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City-Building Regimes in Post-War Stockholm[1]

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Anders Gullberg and Arne Kaijser

IN Stockholm, as in most other big or medium-sized cities in the West, the last 150–200 years have brought about a tremendous expansion and transformation of the city region. These revolutionary changes in size, distribution, density, and structural build-up of the region have been neither smooth nor linear processes. On the contrary, the trajectory of this urban morphological transformation passed through distinctive phases.

Johansson

One common way to describe this discontinuous story is to focus on shifts in transport technology. A first stage can be characterized by a fast and concentrated growth, which was propelled by new inter-urban transportation systems—primarily railways and steamboats. These systems dramatically increased the nodal character of large cities. However, there was no parallel development of intra-urban transportation, which led to a concentrated settlement pattern. This stage could thus be called *the walking city*. With the introduction of horse-pulled and especially electric tramways, the boundaries of the old central city could be broken and new settlement areas were built along the new communication arteries. However, it was not only the new transportation systems that were responsible for this development. The new capacity to transmit energy and information in lines and pipes over great distances also contributed to it. We can call this stage *the tramway city*. The flexibility of the car in transporting people and things paved the way for the next phase of city-metamorphoses,

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leading to a sprawling-out of workplaces, as well as settlement in large urban areas. This urban sprawl abolished the sharp contrasts between urban and rural areas. This stage can be called *the automotive city*.

This three-stage, urban macro-history is, of course, a very sketchy and oversimplified one with an obvious flavor of technological determinism. It leaves out all nuances of national and local specificities such as the influences of various planning efforts, of political and organizational arrangements, and of geographical preconditions. The purpose of our article is to contribute to an understanding of urban morphological transformations that incorporates these factors. The reason for our interest in transformations of urban morphology are their fundamental importance for the environmental sustainability of cities; the changes in the form and function of a city region have a major influence on the transportation needs and also on other factors of vital importance for the environment.

One way to enhance this analysis is to take a closer look at two areas of fundamental importance to urban morphological transformations: on the one hand *the landscape of buildings*, defining the sites for different activities, and on the other hand *the landscape of networks* (streets, wires, rails, pipes), constituting the mobility potential of people, goods, and information between different sites both inside and outside the urban region. It is obvious that these two landscapes are closely interrelated and successively modify each other both in their concrete present physical form and in their potential future appearances. This interplay takes place successively on a day-to-day basis as well as by greater leaps. Changes in the behavior of many "small" actors, like households or shopkeepers, can add up to large-scale changes in the built environment in the form of new or rebuilt houses, which in turn force "big" actors to react. But "big" actors can also initiate major changes, for example when they decide to build new infrastructural systems, large housing areas, or new industrial complexes. Such changes typically take the form of projects, that is, undertakings with an identifiable start and a tangible endpoint.

In large and dense cities, immense positive as well as negative external effects are the companions of most large-scale projects, and this in turn results in displacements in existing relations between actors and real-estate markets. Furthermore, there is often considerable interplay between various projects, sometimes in the form of competition and sometimes in the form of mutual support. Such interaction takes place in different

spheres. In the political or administrative sphere, there is mostly a limited capacity to handle projects and plans, and there is thus often a competition among projects for a place on the municipal agenda. However, when one project has been successfully piloted through the administrative labyrinths, this may facilitate similar projects getting through as well. In the financial sphere, available investment funds tend to be scarce, and different projects often compete for the bankers' favor. Likewise, projects aiming for the same plot of land normally compete with and in some cases even exclude each other. However, specific projects can support each other. The building of a shopping center and the production of high-rise apartment houses nearby are one example. Also, the building of new suburbs along a new mass-transport line is an example of reciprocity. It is often difficult to clearly identify the driving force in these kinds of interplay. Sometimes new housing areas clearly stimulate a certain kind of infrastructural expansion, while at other times new infrastructure systems (infrasystems) open up previously "virgin" land for exploitation.

Our point of departure in this article is that the morphological transformations of city regions can only be understood as a result of the interrelated dynamics of the landscape of buildings and the landscape of networks. We will argue that there is a need for new theoretical approaches focusing on the different efforts to govern these landscapes and to make profits on them. We will propose that this can partly be achieved through using concepts and ideas from two traditions in the fields addressed. The first tradition, Urban Regime Theory (URT) is from the field of urban studies. The second tradition, Large Technical Systems (LTS), is from the field of technology studies. We will present an attempt to combine elements from these two traditions, and we have called this approach the City-Building Regime (CBR). It is intended to deal with questions such as: How can we explain that a mess of divergent processes taking place on different levels can result in relatively stable stages in urbanization? And how can we explain the shifts between such stable phases, i.e., the breakdown and reestablishment of stability?

In the following pages, we will first give a brief outline of the two above-mentioned traditions, and then present the basic concepts and ideas of our CBR-approach. Thereafter, we will apply this approach in an analysis of the morphological transformations in Stockholm after World War II. We close the article with a concluding discussion.

Theoretical Approaches

Urban Regime Theory

American scholars developed urban regime theory in the 1980s to study the role of local coalitions for making cities governable. This theory emanated from studies and debates in the 1950s and 1960s about who ruled American cities. In previous studies, the main focus had been on the analysis of power distribution among different interest groups. The pluralist view was that power was dispersed among many interest groups, while the elite view was that local political power was highly stratified.

In contrast to these earlier traditions, urban regime theorists conceive of power as an entity developed in social praxis, i.e., interactions between actors: "The power struggle concerns, not control and resistance, but gaining and fusing a capacity to act—power to, not power over" (6). The methodological message from this position is clear. Power, its exercise and maintenance, has to be examined in case studies where the repeated actions and interactions of local interest groups should be scrutinized. Consequently, the urban regime theory tradition is dominated by case studies, primarily of large cities in the United States. Clarence Stone, one of the leading proponents of this theory, defines an urban regime as "the set of arrangements by which a community is actually governed" *(6)*. In his own study of Atlanta after the Second World War, Stone put special emphasis on the informal partnership between the politicians in City Hall and the downtown business elite. One important mechanism in this relation is the risk-reduction delivered by local government to business enterprises through facilitating the internalization of some external effects. An example of this would be the support given to private developers that allows them to purchase land on such a scale that part of the rent gains on the surrounding land produced by investments in, *inter alia*, commercial centers, can be captured by the investors.

