

Fig. 2. Left: The *landeri* Marieholm from the end of 1600s; the oldest picture known of a *landeri*. Top right: Several *landerier* are to be seen in this rural part of Göteborg's donation land. Drawing from 1801. Middle: The area of the *landeri* Stora Katrinelund in the 1850s. Reconstruction made in 1948. Bottom right: The Magnus family in the 1870ies gathered at the Katrinedal *landeri*.

Historical background

Göteborg was founded in 1621. Outside the inner town the burghers of the town had a big land area to their common disposal, the donation land. This area is examined with surfaces, boundaries and points in historical map-overlays (i.e. varying layers on top of historical maps) through almost 300 years. Immediately after the town foundation the donation land was divided into small plots, *landerier*, which were leased out.

In the beginning the *landerier* consisted only of agricultural areas but gradually buildings were built. Small gardens were layed out as well and the plots increasingly cultivated. The economic prosperity of the town, especially during the 1700s, also furthered the development of the *landerier* which became lavish with manor houses (inhabited only during the summer), expensive gardens and parks. Many *landerier* aquired names. On the *landerier* were also built places to live for workers and servants, store houses, outhouses, warehouses, and sometimes even buildings containing small industries. During the last period of existence of the *landerier* most of them appear to have been used for the purposes of representation and recreation. In the 1860s as many as 50 *landeri* units were furnished with a large manor-house. (Fig. 2.)

The *landerier* were gradually firmly established not only on the donation land but also in the minds of the townspeople as being much sought after. The leasing of *landerier* by the upper classes became an established and matter-of-course phenomenon. For a long time practically all *landeri* possessors were also on the board of town governors. The donation land, covered with the *landerier*, had in the 1860s developed a stable pattern. (Fig. 3.)

