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The Stockholm Historical Database

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Introduction

The Stockholm Historical Database (SHD), a unit within the Stockholm City Archives, has been digitising historical source material since the mid 1970s. The main source is the Roteman Archives, created by the rotemen (city registrars).

Description of the Source Material

The Normative Administration of Records

The Roteman Institution was established under a government ordinance from November 10, 1876, as well as a decision of the Stockholm City Council from June 1, 1877, setting up the *Mantalsnämnden* (the population and tax registration board), as the body responsible for the rotemen in the capital.

On January 1, 1878, Stockholm was divided into 16 wards, called rotar, with about 8,000 to 10,000 inhabitants each. Every rote was assigned one roteman who administered the work of the Roteman office. This roteman population registration system was in operation for nearly 50 years (1878-1926). By 1926, when the system was abolished, the number of wards had increased to

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36 due to the population increases and to the incorporation of two suburban parishes into the city.

In addition to registering people, the roteman was officially authorized to distribute certain social welfare services. In a way, he served as a "social worker." We may say that he had a patriarchal function, as both a population registrar and a controller.¹

Purpose of the Source

Stockholm's new status during the second half of the nineteenth century as Sweden's largest industrial city, brought with it a rapid increase in population: in 1878 the population was 162,000, in 1926 it was 443,000. The more the city grew, the greater became the need to regulate and organize population policies. It became important to gather reliable information on population and tax revenue bases for everything from town planning and sewage management to hospital care and poor relief. To this end, the new system for registering population the Roteman System - was introduced in 1878. It replaced the Church Examination Registers (See Edvinsson, Chapter 14 in this volume, for information on the Demographic Database), which could not cope with either the rapidly increasing population or the dynamic intra-urban migration, as well as the extensive in- and out-migration to and from places outside Stockholm.

The scope of the source is all the inhabitants in Stockholm. Everyone who lived (and was registered) in Stockholm at any point between 1878-1926 can be found in the Roteman Archives. The roteman kept a longitudinal population register—*mantalsbok* (ledger)—for each piece of real estate in his rote (ward). This

¹ For a map of Stockholm showing the *rotor* and a view of the original source document, see http://www.rhd.uit.no/census/sph09891.tif and

http://www.rhd.uit.no/census/sph10570.tif.

register consisted of a main ledger as well as special ledgers on migrations to and from the rote and on deaths and births.

Contents of the Source

On the front page of each main ledger, the following information is found about the premises concerned: the ledger name, the period covered, the number of the ward, the name and number of the premises and the address and street number.

Inside the ledger, each double-spread page contains 41 columns with printed headings giving information about the population: names, titles/occupations, date and place of birth, civil status, sex, head of household marker, family relationships and death data as well as migrations to and from the specific premises.

On each double-spread page, there are 27 lines, each containing information about one person. In addition to the basic information mentioned above, there is optional information about education, military enrollment number, religion, poor relief, workhouse, medical care, deformities, imprisonment, etc.

The headings of the 41 columns are:

- 1. Name and profession or branch of industry
- 2. Nationality
- 3. Nobility
- 4. Birth: year
- 5. Birth: month
- 6. Birth: day
- 7. Birth: page in the book of births
- 8. Place of birth: parish
- 9. Place of birth: county or town
- 10. Unmarried: male
- 11. Unmarried: female
- 12. Married: male
- 13. Married: female
- 14. Widower
- 15. Widow
- 16. Divorced: male
- 17. Divorced: female
- 18. Infamy