Stone

Stone

Among the lessons to be learned from urban regime theory (URT) is how to analyze informal coalition-building mechanisms in order to understand how regimes are strengthened through repetitious and successful actions. Furthermore, it gives the insight that regime analyses need to focus on the "micro-level," i.e., those actions through which the regime is working and, at the same time, reproduced. There are, however, some weaknesses in the URT approach. The treatment of the relation between processes on the city level and processes on a national level,

Lauria

for example, is unconvincing, and URT proponents have not fully exploited the possibility of building theories based on comparisons of regimes by using case-studies from various times, cities, and countries.

Furthermore, URT has some limitations for our purpose of understanding the morphological transformations of city regions. One of the main starting points in URT is that local government in the United States is weak. From this, the conclusion has been drawn that politicians, businessmen in the command of key local economic activity, and sometimes also representatives of churches, labor unions, etc. have to cooperate to make the city governable. What interests urban regime theorists is how the informal network that makes urban local authority governable is constructed, how it is stabilized, and how it changes over time, whatever concern these actions may have. Thus, the local governance network in itself, irrespective of what it produces, is the object of study in URT. This means that we have to develop a more production-oriented analysis, explicitly focused on the governance of the landscapes of buildings and networks.

In order to do this, fruitful ideas and concepts can also be found within other fields of regime theory. A particularly interesting approach is presented in the book *Governance of the American Economy*. This book presents case studies of changes in the governance of eight American industrial sectors, and based on these cases the editors develop more general findings about what they call governance regimes. These regimes are conceived as specific combinations of coordinating mechanisms to govern actions and processes within an industry. Campbell et al. are particularly interested in the transformations of governance regimes, and they develop an evolutionary model for this purpose. We will borrow some elements of their analysis in our approach.

Campbell et al.

Gullberg

The Large Technical Systems Approach

The LTS approach is our second theoretical point of departure. The origin of this approach is intimately connected with Thomas P. Hughes and his book *Networks of Power: Electrification in Western Society 1880–1930*, which appeared in 1983. The object of study in this approach is the historical development of technical systems, and such systems are regarded as sociotechnical systems. In his study of electric power systems, Hughes emphasized that such systems go through different phases, with varying kinds of critical problems and leading actors or "system builders." In the early stages of system development, the handling of various

Hughes

kinds of uncertainty regarding future markets and technical designs is of critical importance. When the initial uncertainties are overcome, a system often expands rapidly in a direction influenced by certain forces or system goals (in the case of electricity, load factor and economic mix) and the system builders have to handle obstacles to expansion, what Hughes calls reverse salients. In later stages, a system gradually acquires what Hughes has called "momentum," that is, the weight of invested capital and the culture of the people and organizations operating the system, giving the development of a system a certain mass, velocity, and direction. Furthermore, Hughes emphasizes that the development of sociotechnical systems is strongly influenced by local or regional circumstances, including political, cultural, judicial, and geographic factors.

A limitation of the LTS-approach from our point of view is its focus on *one* system. Other systems are taken into account only if they influence the system that is the object of study. Our focus is on the whole landscape of networks in a city region and its interaction with the landscape of buildings. This landscape of networks consists of all urban infrastructural systems (or just "infrasystems") and an important aspect in our approach is the *interaction* among these systems in the form of both competition and cooperation. Furthermore, the *competition for space* is an important object of study for us. Land is a scarce resource in a city region, and a very important aspect of the expansion of infrasystems is that this often strongly affects property values and implies redistribution of wealth among property owners. These differences in the focus of interest show that we are interested in more extensive and heterogeneous sets of actors with very varying forms of interaction and coordination among them.

The City-Building Regime Approach

After this outline and discussion of the URT and LTS approaches, we will now present the basic concepts and ideas of what we call the City-Building Regime approach. By a city-building regime (CBR) we mean the *set of actors* and the *configuration of coordinating mechanisms* among them, which produce the *major changes in the landscapes of buildings and networks* in a specific city region at a given time.

The set of actors playing a prominent role varies over time. (We use the term "actor" in a wide sense, including both organizations and individuals.) These actors can be classified in different ways. One basic distinction is between public and private actors.

Another important distinction regards the geographic base of actors. In the case we will discuss below, there is a major division between actors pertaining to the actual city of Stockholm and those pertaining to the suburban municipalities. Thirdly, actors can be classified according to the kind of functions or roles they fulfill: political decision makers, planners, investors, property owners, infrasystem operators, housing companies, producing companies, commercial companies, trade unions, associations of tenants, and associations of house-owners, etc.

Major changes to the landscapes of cities cannot be achieved by single actors; they need the coordinated efforts of many actors. The three main forms of coordinating mechanisms are usually classified as markets, hierarchies, and networks—or as "the invisible hand" of Adam Smith, "the visible hand" according to Alfred Chandler, and "the handshake" according to Rikard Larsson. Within a city, different kinds of coordinating mechanisms are at work between different actors, and in principle a CBR can be characterized by a certain configuration of dominant actors and dominant forms of coordination among them. An important prerequisite for the design of coordination mechanisms is the institutional legacy of a city, including both the regulatory system (the legal and organizational instruments available for politicians and local authorities) and the "political culture" (the more subtle rules of conduct that have evolved over time).

Thue

Our definition of a city-building regime differs from the definition of an urban regime used within urban regime theory in that it is "production-oriented." A CBR only includes those actors and coordinating mechanisms that produce major changes in the landscapes of buildings and networks. The major purpose of our approach is to try to explain the pattern of these changes, which is characterized by a succession of phases. During some phases, the construction and extension of certain kinds of buildings and infrasystems dominates, while in others, there is a much wider variation of construction activities. Our hypothesis is that the homogenous periods can be explained by the prevalence of a stable CBR, in which a certain set of actors have developed efficient forms for cooperation in certain kinds of projects, which they repeat over and over again. Key questions to address in our approach are thus: What kinds of mechanisms lead to the emergence of such stable CBRs? And what kinds of factors bring about a weakening and dissolution of CBRs?