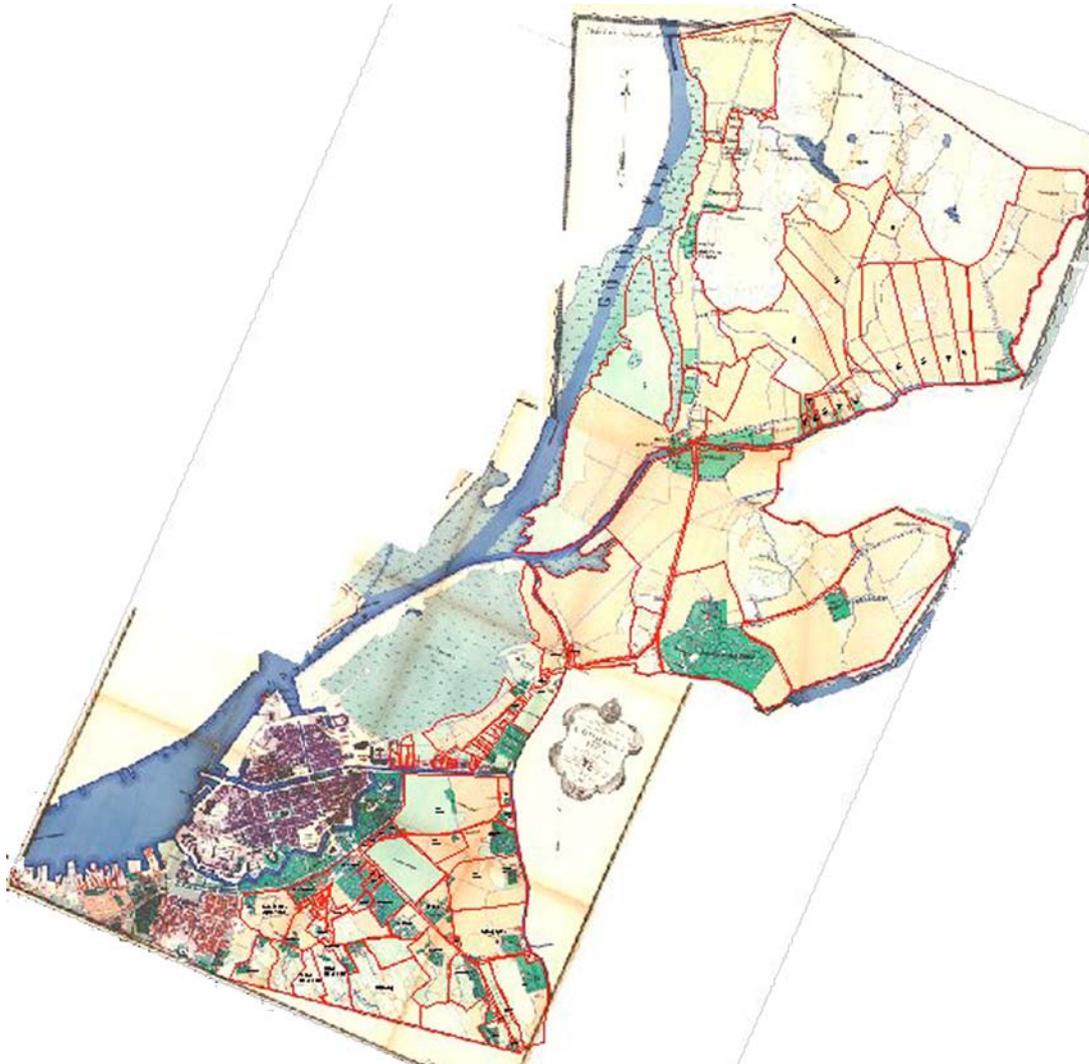


Fig. 3. The donation land right before the town began to plan the area. An overview of all the *landerier* (boundaries marked in red) in the year of 1860 has been laid upon a map from around 1860. Analytical picture made by the author.

Need for expansion

Göteborg during the industrial revolution was a town growing rapidly in every respect. Industrial workers and others moving into town had difficulties finding accommodation. The pressing demand for expansion on the donation land outside the fully built inner town made town planning urgent. In order to make construction possible on donation land redemption of the *landerier* one by one was initiated in the 1860s, a process that took more than 50 years to conclude.

Following a competition, the first major town plan was decided in the 1860s and construction began according to the plan. Further plans soon followed, but these were smaller and detailed and added no changes to the large picture. In the beginning of the 1900s a second major plan, also the result of a competition, was decided. The purpose of this one was to connect completed construction with new areas to be built up. Around 1920 the donation land was almost totally planned and all the *landerier* had gradually gone back into the town's possession.

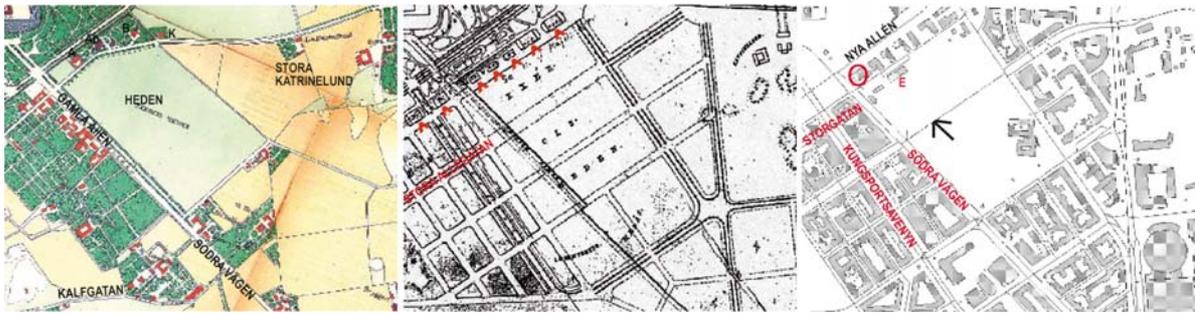


Fig. 4. Left: Map from around 1860 showing the *Heden* drill-ground and the big areas of the *Stora Katrinelund landeri*. Middle: The town plan of 1866, red arrows show the row of "park blocks" where the *landerier* used to have their place. Right: Layers from the Göteborg's municipality map database showing buildings and roads of today [1990]. "O" denotes a villa which still exists, "E" house for drilling, arrow denotes a path for walking.

