisation. Thus, the South Side (Södermalm) has a high percentage of people representing culture and media, while those employed in banking and finance are frequent on the East Side (Östermalm). There are also political differences. The Conservative party have since long ago dominated in the east, whereas the Green party currently got relatively many votes in the south. Consequently, incomes are generally higher on the East Side than on the South Side. (Nilsson 2008, Nilsson 2014, Stockholm Statistical Yearbook)

Social status decreases with increasing distance from the centre. Anyhow, the suburban belt includes fashionable neighbourhoods meant for upper and middle classes. Immigrants have often been concentrated to certain suburbs and have sometimes come to dominate them. Such suburbs are often labelled as “problem areas”.

Avesta – A shrinking city

A majority of Swedish agglomerations and municipalities has however been shrinking since the 1970s and on. (Nilsson 2011b) Many of these declining cities have been dominated by one big company or one single manufacturing branch. Geographically they are often found in Northern Sweden and not least in the province of Bergslagen. Their economy has been based on iron ore or timber industries.

The town of Avesta in Bergslagen was for a long time in most respects strongly dominated by the company Avesta Iron Works owned by the Johnson family. The company’s ups and downs were clearly reflected in the urban development. The city expanded quickly during favourable economic conditions on the international steel market. In depression times, on the other hand, the city stagnated. (Nilsson & Båve)

Avesta Iron Works was established in the late 1860s on the ruins of an old Copper Work from the 17th century. Since then it has been the leading industry in Avesta. The company and the Johnson family owned substantial areas of land both in the city centre and in the surroundings. The spatial development was therefore mainly in private hands and directed by the company’s interests. Of course there were also other firms and industries represented in Avesta, but manufacturing answered still in the 1960s for more than 60 per cent of the local labour market.

Avesta got connection to the national railway system in the early 1870s. The main railway station was, because of geo-technical reasons, located to Krylbo, just outside the then a force administrative border of the city (Map 3). Around the central station a built-up area and a community centre gradually developed, and in 1904 this urban site got its own local authorities. Later on, it got the status of a borough. Krylbo needed soon more land for its further expansion, but the area the local authorities had in mind was owned by Avesta Iron Works. The company kept back the development of Krylbo by not selling the land. In-migrants to Krylbo had therefore to find housing on more distant places.

The expansion of Krylbo took instead place in the north-east direction following a narrow strip of land. Besides, Krylbo grew in the northwest towards Avesta. The spatial form of Krylbo became in that way rather dispersed along the river Dalälven and less dense and compact. Already from the start Krylbo had the character of being a suburb to Avesta and in the 1960s the two urban settings were united into one built-up area, but constituted still different municipalities. Finally, in 1967 Krylbo was annexed by Avesta.

Increasing international competition and falling steel prices in the 1970s caused serious problems for the entire Swedish steel industry, including Avesta Iron Works. To cope with the new situation rationalisations were intensified, production became more specialised, and the number of workers strongly reduced. At the same time cooperation between steel producers became more frequent, both national and international. The Johnson family started to sell out parts of their interest in Avesta Iron Works, and new companies were successively founded. Cooperation between British Steel and Avesta AB resulted for example in the early 1990s in a new company Avesta Sheffield AB. After a series of business transactions, the Finnish company Outokumpu, owned by the Finnish state, became sole owner of Avesta Iron Works. The new owners were not present in Avesta as the Johnson family had been, and did not care for the city's development.

The problems for the steel production at Avesta Iron Works are clearly discernible in the city's population development. The number of inhabitants peaked in 1965. The city and its suburbs housed that year more than 20,000 inhabitants. (Nilsson 2011c) Forty years later the figure was reduced to 15,000, and the decline had been continuously ongoing.

The local authorities of a shrinking city has been facing challenges such as: excess of housing, excess of factory space, loss of tax revenues, and increasing public costs for poverty as well as other social services due to a changed population balance.