To explain the establishment of stable CBRs, our point of departure is that particularly the building activities within a city

region can be regarded from an evolutionary perspective as an extended selection process. Out of a very large number of building projects being outlined and proposed, only a small share are seriously considered and then only a fraction of these succeed in interesting a proprietor, receiving the necessary permission, and gaining the financial support to be realized. When a certain project has successfully passed all these stages, the actors involved may try to pursue similar projects again, and if they are successful again, this may lead to further recurrence and finally a standard procedure becoming an important element of a CBR. The ability of proposed building projects to be adapted to existing or planned infrasystems is of decisive importance. Inversely, the establishment of new infrasystems and the geographic extensions of existing ones have to be adapted to existing and planned settlements. In particular, the building of new rail-bound transportation systems (trams, underground, or railways) presupposes a very close coordination of this kind. Thus, to establish a stable CBR, a standard procedure for building projects has to be combined with a specific and tailor-made kind of infrasystem development.

To explain the dissolution of a CBR, our point of departure is that many different kinds of factors can lead to destabilization, and that the undermining becomes stronger if several such factors are at work simultaneously. Destabilizing factors can either be external or internal. Examples of the former kinds of factor are *new technologies* for transportation or building, *new laws or regulations* affecting *inter alia* the right to vote or the forms for public planning, and *geographic conditions* limiting the scope for expansion of settlements and infrasystems. (These factors have their origin on an international, a national, and a local level, respectively) The destabilization of a CBR can also be due to internal factors, such as when key actors within a CBR try to increase their influence at the expense of other actors.

In the next section, we will apply the approach outlined above to an analysis of the developments in the Stockholm region after World War II.

City-Building Regimes in Stockholm: 1945 to the Present

The Municipal Multi-Family Housing Regime (MMF), 1945–1970

The Second World War represented a watershed in the development of Stockholm in many ways. Firstly, the interruption of

Hall
Johansson
Sidenbladh

housing production during the war, the acceleration in urbanization, and a rising birth rate led to a tremendous demand for new dwellings in the Stockholm region after the war. Secondly, in 1941, the city council made a strategic decision to build an underground system in Stockholm. In the 1950s and 60s, the municipal authorities played a very active role in coordinating the construction of new houses, mainly multi-family houses, and the building of an extended underground system. In parallel, they also played a leading role in a huge redevelopment of the CBD area, which took advantage of the new radial traffic system. A city-building regime evolved which we label "the municipal multi-family housing regime," the MMF regime.

Clark and Gullberg 1991
Clark and Gullberg 1997

The foundations for this regime had in fact been laid much earlier. Early in the twentieth century, the city of Stockholm bought very large estates south and west of the city, and a few years later these areas were also politically incorporated into the municipality of Stockholm. Until 1970, the city was very eager to buy land in neighboring municipalities. However, geographic conditions made it difficult to exploit these new areas for housing. The city center was located largely on islands, and there were only a few bridges connecting these areas with the city, making transportation a critical issue. Private companies built a number of trains and tramlines across some of these bridges, enabling the exploitation of suburban areas. Already at this time, the building of an underground system was proposed, but it was rejected by the city council in 1913. One reason for this was that the public transportation systems were privately owned. After the First World War, the tramway companies were taken over by the city and the municipally owned Stockholm Tramway Company was established. In the inter-war years, the traffic situation in Stockholm became more and more problematic, and a number of leading politicians and officials started planning and preparing for the building of an underground system. In 1941, they were able to carry through a formal decision, which could not, however, be realized before the war ended.

Another important foundation for the regime was provided through the housing policy pursued by the Social Democratic government, which came into office in 1933. At this time, the housing situation in Sweden was very poor, particularly in the largest cities. Stockholm had the second lowest per-capita dwelling space of all European capitals. Therefore, the government made improved housing one of its key targets, and it stimulated the establishment of municipal housing companies by giving them

favorable financial conditions for building multi-family houses for poor people. These companies started building new multi-family houses in the late 1930s, but this endeavor came to an end with the outbreak of the war.

The decision to build an underground in Stockholm was very bold. There was no other city of such limited size that had built an underground, and this project was to become the most expensive ever in the city's history. For making this investment profitable, a close coordination between the building of the underground and the construction of new houses would be necessary. This was well understood by the leading municipal planners, and already in 1945 they published a document with the title "The Future Stockholm," in which a draft of a master plan for the building of new suburbs was presented. According to this plan each suburb, ideally with about 10,000 inhabitants, should be centered around an underground station, with a commercial center, a school, and multi-family houses closest to the station, with terraced houses and single-family houses in the periphery, but still within walking distance from the station. This would give the inhabitants easy access to their daily service needs and convenient transport to downtown workplaces. In addition, they would have an abundance of forests, fields, and lakes for recreation at the edge of their suburb. In short, the planners envisaged a new, better, healthier, and more democratic world in local suburban communities.

One of the major aims of this master plan was to create a sufficient passenger load for the underground by placing suburbs, like pearls on a necklace, along the underground lines. Moreover, there should be careful timing in this whole endeavor, so that ideally a new suburb should be completed just in time for the inauguration of its underground station. A typical underground system has a rush hour in the morning with over-filled trains going towards the city center and in the opposite direction in the late afternoon. This results in a rather poor overall load factor for the system. However, the city planners in Stockholm were inspired by the English concept of "new towns" to counteract this imbalance in part. They developed the concept of ABC-suburbs, that is suburbs supplied not only with dwellings ("**B**ostäder") and a commercial center ("**C**entrum"), but also with workplaces ("**A**rbete"). The workplaces would then create traffic going in the opposite direction during rush hours, and a well-equipped commercial and cultural center would stimulate traffic during the day and also in the evening. The suburb Vällingby, built in the early