To accommodate the land outside the town centre to a large and comprehensive pattern of expansion also other measures were taken but town planning and the redemption of *landerier*: new infrastructure, formation of new, so-called rotar, new regulations and incorporation of neighbouring areas.

The meeting of two different structures

The town expansion meant that two completely different structures met on the donation land – the *landerier* and the new town plans. When the plans were put into practice they influenced and claimed the *landeri* areas with their established structure, a sub-urban pattern. But the *landerier* also affected the design of plans and the expansion. A number of examples show the meeting between these structures, focused on the years 1860–1920. The interaction between these reciprocal developments is examined not only by using GIS in historical map-overlays but also by using morphological theories. A universal morphological system, in which the city is regarded as a network, has been used. This system, consisting of elements, arranged in a chosen structure according to the available means and possibilities, has been applied to the examples.

To begin with town planning complied rather much with existing conditions and would e.g. allow at least most of the manor-houses to remain. The first plan included a park to be placed like a girdle south of the *Nya allén* avenue, and blocks of parks to intermediate between that park and the residential quarters south of there. Almost all of the small *landerier* in this area was torn down and replaced by new blocks. However a few *landerier* were allowed to remain – the ones of well-to-do leaseholders, which had an effect on construction. In spite that these manor houses were torn down later (except for one) they have pointed out the direction for the continuing building out. The plan was changed with respect to the main roads south, and the *Gamla allén* avenue was allowed to remain, contrary to plan. A parallel boulevard, the *Kungsporsavenyn*, was layed out and thereby

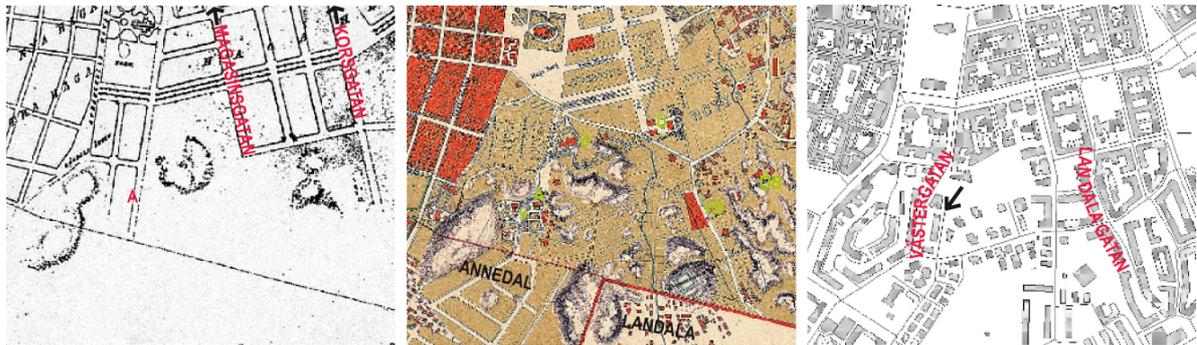


Fig. 5. Left: The town plan of 1866. Arrows denoting the Magasins- and Korsgatan streets. "A" shows where the Anneberg *landeri* was situated. Middle: Map from 1872. "V" the Västergatan street, "ÖB" and "VB" denoting the *landerier* Östra and Västra Brantdala, "U" the Ulriceberg *landeri*. Right: Layers from the Göteborg's municipality map database showing buildings and roads of today [1990]. Arrow denoting the street which was supposed to be the main one.

providing the inner city with two streets of entrance. According to the plan a few streets would run across the *Heden* drill-ground. But the field was left intact, and so it is, still today. Orthogonal blocks were planned south of the *Fattighusån* stream, and the streets were also planned to be straight. But despite all planning the winding road east, the *Levgrens väg*, remained. (Fig. 4.)

North of the *Fattighusån* stream the *landerier* were fitted in to the ideal of the time, when the small *landeri* units were to determine the shape and position of some boulevards converging into a star square, named *Odinsplatsen*.

