# ACTIVITY SYSTEMS OF THE INNER CITY OF COPENHAGEN

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*This article is based upon a research project of the inner city of Copenhagen. It describes part of the work which has been carried out to analyse the activity systems and the organization of space. Apart from some residential enclaves and the administration of state and finance, the inner city of Copenhagen is characterized by a functional interdependence and a spatial mixture.*

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## The place-related activities

In the investigation, activities taking place within a fixed framework and which can be identified in different registers are considered place-related.

The study area is shown in figure 1. It was considered of importance to investigate how place-related activities can be classified; the result was a system of 18 classes, whose main groups are described by action, table 1. A sample of 2537 leaseholds (7%) was classified into the 18 activity groups. It was tested that this random sample represented the activities in a meaningful way.

Simple calculations of correlation between the 18 classes showed that there were high correlation coefficients between the distribution of activity categories. A complex picture of categories was formed around the commercial administration of wholesale, and the customer service of retail sale of select goods. This extensive mixture of many interdependent activities was perceived as an expression of a superior activity system in the inner city and was named the central activity complex, figure 2.

## Analysis

In order to isolate basic patterns of activity, the correlation matrix of the 18 categories of activity was made the object of factor analysis. The application of the methods was based upon works by Rummel (USA, 1970), Goddard (UK, 1968), and Sauberer and Czerjan (Austria, 1972). The computing was mainly carried out by using the program system of BMD (USA, 1972) and SAS (USA, 1972).

Some structures were easy to isolate and interprete as systems of activity. The central activity complex was isolated by the first component of a principal component analysis, and it turned out that a high central status was found in the core area of the medieval city and in two connecting areas: the Frederiksborggade area and the Bredgade area whereas a low central status was found in the residential areas in the outer zone of the inner city.

When demanding a simple solution of the factor analysis, it turned out that the superior system of activity contained two subsystems. The first of them (around the retail sale of select goods) was called the Strøg-factor (named after the main shopping street, Strøget), and the second one (around wholesale business) was called the commercial office factor. The former consisted of customer activities, the latter of activities without customer service. It is considered important that the central component describes a nearly complete activity system which the Strøg-factor and the commercial office factor subdivide.

The second, most important component was called the city component. It isolated an activity system which typically exists in offices and involves commercial administration at a high level. The component is negatively related to industrial activity and to education. In the process of factor analysis, low city status was isolated in a special factor, while one factor at its negative end showed high city status. Thus an activity system was isolated which concerns the status of the urban core as a city. High city status was found in three core areas: one around Vesterport, one around Bredgade, and one around Holmens Kanal, whereas low city status was found around in the medieval parts of the city.

At its one end the third component isolates activities which involve a system of terminal service. The other end of the third component, explains the activity system of state and finance administration. Both systems are also indicated by the results of the factor analysis which demanded a simple solution.

High terminal service status is connected with hotel activitiy and service for the public. It is found in a large compact core area west of Hovedbanegården (the central

Fig. 1. The study area. The inner city of Copenhagen.

*Fig. 1. Københavns bykerne.*

Table 1. The coding system. *Klassifikationssystemet.*

| Code | Label | Group Definition |
|------|-------|------------------|
| 1.2 | Hotels | Residential activity with commercial service. |
| 2.1 | Retail (everyday goods) | Customer service with retail sail of everyday goods |
| 2.2 | Retail (select goods) | Customer service with retail sail of select goods |
| 2.6 | Personal service | Customer service (without sale) for households and individuals |
| 2.7 | Business service | Customer service (without sale) for firms and institutions |
| 3.1 | Clinics | Consultation and treatment (commercial customer service) |
| 3.3 | Consultants | Consultation and advice, business |
| 3.4 | Professional service | Consultation and advice, personal |
| 4.0 | Publishers | Administration, commercial with sale and production |
| 4.1 | Wholesale | Administration, commercial, with sale |
| 4.2 | Banking | Administration, commercial, without sale, finance |
| 4.3 | Insurance | Administration, commercial, without sale, insurance |
| 4.4 | Headquarters | Administration, commercial, without sale, other than finance and insurance |
| 4.5 | The State | Administration, not commercial, public |
| 4.9 | Institutions | Administration, not commercial, private |
| 5.1 | Industry | Processing, complex |
| 5.2 | Trade and handicraft | Processing, simple |
| 7.0 | Education | Education |

The definitions used in the classification system serve to isolate basic patterns of activity. The system was elaborated and tested especially for this analysis. It is partly based on works by Guttenberg (1965), Chapin (1965), Magnussen (1970), and Andersson (1971).