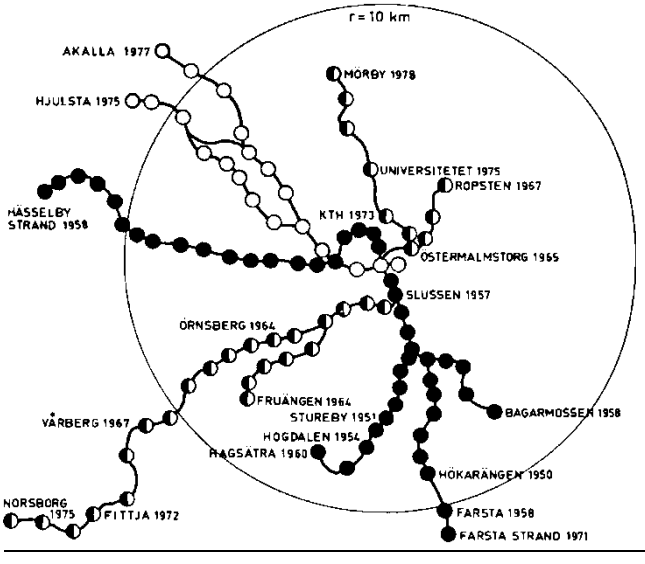
1950s on the western underground line, was a design model for this ABC-concept, and as a modernistic ideal attracted a great deal of attention from architects and planners from all over the world. (See Figure 1.)

Pass
Sax

A prerequisite for the realization of this master plan was a very close coordination of the efforts of all the actors involved. This was possible since the leading municipal politicians and municipal officials at the real estate division had powerful instruments at their disposal: the city owned most of the land in its southern and western parts; it owned the Stockholm Tramway Company, which built the underground; and it also owned municipal housing companies, which would build and own a large number of the dwellings and also some of the commercial centers. However, the whole implementation was not under the control of the city council. There was a very large need for investment capital, which would partly have to be provided by banks and other private investors. And to fill the commercial centers and the industrial plots in the new suburbs, private retailers and industries would have to be willing to lease the facilities.

In the beginning of the 1950s, a kind of *de facto* agreement was reached among the leading public and private actors. The private actors wanted a larger share for private building companies

FIGURE 1
Building of the Stockholm Underground, 1950–1978



in the production of new housing areas, but they accepted a more limited role, recognizing that a realization of the masterplan would still bring mutual benefits for most parties involved. This overall consensus was a cornerstone in the new city-building regime, which we call the municipal multi-family housing regime, because the municipal actors played a leading role and the bulk of the building production was in the form of multi-family houses. This regime was characterized, on the one hand, by a rather strong hierarchical coordination among the municipal actors, orchestrated by the leading politicians and officials in the town hall, and, on the other hand, by a network based on the trust between municipal and private actors.

However, at times there were conflicting views within the regime primarily concerning the balance between municipal and private building companies in the building of dwellings and commercial centers. The Social Democrats, who had a very strong position in City Hall in the first years after the war, were in favor of municipal housing companies, and consequently, these built a large share of all the buildings in the late 1940s and early 1950s. The Liberal Party and, in particular the Conservative Party, favored private companies, and when these parties gained a stronger position in City Hall in the 1950s, they gave more room to those. For example, a private consortium of housing and building companies was given a leading role in the construction of the suburb of Farsta, which was to become an equivalent of Vällingby on one of the southern underground lines. And when the Social Democrats regained a majority in the city council in 1958, the pendulum once more swung in favor of the municipal housing companies.

Although there were constant tensions within the regime concerning the balance of power between municipal and private actors, this did not threaten the overall consensus concerning the need to coordinate the landscapes of buildings and networks. As a result, this regime was fairly stable for more than two decades after the war. The regime was characterized by strong coordination among its actors; it was very effective in producing both houses and underground rails, and it was also dominant, in the sense that a large part of all building activities in the Stockholm region took place in the new suburbs along the underground lines. An important reason for these characteristics was that the regime was based within the political boundaries of the city of Stockholm.

As we have seen, the underground played a very important role in the physical structure of Stockholm's expansion in the

post-war decades. However, the 1950s saw a very fast increase in the number of privately owned cars. After an initial stage of resistance, local politicians had to accept the popular quest for the new symbol of democracy and freedom. The car was integrated into the new suburban—but still mainly underground dependent—structures. New motor-traffic arteries were built, and new parking standards were developed for housing districts. Furthermore, the commercial centers in the new suburbs were supplied with generous parking spaces. In the 1950s, the new car-culture did not alter the development of the MMF-regime. However, in the longer run, the new transportation technology certainly represented a serious threat as it opened new exploitation possibilities—especially for decentralized single-family houses.

Skårfors

Another threat to the MMF-regime was the fact that the underground lines were reaching the city boundaries in the early 1960s. When no further suburbs could be built inside the municipality border of Stockholm, it was easy to foresee that the regime would be in trouble. The politicians in suburban municipalities did not want to lose their political control to Stockholm. But Stockholm continued her tradition of active land acquisition and purchased land in surrounding municipalities, mostly without consulting and against the will of the local authorities. In 1959, the Swedish Parliament passed a new law, on the initiative of Stockholm politicians, which enabled municipal housing companies to build and own housing areas outside their own municipalities. This made it possible for the city of Stockholm to let its municipal housing companies build houses on land that it had bought in neighboring municipalities, on the condition that the local authorities in the suburb gave their consent. Stockholm could often offer their neighbors advantages in return for such consent, for example, giving them access to water or sewer capacity in plants belonging to Stockholm. In this way, the Stockholm-based MMF-regime was able to cross its political boundaries on a number of occasions in the 1960s, and thereby colonize considerable parts of the suburban municipalities into its domain. The MMF-regime had entered a second phase.

However, the poor state of transport systems was an obstacle to the expansion of the regime outside Stockholm's borders. In the early 1960s, there was very little coordination between the Stockholm Tramway Company and the traffic companies in the independent suburbs, both in terms of fares and timetables. Furthermore, underground lines had only been built within the municipality of Stockholm. This made daily travel both expensive

and time-consuming for many commuters living in suburban municipalities. The resistance to coordination came from a number of suburban political leaders who were afraid of the loss of control, while the city of Stockholm wanted an agreement. The city made certain concessions and promised to extend underground lines to some of the suburban municipalities, and in 1964 a broad regional traffic agreement was reached between all the municipalities in Greater Stockholm. As a result, all the existing traffic companies were amalgamated into one regional company, Stockholm Transport. In addition, an agreement was made with the State Railway Board to use existing railways for commuter traffic. All this meant a radical improvement in public transport in Greater Stockholm. A serious bottleneck for car traffic in Stockholm was the limited capacity of bridges across Lake Mälaren, connecting the southern and northern parts of the city region. However, when a new high-capacity motorway across Lake Mälaren to the west of the city was built in 1966, traffic improved dramatically.