Already in the 1960s, the local authorities of Avesta realised that it was necessary to restructure the economy and the inner city as well. The intention was that the city should be more of a regional market place and less of a company town. More space was needed for shopping and for parking. Many of the measures that since then have been initiated are of the same nature as for the expanding metropolitan areas but on a smaller scale. Some examples

are renewal of the inner city to get it more attractive, an external shopping centre along the new main route outside central Avesta, and investments in cultural activities.

Originally Avesta Iron Works was located just north of the central city in an area later called Northern Works (map 3). By the time no more land could be obtained in that area for further expansion of the growing steel production. Therefore the Iron Works moved to a new more peripheral industrial site, called Southern Works, south of Avesta. The Northern Works was taken over by Avesta municipality. In the first stage, the local authorities tried to attract new manufacturing firms and wholesalers to the area. When it failed more or less, the Northern Works was transformed to a cultural centre.

Since 1995, the Northern Works has housed an exhibition of contemporary international art in one of the old industrial buildings, and nearby there is an industrial museum reminding of the old production methods. Together they are labelled “Verket” (The Works). An art academy has as well been set up with the intention to create a national artistic knowledge centre. In the same area we also find an indoor sports arena. The dynamic branches of art, industrial heritage, creative industries, and sports are thus all represented here. The whole area is marketed as “Koppardalen” (the Copper Valley) referring to the old Copper Works from the 17th century. Generally, many of the shrinking towns in Bergslagen have marketed themselves as important sites for cultural heritage. Parallel to that the towns are re-identifying themselves from company sites to something else, often associated with creativity.

A goal for the local authorities of Avesta has been to restore the labour market and get back to the same number of inhabitants as before the crises. Ambitious plans have been formulated and new municipal companies set up in order to market the city as an attractive site for manufacturing, wholesaling, commerce, and services as well. The Johnson family donated money for the erection of public buildings, for town planning, and also for an investment fund for replacing jobs lost when the Iron Works reduced their labour force. The attempts to get substantial State support have, however, often failed.

The result of all these efforts became anyhow relatively meagre when it comes to population figures. It has turned out difficult to attract long-living industrial firms with high employment figures. The number of city inhabitants has, as we noticed above, continued to decline.

Declining population will soon be followed by an excess of housing. The supply of apartments increased rapidly when people moved out and the demand was very low if any at all. Empty apartments start quickly to degenerate, and unsettled neighbourhoods become unattractive and stigmatised. Such problems have existed in the entire city but have been most acute in the district of Krylbo. Many of the tenement houses in Krylbo were built after World War II as part of the Swedish national social housing programme. According to a building law from 1947 special economic advantages were given to non-profit public utility companies and foundations. A substantial proportion of the empty apartments were owned by such public utility firms or municipal foundations.

The new national housing policy from the 1990s had immediate effects on the housing situation in Avesta including Krylbo. Housing was not any longer seen as a public utility essential for the welfare system. Instead, housing was perceived as an important source for tax revenues. As has been discussed above tenants and tenement houses were most exposed for the increasing costs that were caused by the reform. The already low demand for tenement apartments was consequently further reduced. Immigrants and people with low incomes in search for housing could be offered to settle down in such low-quality areas with many empty flats.

The housing situation deteriorated quickly in Krylbo in the 1990s. Repairs and other maintenances became neglected, and the management of the property ignored. In that situation the public utility firm decided to sell out most of the apartments to private entrepreneurs. The new owners sold only after a short period of time the apartments to other private firms. A long series of owner shifts followed. Real estate companies appeared and disappeared. Nobody took real care of the tenement houses. The deterioration continued and was even intensified. Electricity, water and heating were periodically threatened to be switched off, or really switched off, when the house owning companies could not pay the bills. Many apartments were in so bad condition that substantial renovation was necessary, and about half of the flats were still un-hired and empty.