Landeri entry roads and roads connecting the *landerier* were to effect the situation in many places, for example in the *Stampen* quarter where two streets make an extra curve due to the *landeri* once situated there.

Further two examples are the *Västergatan* street near the *landeri* Anneberg which follows along a previous *landeri* boundary in the same manner as does the *Karl Gustavsgatan* street up to the *Kapellplatsen* square. (Fig. 5.)

Parts of the old *Kalfgatan* street remained along the future *Vasaplatsen* square, where also the *landerier* in the area preponderated over planning and construction. (Fig. 6, left.)

Albert Lilienberg was the planner of the areas, as well as *landerier* Gamlestaden and Kristinedal-Bagaregården in the 1910s. These were situated on the land north of the *Säveån* stream. Lilienberg's guiding principle for planning was to accommodate to the prevailing situation and make use of existing elements to accomplish the structure he wanted. (Fig. 6, right.)

The same principle was also applied to Lilienberg's planning of the areas southwards, where the western entry road, the *Eklandagatan* street, would curve at the *landeri* Carlsberg. The Carlsberg manor house was torn down but its park kept as a whole. For these south areas detailed plans followed until the turn of the century.

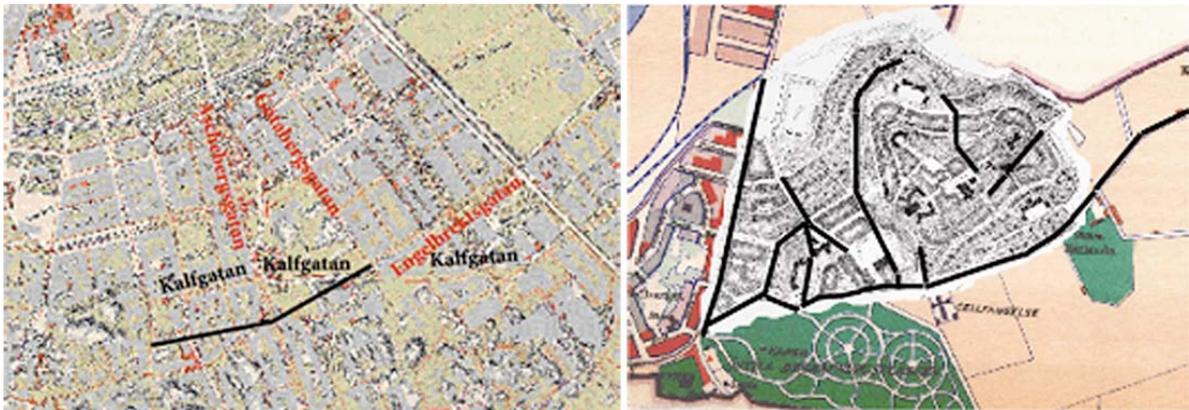


Fig. 6. Left: The today [1990] pattern of streets and blocks according to plans placed upon a map from 1872. The black line is showing a design which was impossible to reach because of leased out *landerier* blocking. Right: On top of a map from 1910 the Albert Lilienberg's town plan of the Kristinedal-Bagaregården area from 1911 has been placed. Black lines show the old *landerier* and road boundaries that still today are to be found. Analytical pictures made by the author.

These examples build up to the conclusion that the meeting between the structure of building according to new plans and the *landerier* structure was a process characterized by influences working in both directions. Material factors as well as immaterial ones had a decisive role in particular cases. The meeting also had as a consequence that an urban layer came into existence, which replaced a more rurally characterized layer.

Elements of the urban pattern and their durability

The morphological approach has enabled a system analysis, which indicates a structure of constituent elements informing building patterns, and identifies factors that still today can be identified. Forms from older, urban systems will always partly remain and play a role in the newer system.

When the plans for Göteborg were designed existing structures were sometimes regarded, sometimes not; predicting from case to case appears impossible. A city is only partly the product of what is deliberately planned.

Incessantly there are unplanned, actual, contemporaneous processes – which might be denominated spontaneous – taking place. Some of these will be of influence in the long run and the accomplished structure is a result also of such circumstances.