The leading actors of the MMF-regime were thus able to overcome difficult obstacles in the late 1950s and early 1960s. As a result, the regime entered a second phase and was able to expand into a number of the "independent" suburbs of Greater Stockholm. The big municipal housing companies owned by Stockholm city became the spearhead in this new wave of expansion, and the production of multi-family dwellings reached its maximum around 1970, when more than 16,000 apartments per year were built. The high production rate was stimulated by generous government subsidies to the housing sector. The government set up a national goal in the early 1960s to produce one million dwellings in ten years in order to erase the housing shortage once and for all. During the period from 1945 to the early 1970s, construction of multi-family dwellings in Greater Stockholm was never below 75 percent of total housing production, and sometimes its share was over 90 percent. This high proportion of multi-family dwellings was unique to Stockholm, as opposed to all other major European cities. This illustrates the strength and dominance of the MMF-regime, and around 1970 this regime seemed stronger than ever. Few could guess that it would collapse within five years.

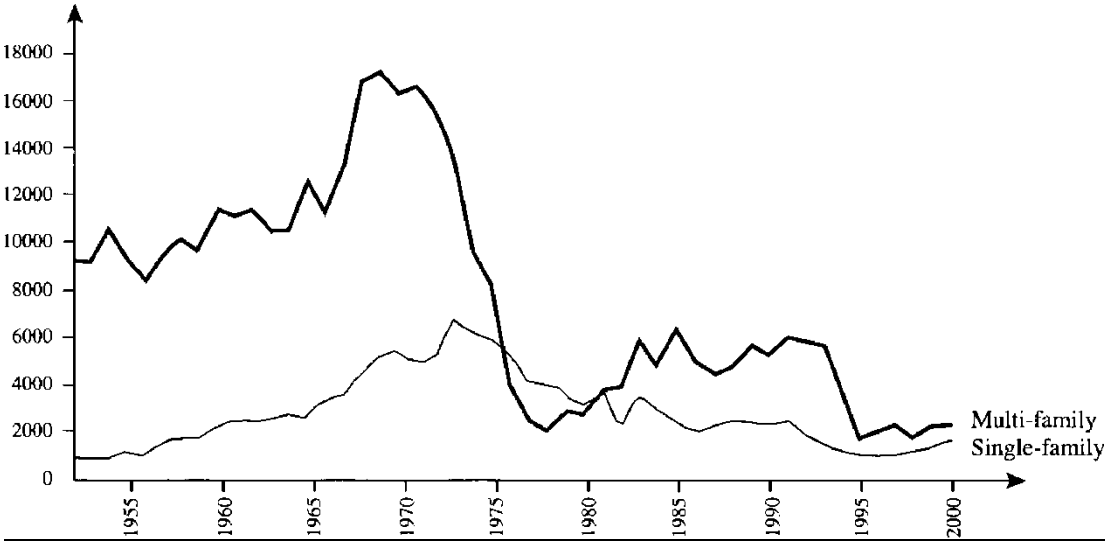
The Private, Single-Family (PSF) House Regime, 1970–1980

In the 1960s, the large-scale construction of huge housing areas in far away suburbs came under sharp criticism, as did the entire modern city building tradition. In 1971, this opposition was channeled into a symbolic battle in a park in central Stockholm.

In order to build a new underground station, the city council decided to cut down a handful of trees. But when woodsmen came to cut the trees, environmentalists prevented the felling by climbing the trees, and they quickly received broad popular support in their struggle. The leading politicians were very stubborn and refused to alter the decision, but the public anger finally forced them to do so anyway. This conflict led to a total loss of legitimacy for City Hall politicians and their allies in the MMF-regime. When at the same time, the population of Stockholm decreased for the first time in half a century and the newly produced flats remained without tenants, the old regime collapsed, and the production of dwellings, especially in multi-family houses, decreased dramatically. (See Figure 2.)

The MMF-regime was replaced by a much weaker regime focused on the production of single-family houses, in the form of detached houses and terrace houses. This new regime was primarily based in the independent suburbs of Greater Stockholm. Several factors stimulated the demand for single-family houses. Many house-holds had increased their incomes considerably during the 1960s and longed for dwellings on the ground. Furthermore, an inflationary economy and government subsidies stimulated families to invest in private houses. As a result, the

FIGURE 2
Production of Dwellings in Greater Stockholm, 1952–2000



production of single-family houses surpassed the production of multi-family houses in the second half of the 1970s. A large number of these houses were built in suburban municipalities, often rather far from the city. However, the overall production of dwellings was much lower in the 1970s than in the previous decades.

The production of single-family houses took place in two distinct forms; in large numbers on virgin land or one by one in existing, old villa areas. Houses on virgin land were often built on a large scale in an industrial way by big, private, building companies that specialized in this kind of production. The number of dwellings in such areas could vary from 50 up to more than 1,000, and usually a large number were built as terrace houses. The building companies sold most of these houses directly to individual households, but some were built for municipal housing companies and cooperative housing associations and were leased out by them. The second kind of house production, in the form of single houses built in old existing villa areas, was performed on a small scale in an artisan way, often by small building companies. In this case, the future house owner was often actively involved during the planning and building process, and the house was tailor-made to his or her needs.

The new regime, which produced a much greater share of private single-family houses and which we, therefore, label the PSF-regime, was very different in character from the previous one. The first difference had to do with transportation. Almost all families moving into single-family houses had a car, and the dependence on public transportation was, therefore, lower. The bus became the dominant form of public transport in new housing areas, and a bus line could easily be established once an area had been completed. In the previous decades, the road system had been improved, and the new housing areas, which tended to be scattered over the region, could to a large extent, rely on the existing regional road-system, with the exception, of course, of new local roads to and within the housing areas. Thus, neither regional planning offices nor the regional Traffic Company played a very active role in the planning of the new housing areas.