The house owning company was several times accused for mismanagement and forced management by the non-profit utility firm was intermittently decided now and then. Thus, the tenement houses returned for shorter periods of time to the former owner.

Krylbo, that previously was something of an ideal model for a welfare municipality developed from the 1970s and on into an unattractive and neglected district in the outskirts of Avesta. Krylbo can at least partly be described as a “problem area”. More fashionable quarters were found in the central city but also in semi-central and peripheral villa neighbourhoods. Already the construction of the external shopping centre and the new main route outside the city meant a loss of commerce and private services for Krylbo. The shops around the railway station could not survive when competition from the external tradesmen increased. Besides, a new travel centre was built in central Avesta.

An alternative strategy for handling a situation with excess of housing could be to pull down tenement houses with many empty flats and concentrate the tenants in the remaining residential buildings. This will of course mean a loss of capital but on the other hand the local authorities may avoid slum areas and reduce maintenance costs. A demolition must certainly be done in a proper and careful way not to disturb the urban landscape. Otherwise there is an obvious risk for creating big empty spaces between the prevailing buildings and an unpleasant milieu with decreased density and a more sparse settlement.

A shrinking city that has practised demolition of tenement houses is Söderhamn, located at the southern coast line of the Gulf of Bothnia. Söderhamn has been almost of the same population size as Avesta, and previously dependent on timber industries, complemented with an engineering industry and an air wing after the Second World War. Most of these old factories, as well as the air wing, closed down during the last decades of the 20th century. The problems to find replacing industries were as hard as in Avesta. Minor support from the State and the EU had only marginal effects. Population declined and that resulted among else in an excess of housing.

The demolition of tenement houses took place in two former industrial suburbs to Söderhamn, Ljusne and Vallvik. The number of inhabitants was halved in these settings. The expectations of attracting new factories have been given up. Instead attention has been directed towards tourism, museums, producer services, and cultural heritage. These are branches better adapted to a post-industrial society.

At the same time as the city authorities of Söderhamn have pulled down suburban tenement houses there has been an upgrading of the city centre to get a more attractive city. The processes are of the same nature as in Avesta and other shrinking cities.

Conclusions

The built-up urban geographical area from the industrial period has mainly been intact in both Stockholm and Avesta after the switch to post-industrial conditions. Cities have expanded inwards and not outwards. There has been a renaissance for living in the inner city. Old industrial sites and harbour areas have been transformed into housing quarters, museums, creative industries, and various cultural activities as well as small-scale handicraft firms.

The dominating planning ideology has favoured a dense and compact spatial form. Streets and squares have been rebuilt to promote walking, by-cycling and public transport, and prevent the use of motor cars. All empty spaces in central areas have been identified and as far as possible been used for new buildings and increased the density. Besides, there has been a plea for high-rise buildings, skyscrapers. These tendencies can be observed both in expansive metropolitan areas and shrinking cities. Furthermore, suburban communities have gone through similar processes of densification.

Another trend has been to complement central shopping areas with external malls, sometimes combined with sports arenas and office buildings. An impressive architectural style can be used to catch more attention. That is also the case for new buildings in central locations, and for residential houses. Manufacturing, wholesaling and other space-consuming industries have moved to new areas more far away from city centre than before. Once again, trends are in principle the same in expanding and shrinking agglomerations, even if the scale varies considerably.

Social segregation has generally increased in the post-industrial age. Former working-class districts have been gentrified and got a social composition close to the city in average. Immigrants have often been restricted to live with each other in the suburban belt. The social status has decreased with growing distances from the city centre. At the same time exclusive villa quarters and fashionable housing districts can be found on peripheral and semi-central sites. The urban area stands still out as a mosaic of different worlds and activities.

For many shrinking cities the long-term goal has been to restore the economy and return to the former number of inhabitants. The municipalities own political measures have not been enough. Not even State support or EU money has had any visible effect on population numbers. The housing standard of shrinking cities has deteriorated in the outskirts and in the suburbs. The central city has been renovated in order to give the city a new facade, and attract tourists, potential in-migrants, investors and others as well.