Some factors are more durable than others, however. Some types of elements are obviously more disposed to remain.

The boundaries of the *landerier* were surprisingly stable and could remain unaltered even though the unit wasn't furnished with a manor house. In addition to material structures, immaterial ones like legislation and political and economic power, for example influential *landerier* leaseholders, have also influenced the configuration of the town.

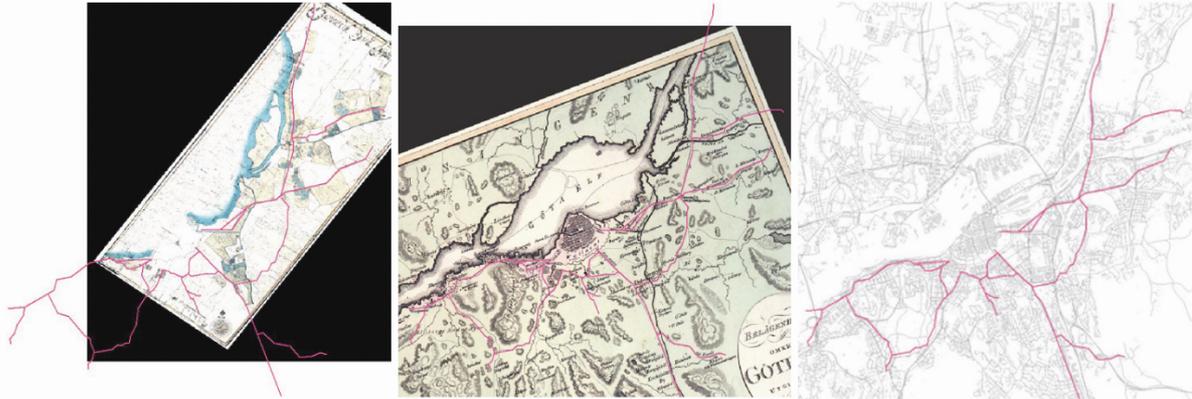


Fig. 7. The pictures above show the resistance of the roads in Göteborg. From left to right: The oldest net of roads has been laid upon map from 1696. Thereafter the same net of roads has been laid upon a map from 1809. Finally the same net of roads has been laid upon layers from the Göteborg's municipality map database showing buildings and roads of today [1990]. Analytical pictures made by the author.

The ideal of the time contained an aspiration for what was in order and representative. Sometimes the ideals happened to correspond with the prevailing land use.

The disposition and ability of urban planners to adapt to existing structures have also influenced the accomplished town pattern. (Fig. 6, right).

Streets and roads are two of the elements that the town consists of when you look upon the town as a whole, as an urban net. Streets and roads seem to be highly resistant to change and thus tend to remain longer than most other elements. (Fig. 7.)

Apart from buildings and roads the *landeri* areas roomed fields, garden plots, parks, tree avenues, herb gardens and so on. All of these made their imprints as well and traces are often possible to discover today.

A *landeri* could remain a coherent unit may in part be attributed to chance but also to topography. Already the old, rural system of possession boundaries from which the urbanization process began was very often structured by nature factors.

The structure of domains hold a decisive importance to what can be built and in which turn this can be done. The delay of an intended development due to privately owned areas is shown in an example from the Jönköping town. (Fig. 8, right.)

The different elements of the urban network vary in durability. These variations are clear from comparisons with other towns, and even outside Sweden. (Fig. 8, top.)

Conclusions and reflections

Since the *landerier* in Göteborg were situated on donation land which could only be leasehold, the conditions for building on this land differed from other types of land, like crown land, town land which was not donation land, or privately owned land. It should perhaps be mentioned here that land in most Swedish towns was made up of several legal categories in