This does not mean that there were no coordination needs, but they were of a different kind than before and primarily involved the local municipal authorities. A prerequisite for the construction of new housing areas on virgin land was, of course, that all the infrasystems (water and sewage, electricity, local

roads, etc.) were in place when the houses were built. There was thus a need for close cooperation between the building company, the municipal planning authorities, and the local infrasystem providers. In the case of new houses being built in existing villa areas, these houses "hooked on" to existing infrasystems and, apart from checking that the capacity of these systems was sufficient, there was little need for planning and preparations.

In sum, the PSF-regime had rather weak coordination in comparison with the MMF-regime. It was much more decentralized and scattered over the entire region. Private building companies and local municipal planning authorities and infrasystem providers had the key roles in this regime. The coordination among them was largely of a network character. Furthermore, mortgage banks and other banks played an important role in the financing of housing production, and special government authorities, distributing subsidies to the house-owners for their capital costs, could exert some quality control on the production of the houses.

The Commercial Building Regime, 1980-

During the second half of the 1980s, housing production developed in a more fashionable direction. A process of gentrification, sometimes in the form of infill projects in the inner city, took place. The same development occurred in other Swedish cities as well. A basic reason for this was that the financial market was liberalized in some important aspects. A great amount of borrowed money was in circulation and forced prices and production to rise. Also, governmental subsidies supported an overproduction in the housing sector. The Swedish housing standard (dwelling space per capita) had become very high compared to other countries, due to the very generous housing subsidies provided by the state during the whole post-war period, and particularly during the "one million dwelling program" in the 1960s and 70s. This new, overheated, and much more city-center-oriented building activity led to the emergence of a new city-building regime, during which a growing share of the building production was directed towards constructing commercial centers and office buildings. We call it the commercial building regime, the CB-regime.

In the period from the 1970s to the end of the 1980s, a growing portion of the households in Greater Stockholm moved to dwellings rather far away from the city, often in single-family houses. In parallel, the number of cars increased considerably and a growing number of people needed a car for

their daily commute. Since the collapse of the MMF-regime in the early 1970s, there had been an absence of a strong, strategic coordinating authority on the regional level. One of the consequences of this was that rather few new artery roads were built and this led to a gradual decrease in the accessibility of the city by car. In the early 1980s, an informal coalition of private actors—including property owners, building companies, and the chamber of commerce—was formed to devise a new strategy for the development of the Stockholm region. This strategy circumscribed the influence of the municipality and had two components.

The first component was to exploit strategic places primarily in the "near-periphery" (just outside the dense inner-city area) with good transportation facilities for commercial centers, office buildings, sport arenas, etc. The most spectacular of these projects was "the Globe," a huge and very visible sports arena combined with a commercial center and office buildings, built just outside the city at an underground station and along a motorway. A number of similar projects were planned and some were also built along the main artery roads in the region. Also some housing projects were designed to take advantage of being centrally located. The most well known of these is the Southern Station project, in which a whole new housing area was built on a covered railway station in the inner-city of Stockholm. The houses were built in a post-modern style, one of them designed by the famous architect Ricardo Bofill.

This part of the new strategy was stimulated by strong inflationary tendencies and a release of credit restrictions in the late 1980s, resulting in an oversupply of lending offers directed to building and real estate companies. It was also influenced by an international tendency to see the upgrading of real estate as a branch of lucrative financial operations. Leading City Hall politicians and officials were positive to these initiatives. The representatives of the city negotiated with building companies, property owners, and other interested parties trying to exchange the value added effect of extended building permission for a share in the value of the new establishment.

The second component of the strategy was to engage in active lobbying for the building of a number of new motorways (largely in tunnels) in order to create a motorway ring encircling the city. The purpose was both to make the city more accessible by car and to relieve the central part of the city of through traffic. Furthermore, the tunnel ring would make some of the new commercial centers more accessible and increase land values in the periphery

of the inner city. Also, several other traffic projects were being lobbied for. The coalition was rather successful in its campaign and managed to raise a positive interest in the proposed projects from many parties, but it also raised strong opposition from the green parties. However, a key problem was how to finance all these expensive projects.

In 1990, the national government appointed a special negotiator, the Governor of the Bank of Sweden, Mr. Dennis, to try to gain broad political support in the Stockholm region for a whole "package" of traffic investments. Mr. Dennis was supplied with a carrot; if such a package were agreed upon, the government would finance part of it. Mr. Dennis quickly made an outline of such a package a basis for further negotiations largely based on the proposals developed by the private actors. It included three major components: a motorway ring around the city with a motorway semicircle further out, a new high-speed tramway around a part of the city coupled with a general rehabilitation of the underground and other parts of the public transport systems, and an imposition of tolls on cars driving on the new motorways. The tolls would provide the financing for these initiatives. When a number of environmental political parties did not accept this framework, they were expelled from further negotiations, leaving only three parties at the table—the Social Democrats, the Liberals, and the Conservatives. These three reached an agreement in 1992, which became known as the "Dennis package." The result was an extremely expensive, comprehensive plan with enough backing from the three big political parties to be approved by the majority both in the city council and in the regional council, but only after very strong and bitter opposition from the other parties. There was also considerable opposition within the three large parties, but in the end these opponents obeyed their respective party whips.

Despite the agreements, a deep disunity emerged during this political process. The disunity, which still prevails, had its roots in different visions and goals regarding the future development of the Stockholm region. For many of the supporters of the Dennis package, economic growth was the overarching goal, and they saw improved conditions for car traffic in the region as a precondition for Stockholm's preserving its economic competitiveness in relation to other city regions in Europe and elsewhere. For many of the opponents of the package, an improved environment was the most important goal, and they saw increasing car traffic as the major threat to such an improvement.