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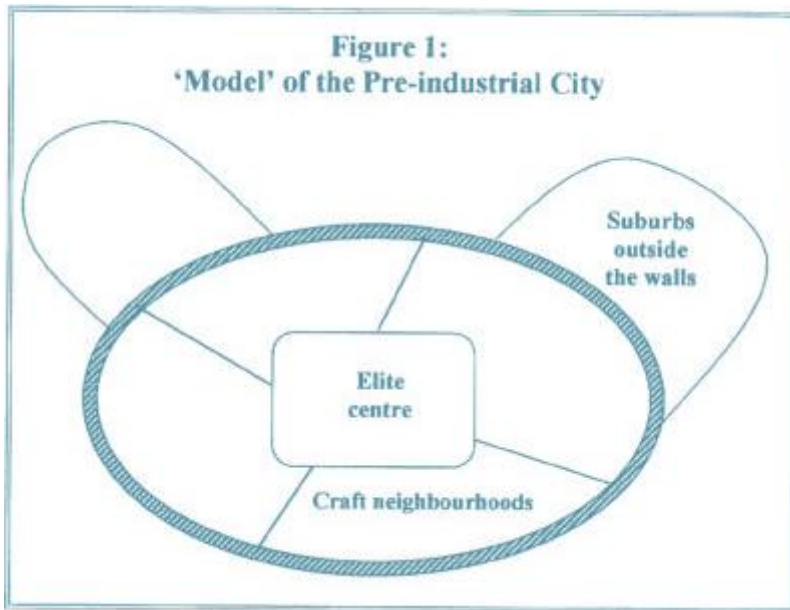
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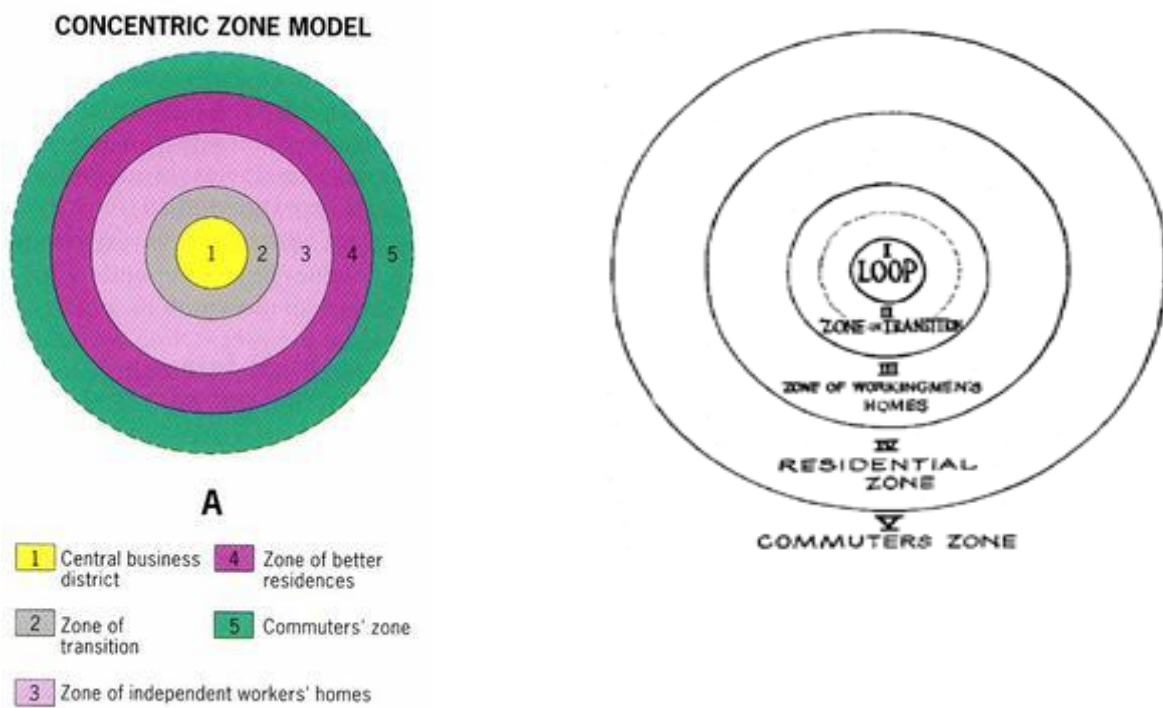
www.sipaphumangeography.wikifoundry.com