*De definitioner, som anvendes, tjener til at isolere grundlæggende aktivitetsmønstre.*

station) and Vesterport. High state and finance administration is found in a core area around Christiansborg.

These three main components thus show the most important activity systems of the urban core. On figure 3 a simplified picture shows the areas of high and low status.

Conclusions

The main conclusions of the study are the following:

The place-related activity constitutes a unity which is characterized by an extensive mixture of interdependence among a great variety of activities. The central activity complex is scattered over almost the entire urban core.

The areas around Vesterport and around Bredgade have a high city status, but these two parts of the urban core can hardly be considered functional enclaves, as they are involved in the central activity complex.

The administration of state and finance is situated in the area on and around Slotsholmen where no other activity system is involved; it can therefore be considered a functional enclave.

Within the inner city there are some enclaves of residential use which do not take part in the most important activity system of the inner city.

RESUME

Artiklen indeholder hovedtræk om Københavns bykernes stedbundne aktiviteter. Den forsøger at beskrive hvilke kontakt- og lokaliseringsmønstre, der kendetegner bykernens virksomheder og institutioner. Bykernens hovedstruktur dannes af et aktivitetssystem, som omfatter handelsfunktionen. Udvalgsvaresalg og engrosvirksomhed er de centrale aktivitetstyper. De er meget kraftigt forbundet, og de er i intens fysisk kontakt. Forskellige andre typer af aktivitet er knyttet til dem, nemlig servicevirksomhed, både for personer og firmaer, konsulentfirmaer og håndværk; medens forlag, hovedkontorer og industri knap har så nær kontakt med de centrale aktivitetstyper. Dette aktivitetssystem kaldes det centrale aktivitetskompleks, og det omfatter 50% af al aktivitet i bykernen, se figur 2.

Ved siden af dette system findes tre mindre, som hver for sig omfatter ca. 15% af aktiviteten og fungerer selvstændigt. Et af dem er tilknyttet bykernens terminalfunktion og består af de store terminalanlæg, hoteller og forskellige typer af personrettet service; det kaldes terminalbetjeningsaktivitet. De to andre har begge med samfundets overordnede styring at gøre; det ene omfatter hovedkontorer, forsikringsvirksomheder og private banker og kaldes cityaktivitet; det andet omfatter statsadministration, de offentlige banker og institutioner og kaldes stats- og finansaktivitet.