The Dennis package was not implemented because it fell victim to growing political opposition, increased cost estimates of the planned motorways, and transformation of a large park in Stockholm into a national park, resulting in severe restrictions on where and how the motorways could be built. In 1997, the Dennis package was formally replaced with a more restricted "package." Important parts of the original agreement were postponed or abandoned in the new package.

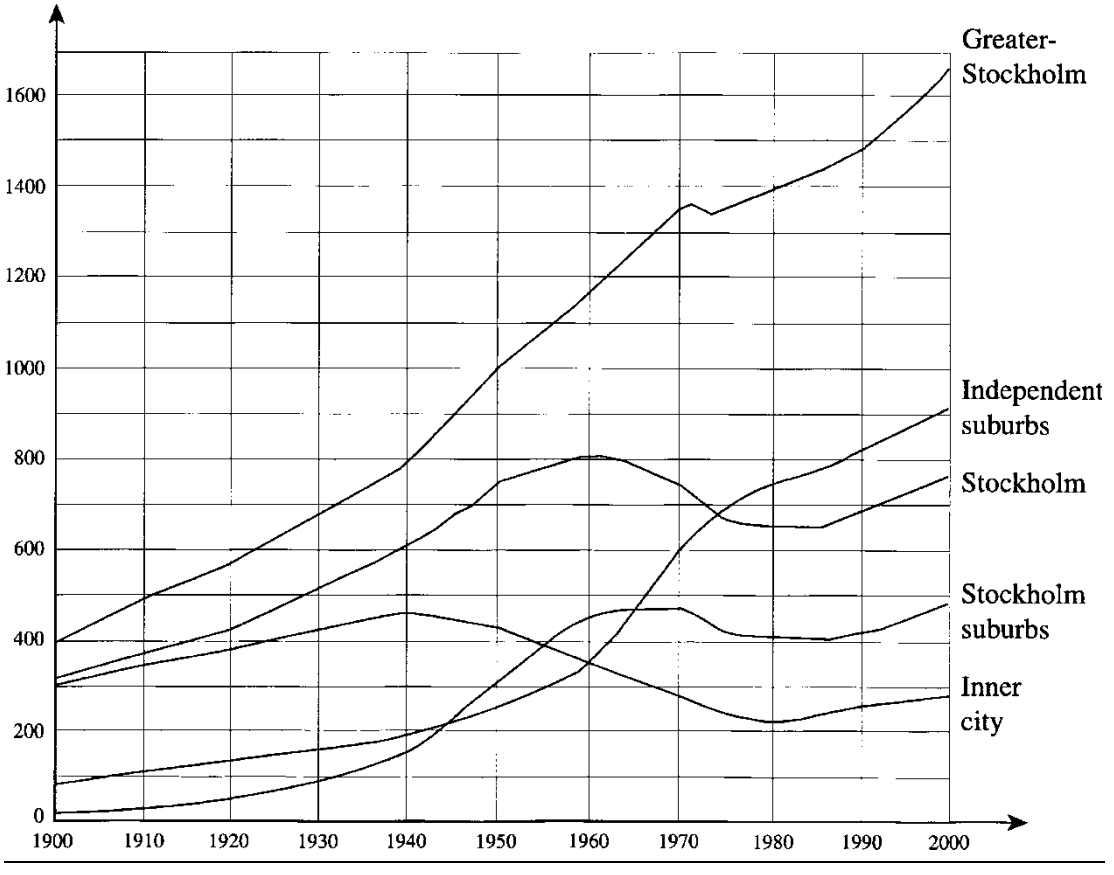
The current city building situation in Stockholm is a mess. The CB-regime has, in effect, withered away during the deep financial crisis at the onset of the 1990s and the long battle about the Dennis package, and there does not seem to be much coordination whatsoever at present. Different interests block each other in a situation where no one constellation is strong enough to take the lead in developing a new regime. Instead, partial projects are chosen by seemingly accidental circumstances in a context of uncertain and conflicting visions of the future. National as well as local quests for sustainable development are countered by families and organizations acting with their feet—or rather their cars—in choosing sites for housing and shopping that are more and more scattered. And at the same time, the automobile lobby has managed to maneuver some of the big road-projects from the Dennis package, one after the other, to an implementation phase. Furthermore, road tolls have become a strongly contested issue, causing splits both between and within political parties and also between the city and the surrounding municipalities. The introduction of road tolls will be decided through a local referendum in Autumn 2006 after one year's full-scale experiment. This situation of weakness and lack of coordination may prepare the ground for a new and stronger regime to evolve through the necessary steps of collective interactions in new types of coordinated building and infrastructural projects.

Concluding Discussion

The purpose of our article has been to analyze the morphological transformations of Stockholm by using what we have called the City Building (CB) Regime approach. In this concluding section, we will first summarize our findings concerning the successive regimes in post-war Stockholm. Thereafter, we will briefly discuss the major factors that have influenced the emergence and dissolution of these regimes.

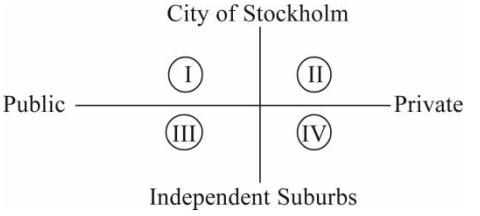
The morphological transformations of Stockholm in the past century can be illustrated by Figure 3, showing the development and distribution of the population of Stockholm. The regimes that we have identified are clearly reflected in the diagram. During the first phase of the municipal multi-family housing (MMF) regime, the fastest expansion took place in the suburbs belonging to the city of Stockholm, while the population in the downtown area started to decrease. In the second phase of the MMF regime, a fast expansion took place in the independent suburbs, while the population of the city decreased. During the private single-family housing (PSF) regime, the expansion still took place in the independent suburbs but at a slower pace, while the population of the city was constant. In the CB regime,

FIGURE 3
Inhabitants (1,000) in Different Parts of Greater Stockholm, 1900–2000



both the distribution and the size of the population in Greater Stockholm has been almost constant and the production of housing has been very low.