Figure 1: Gideon Sjoberg's pre-industrial model



Source: gideonsjoberg.weebly.com

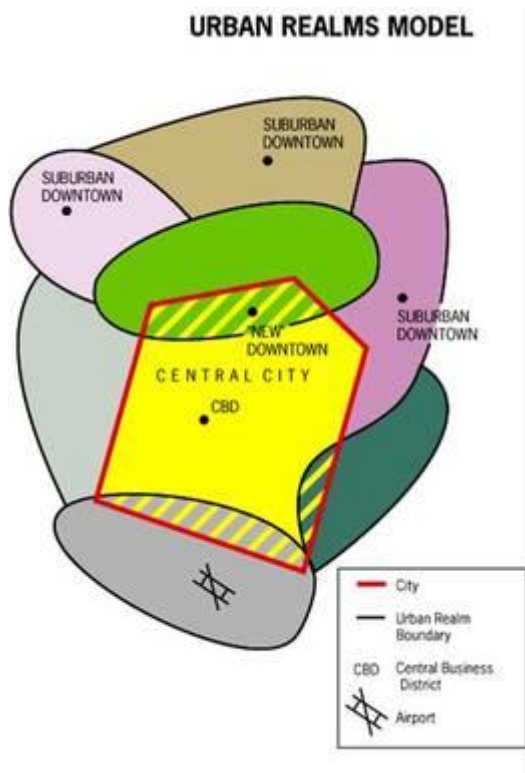
Figure 2: Ernest Burgess Concentric zone model