Det centrale aktivitetskompleks er udbredt over hele bykernen (bortset fra boligenklaver som Nyboder). Terminalaktiviteten findes omkring Hovedbanegården og Vesterport, cityaktivitet øst for Sankt Jørgens Sø og i Frederiksstaden, og stats- og finansaktivitet i området omkring Christiansborg, se figur 3.
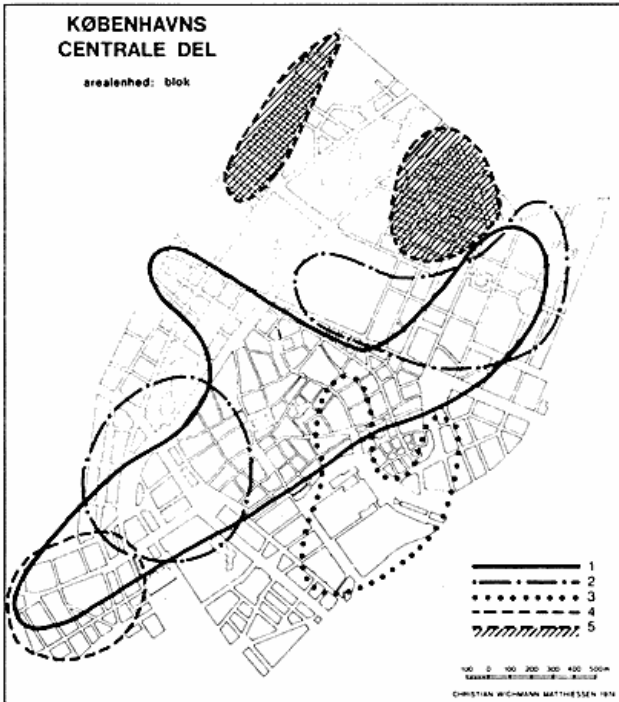
Fig. 2. The central activity complex. The numbers are codes correspon-
ding with the classification system in table 1. The lines connecting the
classes show the most significant correlation ties.
*Fig. 2. Det centrale aktivitetskompleks. Numrene svarer til klassenum-*
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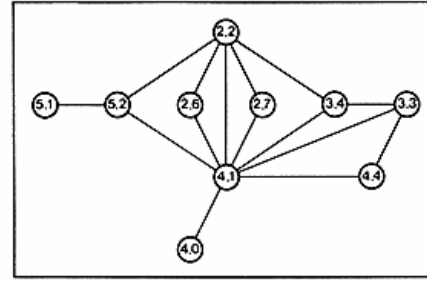


Fig. 3. The distribution of the main activity system. The number of the
signs encircling the areas refer to 1: high central status, 2: high city sta-
tus, 3: high state and finance administration status, 4: high terminal
service status. 5: residential enclaves.
*Fig. 3. Udbredelsen af de vigtigste aktivitetssystemer. 1. Det centrale*
*aktivitetskompleks, 2. Høj citystatus, 3. Høj stats- og finansadministra-*
*tionsstatus, 4. Høj terminalbetjeningsstatus, 5. Boligenklaver.*

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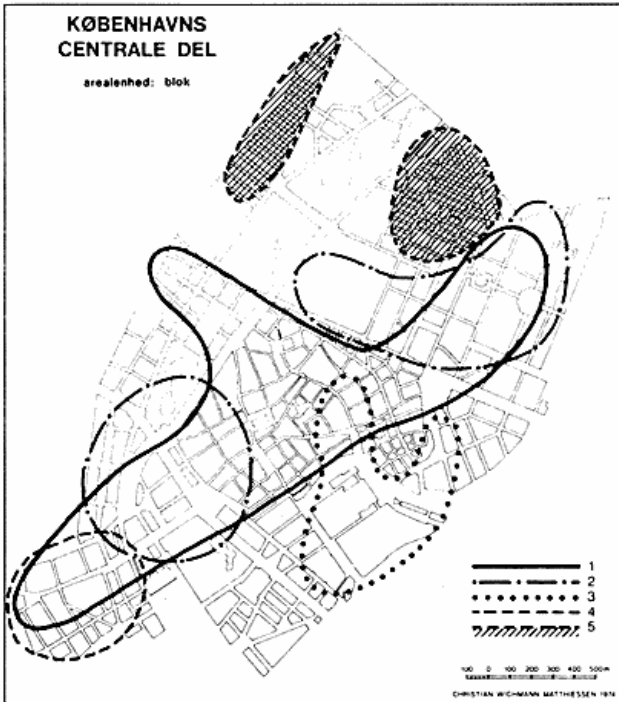rung, Wien 1961. Ergebnisse einer Faktorenanalyse. Austria.

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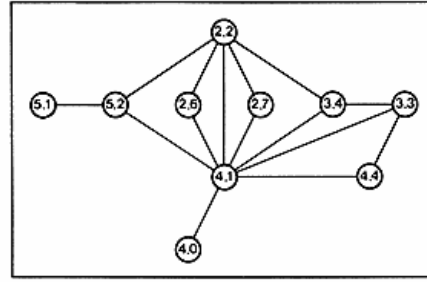


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