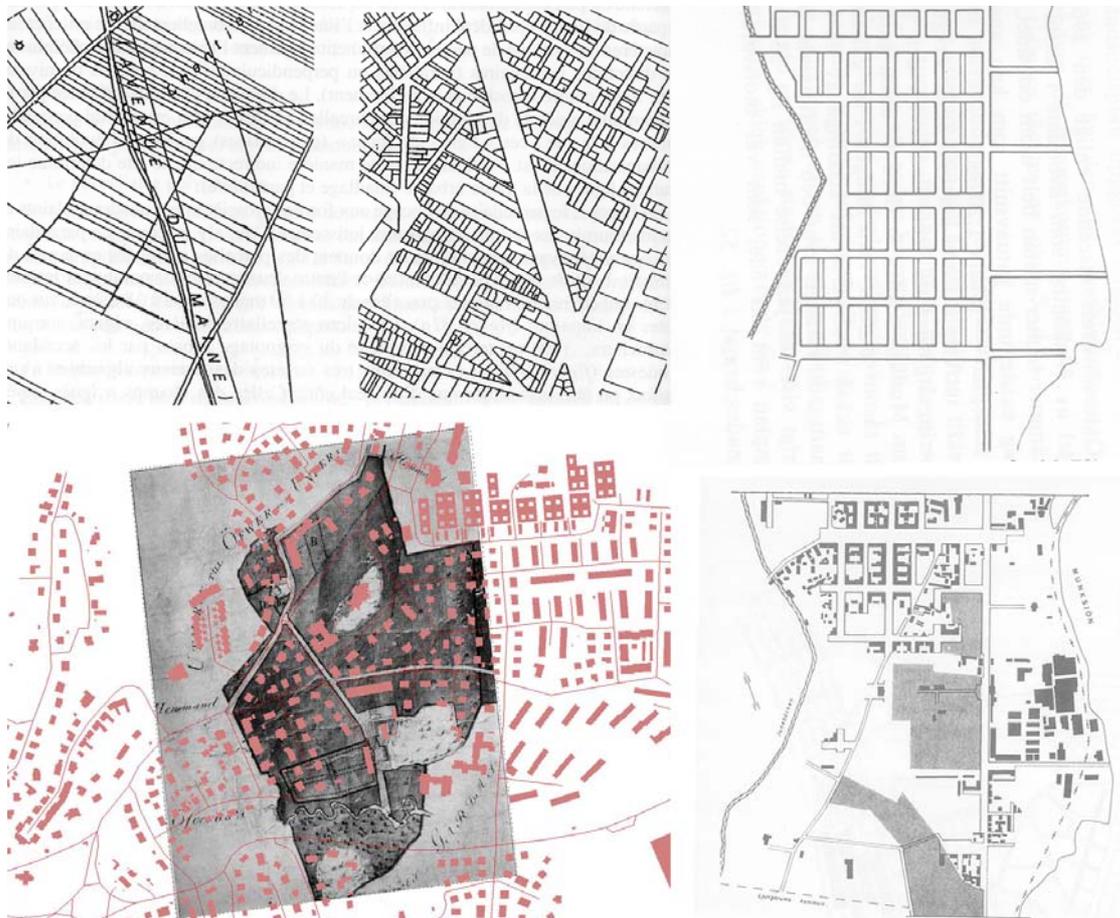


Fig. 8. Top left: A new road forced on when drawn out over rural plots for the Avenue du Maine (Paris). The street was designed by the duke of Maine, extramarital son of Ludvig XIV, with the intension to make a quick connection between his house in Paris with his palace in *Sceaux*. Top middle: Existing conditions in the same Paris area in 1980. Above: Bø estate in the Örgryte parish, incorporated with Göteborg in 1922: Boundaries of rural plots that still today exist. Top right: Part of the Jönköping town plan 1877. Underneath the same part in 1907, after thirty years of building. Grey coloured pieces denote the three biggest privately owned estates.

terms of ownership. The fact that land property of the town of Göteborg was exclusively donation land made the situation there unusually clear.

I have shown that the *landerier* were of a special kind and that they turned out to be of certain durability when building according to new town plans was to replace them. The inertia of the *landerier* seems to lie somewhere between "owned" respectively "rented" properties.

There is a possibility to study the *landerier* from yet another viewpoint. If you look upon the donation land as the bigger and topographically perceived units they make, then one such unit would contain a number of *landerier*. Those units, e.g. delimited by streams, roads and mountain ridges, would perhaps hold a durability level in accordance with big landed properties/farming estates. (Fig. 8, bottom left).