Source: www.sipaphumangeography.wikifoundry.com

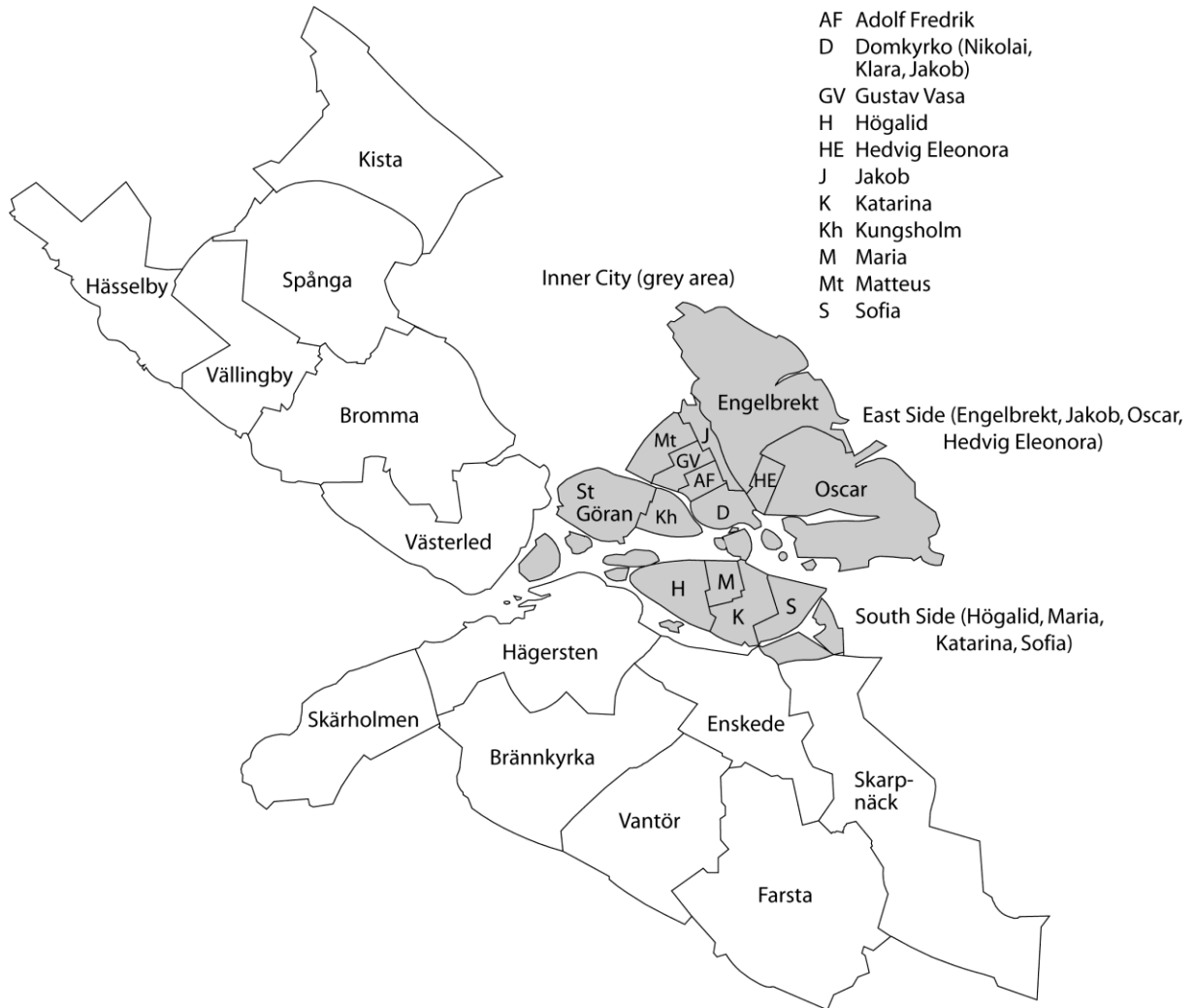
Ernest Burgess 1925, p. 51

Figure 3: Urban realms model

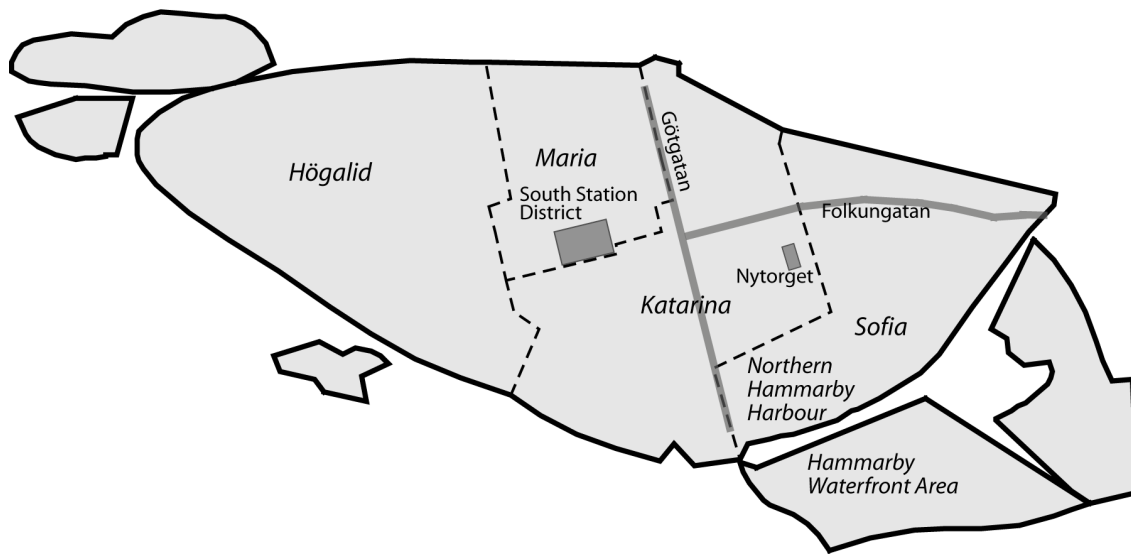


Source: www.sipaphumangeography.wikifoundry.com