The concept of a City-Building Regime focuses on the actors and coordinating mechanisms that produce major changes in a city's landscape of buildings and networks. A simple matrix can highlight the differences regarding actors and coordinating mechanisms in the regimes that we have identified:



In the first phase of the MMF regime, from 1945 to 1960, only actors belonging to categories I and II were involved. Among these, there was a general agreement concerning the goals for a fast expansion of new suburbs with mainly multi-family houses along the new underground lines. It was also a common understanding that this would call for rather strong coordination under the guidance of politicians and planners. There was, however, some disagreement concerning the roles of the municipal housing companies and private housing companies in the production of houses and commercial centers, both among public and private actors, and among the political parties. In the second phase of the MMF regime, from 1960 to the early 1970s, actors from category III also became involved. Again, there was a general agreement concerning the goals for a continuation of housing production focused on multi-family houses but further out in the periphery. Even if there had been an agreement about the need for regional coordination, there were at times strong tensions between politicians in the city and in the suburban municipalities concerning the degree of influence of the city. The main coordination mechanism during the MMF regime was hierarchical, but with an increasing degree of network coordination among public and private actors and among the city and suburban municipalities.

In the PSF regime, from the early 1970s to the late 1980s, mainly actors belonging to categories III and IV were involved, and this regime was scattered over the region and heterogeneous in character. There was an agreement among the actors involved concerning the desirability for building single-family houses

primarily in the periphery of the region. The need for coordination among different actors was weaker than in the previous regime. Private building companies were often the driving forces in the building of larger housing areas, and their relation with municipal planners and infrasystem operators was primarily characterized by network coordination.

In the CB regime, from the 1980s to the present, private actors (categories II and IV) have played a key role, particularly in building projects. Building companies and property owners in many cases entered into bargaining with municipal authorities, offering shares in exchange for building permission. The coordination mechanism between private and public actors was thus at least partly in the form of market relations. In the case of the big transport projects, private actors played a catalytic role and succeeded in putting the issue on the political agenda but were largely excluded from the later process. In the political process, actors belonging to both the city council and the regional council participated (actors I and III). In this case, the main dividing line was not between I and III but *within* the two categories. In fact, a deep disunity emerged during this process between the big traditional parties and the green and leftist parties with roots in different visions and goals regarding the future development of the Stockholm region—economic growth versus an improved environment.

In the beginning of our article, we emphasized that an important task for the CBR-approach was to try to explain the changes over time, that is, the emergence of stable regimes as well as the weakening and dissolution of such regimes and their replacement by new regimes. In the case of post-war Stockholm, a number of factors on different levels were important for this development and we summarize them below.

The "*geo-political*" *conditions* in the Stockholm region comprise one factor on the local level that was of great importance. In the Swedish political structure, municipalities have a high degree of independence. At the turn of the century, the city of Stockholm only consisted of what is still today the downtown area, and it was surrounded by a number of independent municipalities. But in the beginning of the twentieth century, the city pursued a very active expansionist policy of first purchasing land in neighboring areas and then trying to formally incorporate this land into its own jurisdiction. In this way, the city was able to incorporate large areas to the south and west of the city, in which major landowners had a strong influence. In these areas, it was politically easy to organize a first wave of expansion in the 1940s and 50s, along the new

underground lines. However, when these areas had been "filled" in the early 1960s, it became more difficult to coordinate further expansion because of the independence of suburban municipalities. The city managed to change part of the institutional framework to enable at least some degree of cross-municipal coordination in the region, particularly in the transportation area.

Secondly, the developments in Stockholm have been influenced by government *policies and parliamentary decisions* on new legislation. These are factors on a national level. Sweden had a very low housing standard in the 1940s, and after the war the governments introduced a housing policy with considerable subsidies for the production of houses, and in particular for multi-family dwellings. In the 1970s, generous subsidies were also introduced for single-family houses. The design of these subsidies was important for the composition of housing production in the Stockholm region. Influential parliamentary decisions concerned the legal foundations for physical planning. In 1947, a new Building Law was introduced which gave the municipalities increased powers to plan the production of buildings within their territory. A new Planning and Building Law, introduced in 1987, further extended their power.

A third factor of importance was the *availability of technologies* at different times, which was partly dependent on international developments. The decision to build an underground system in Stockholm was crucial for the emergence of the MMF-regime, characterized by the specific geographic pattern of new densely built suburbs along the underground lines. In the 1950s, the technology for constructing multi-family houses gradually became more industrialized, allowing ever-bigger houses. Furthermore, new infrasystems such as district heating, refuse chutes, and advanced sewage treatment plants were introduced to provide a healthy, clean, and rational environment. A basic prerequisite for the transition to the PSF regime, with single-family houses in the periphery of the city region, was the fast diffusion of cars in the 1950s and 60s, which resulted in a radically increased mobility of households. Heating was also an important issue in the 1970s. Oil became a vulnerable fuel after the oil crisis in 1973, and single-family houses were built in a scattered way, which was not well suited for district heating. Instead, electricity became a rather cheap and convenient source for heating due to the fast expansion of nuclear power in Sweden in the 1970s.

In our analysis of the morphological transformations of Stockholm in the post-war era, we have emphasized the influence

of transportation networks on urban structure. Many analysts and scholars believe that information and communications technologies will have similar effects in the future. We have seen how important the underground system was to Stockholm's growth. Similarly, future historians may point to the 1994 decision of Stockholm politicians to establish STOKAB, the Stockholm city cable company, as a decision of equal importance for the city's settlement patterns. The decision establishing STOKAB had its origin in a new telecommunications act passed by the Swedish parliament in 1993 that was designed to increase competition. The leading politicians in the city of Stockholm and the Stockholm County Council used the opportunity of the act to build a fiber optic network employing already existing infrasystems (underground, water and sewage, district heating, etc.). The goal was to offer "dark fiber"—but no services—to all customers at low cost. The larger ambition was to stimulate the development of the telecom market and to make Stockholm one of the leading IT-regions in the world. Thus, while the political scene in Stockholm was dominated by the sharp conflicts and confrontations around the Dennis package, representatives from all parties were able to make a joint decision on the establishment of a publicly owned optic network, which was the first of its kind in the world. It may well be that the establishment of STOKAB, in retrospect, will stand out as a key event in the emergence of a new city-building regime.

Dobers

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