From this morphological analysis I discuss the factors that have affected the urban pattern and general morphological aspects of the development of lands as well as street

grids of towns. The originality is my use of GIS for illustrating the historic changes, and the innovation is that I combine the historical map-overlays with morphological theories. This is a tool to deepen the analysis of transformations of urban patterns over time and thereby contribute to cartography development.

But did the conditions of the donation land in Göteborg result in a structure which was even more durable than such structure which is a result of a mixture of different kinds of land? Were the *landerier* more durable than common farms? By the town expansion the donation land was undoubtedly rather inert. But to what extent? Is the Göteborg donation land with its *landerier* holding a unique position in Sweden? Had this donation land as a result a structure, considerably more constant, than the structure you expect to find elsewhere – even outside Sweden? – These questions still remain to be answered.

Keywords

Landeri, donation land, geographical information systems [GIS], Göteborg [Gothenburg], historical map-overlay, urban morphology, sub-urban pattern, town plan and expansion, urban transformations.

References

- Allain, Rémy (2004), *Morphologie Urbaine: Géographie, aménagement et architecture de la ville*. Armand Colin Paris.
- Améen, Lennart (1964): *Stadsbebyggelse och domänstruktur. Svensk stadsutveckling i relation till ägoförhållanden och administrativa gränser*. Meddelanden från Lunds geografiska institution, avhandlingar 46. Lund University, Lund.
- Améen, Lennart (1985): *Stadens gator och kvarter: Stadsmiljöns geografiska grunddrag*. 2 ed. Stockholm [1972].
- Bjur, Hans (1983): "Götaplatsen – Kungssportsavenyens avslutning", *Stadsbyggnad* 1983:5.
- Bjur, Hans (1984): *Stadsplanering kring 1900 med exempel från Göteborg och Albert Lilienbergs verksamhet*. Chalmers University of Technology, Göteborg. (diss.).
- Bjur, Hans (1988): *Vattenbyggnadskonst i Göteborg under 200 år*. Göteborg.
- Book, Tommy (1974): *Stadsplan och järnväg i Norden*. Meddelanden från Lunds Universitets geografiska institution, avhandlingar 69. Lund University, Lund. (diss.).
- Conzen, M.R.G. (1958): "The growth and character of Whitby", i *A survey of Whitby and the surrounding area*. (Ed.: Daysh, G.H.R.) Eton, Windsor.
- Conzen, M.R.G. (1960): *Alnwick, Northumberland. A study in town-plan analysis*. The Institute of British Geographers. Publication No. 27. London.
- Enhörning, Gunilla (2000): "Stadsjord, rotar, kvarter ... och mycket mer. «Tidsskikt» av juridiska och administrativa gränser i Göteborg", *Stadsmiljöns förändring. Digitala verktyg för hantering och visualisering av stadshistorisk information och kommunikation. Metoder och tillämpningar*. <http://www.design.chalmers.se/projects/histgis/2003-11-20>.
- Enhörning, Gunilla (2004) "Urban transformations and confrontations in Göteborg: *Landeris* and town plans 1866-c. 1920", i *The European City. Architectural Interventions and Transformations*. Ed.: Claessens & van Duin. Proceedings of the EAAE conference, Delft, Oct. 27–30, 2004.
- Enhörning, Gunilla (2005): "The extension of Göteborg according to town plans 1866–ca. 1920: The case of the *landeris*", *Mapping and Image Science*. Scientific ed. Swedish Cartographic Society. N:o 2.
- Historiskt kartverk över Göteborg upprättat för jubileumsutställningen i Göteborg 1923 av andre stadsingenjören A. Södergren*. Göteborg.