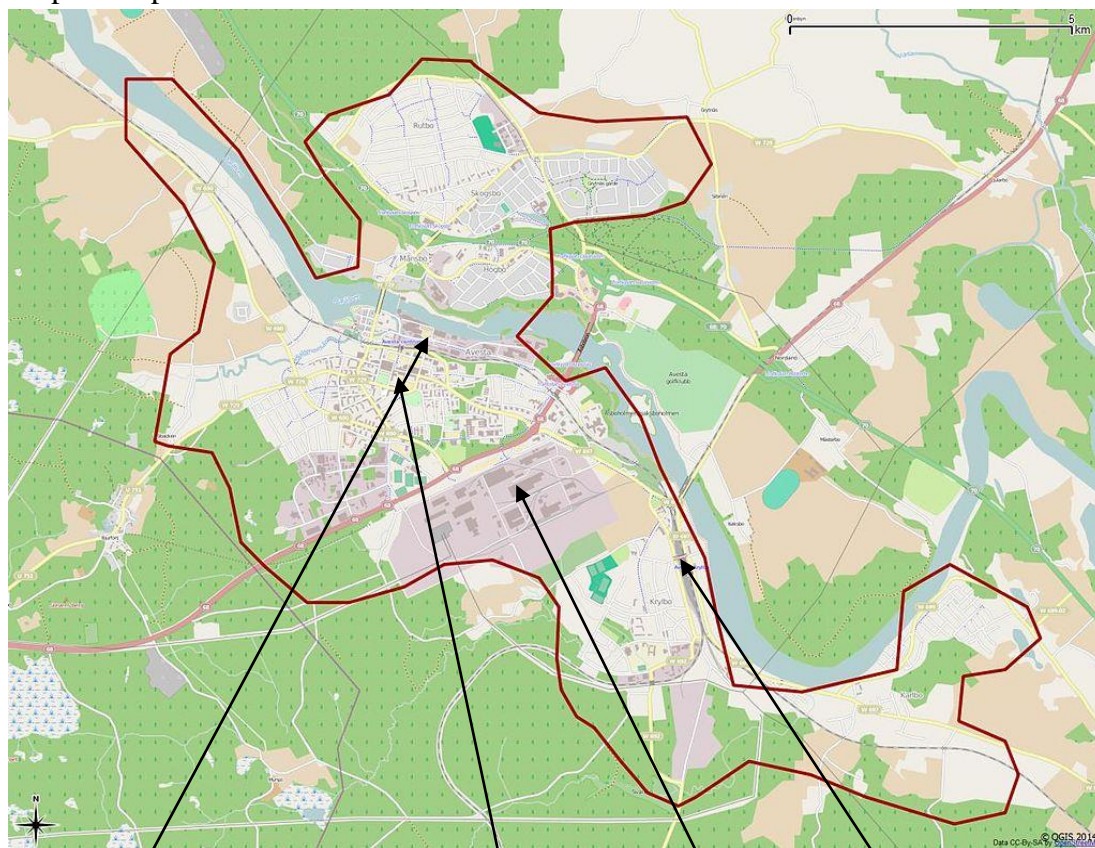
Map 1: Stockholm's Congregations



Map 2: The South Side of Stockholm



Map 3: Map of Avesta



Northern Works (Copper Valley) Central Avesta Southern Works Krylbo