- Janson, Esbjörn (1988): *Donationsjorden i Göteborg och vissa närstående kameralistiska institut*. Göteborgs fastighetskontor. Göteborg.
- Jivén, Gunilla (2003): *Stadens morfologi som kulturarv*. Chalmers University of Technology, Göteborg (diss.).
- Kostof, Spiro (1992): *The city assembled: The elements of urban form through history*. Thames and Hudson. London.
- Linde Bjur, Gunilla (1999): *Arkitekt vid industrialismens genombrott: Adolf Edelsvärd en yrkesbiografi*. Konstvetenskapliga inst. Göteborg University. Göteborg (diss.).
- Pihl Atmer, Ann Katrin (1987): *Sommarnöjet i skärgården. Sommarbebyggelse i Stockholms inre skärgård 1860–1915*. Konstvetenskapliga inst. Stockholm University. Stockholm (diss.).
- Prawitz, Gunnar (1954): *Tomter och stadsägor. Om fastighetsindelningen i Sveriges städer*. 2nd ed. Stockholm. [1948]
- Stenström, Stenström, Fritz (1986): *Örgryte genom tiderna. En minnesbok*, I and II. 2nd faksimile ed. Göteborg. [1920]
- Thinking About Urban Form: Papers on urban morphology 1932–1998*. M.R.G. Conzen (2004). Ed.: Michael P. Conzen. Peter Lang AG, Bern.
- Urban Forms: The death and life of the urban block* (2004). (Ed.: Panerai, Castex & Depaule + Samuels in English ed.). Architectural Press, Oxford. [*Formes urbaines, de l'îlot à la barre*, Éditions Parenthèses, Marseilles 1997, 2001].
- Whitehand, J.W.R. (2003): "Suburban residential building form: A historico-geographical approach", in *In Beiträge zur geographischen Stadt- und Regionalforschung. Festschrift für Heinz Heineberg* (ed: Bischoff & Krajewski). Münstersche Geographische Arbeiten 46. Münster.

Maps, plans, database

- Map 1644 by Kiättel Klason: "Geometrisk affritningh uppå Giöteborghs stadh", in *Historiskt kartverk ... 1923*, sheet N:o 1. Lantmäteristyrelsens arkiv.
- Map of the *landerier* by Erich Kuus 1696: "Geometrisk Charta öfwer Giöthebårgz Stadz ägor". Facsimile map in *Historiskt kartverk ... 1923*, sheet N:o 1. Original in Regionarkivet Västra Götaland.
- Paris in the 1700s from Allain 2004, p. 104. (Originally in Bernard Rouleau: *Le tracé des rues de Paris*, 1988.)
- Map of 1 mtl Bö by J.L. Gyzander 1797 from Stenström I [1920] 1986, p. 46-47.
- Map from 1809 by N. G. Werming: "Belägenheten omkring Göteborg utgifven af N. G. Werming 1809. Graverad av E. Åkerland." Lantmäteristyrelsens arkiv.
- Map from c. 1860 by A. Södergren in *Historiskt kartverk ... 1923*, sheet N:o 5. Original in Regionarkivet Västra Götaland.
- "Plan till Göteborgs stads utvidgning", town plan confirmed 1866. Regionarkivet Västra Götaland.
- Map 1872 by R. Söderqvist: "Karta öfver Göteborg sammandragen efter äldre och nyare kartor år 1872 af Rob. [Robert] Söderqvist". Regionarkivet Västra Götaland.
- Part of the Jönköping town plan 1877 from Améen [1972] 1985, p. 80.
- Part of Jönköping in 1907 from Améen [1972] 1985, p. 83.
- Map from 1910 by A. Södergren in *Historiskt kartverk ... 1923*, sheet N:o 12-13. Stadsbyggnadskontoret in Göteborg.
- Albert Lilienberg: plan of Kristinedal-Bagaregården, "Illustrationsritning till förslag till stadsplan, gatuhöjder och byggnadsbestämmelser Landeriet Bagaregården samt del av Christinedal uti 19^{de} roten av Göteborgs stad". Confirmed 1911. Stadsbyggnadskontoret in Göteborg.
- Paris 1980 from Allain 2004, p. 104. (Originally in Bernard Rouleau: *Le tracé des rues de Paris*, 1988.)
- The Göteborg municipality map database transformed into the Swedish coordinate systems database RT90, 1990.