- 19. Smallpox: natural
- 20. Smallpox: vaccination
- 21. Education (in what school or at home)
- Church registration parish: parish in Stockholm, territorial
- 23. Church registration parish: parish in Stockholm, non territorial
- 24. Church registration parish: outside Stockholm
- 25. Registered for census purposes in:
- 26. Poor relief: page in the book of relief applicants
- 27. Due to poverty exempted from personal tax: male
- 28. Due to poverty exempted from personal tax: female
- 29. Moved to the property: year
- 30. Moved to the property: from which parish in which county/town
- 31. Moved to the property: from which ward (rote) number
- 32. Moved to the property: page in the book of inmigrations
- 33. Moved to the property: within the ward (rote): page in that ledger
- 34. Specific notations
- 35. Moved from the property: year
- 36. Moved from the property: to which parish in which county/town
- 37. Moved from the property: to which ward (rote) number
- 38. Moved from the property: page in the book of outmigrations
- 39. Moved from the property: within the ward: page in that ledger
- 40. Death: year
- 41. Death: page in the book of deaths

Time Dimension

During the time of the Roteman Institution from 1878 to 1926, each roteman (they were all men) continuously updated a ledger for each property in his ward. He noted when a person moved into or out of a property, was born or died. Furthermore,

he updated the information in the ledgers every year at the time of the yearly census registration.

The Administration of the Record

Some of the columns in the source - the ledger - are rarely used for their original purposes, as indicated in the headings. Yet the headings remained the same throughout the 50 years the system existed. These headings are: Column 3, Nobility (adel) and columns 26 and 27 "Due to poverty exempted from personal tax: male/female." In Column 3 information was often entered for census purposes, while columns 26 and 27 were rarely used.

The roteman had an assistant and a messenger who helped him in the roteman office. He could also get extra help for the census registration at the beginning of each year.

When a person moved into a property from another ward (rote) and/or from another parish he had to show his "priest certificate" which also served as a kind of personal identity card to the roteman. The information on this certificate was then entered in the current ledger for the property. The certificate was kept by the roteman until the person moved out of the ward (rote). Therefore, a person moving within the ward had no need to show the certificate. At 15 years of age, a person would get his or her own priest certificate, while a married couple and their children (under 15 years) were normally joined on one certificate.

As mentioned above, the roteman functioned as a local representative for the poor relief authorities, issuing certificates to applicants for poor relief and for free hospital and medical care. This took up a great deal of his time. Another task was compiling lists of all school-age children within his rote (ward) as well as lists for military enrolment purposes.

Since the roteman kept an ongoing ledger for each property in his rote (district), which he updated continually, the system was efficient and difficult to evade. When a ledger was full, the roteman transferred the information for the persons still present in the property to a new ledger. Every person moving away from the property was crossed out (normally with blue crayon) so it was easy to see who remained. The old ledger was closed with a duration period and filed in the internal archives in the roteman office.

Archival Procedures and their History

Rearrangements and Transformations

The Roteman Archives are divided into 36 sub-archives, one for each ward (rote). The ledgers were archived in the ward to which they belonged until the system was terminated in 1926.

Changes in ward borders create major difficulties when searching the Roteman Archives. A single property could belong to several different wards at some points during the roteman's era. Therefore, adjustments have been made so that the same block is never split over more than two different rote archives.

Intentional or Non-intentional Partial Destruction

The only intentional destruction of these records is a limited deletion of some intra-ward moves when the roteman system ceased in 1926; the same holds true for the poor relief books of the different wards. This means that there is no remaining source to fill in missing dates (month and day) for moves within a ward and that no checks can be made of some of the poor relief information. There has been no unintentional partial destruction.

Accessibility of the Sources

The ledgers are fragile due to their construction and poor paper quality, wear and tear in the Roteman's office, and inadequate mending. In addition, researchers faced substantial difficulties finding their way through material in the Roteman Archives. Together these conditions made the archival material virtually inaccessible to the public. This is the main reason for the transformation of this rich material into machine-readable form.

Archival Reference

The original source can be found at the Stockholm city archives *Stockholms stadsarkiv* (SSA) under the archival reference "the Roteman Archives" (*Rotemännens arkiv*) which is a subarchive of *Överstäthållarämbetets skatteavdelnings arkiv*. The source has not been published and is not available on microfilm.

Transformation of the Source into Machine Readable Form

Procedural History

The work with the transformation of the Roteman Archives into machine-readable form started as a project in the mid 1970s and is still in progress due to the large dimensions of the archives

Flectronic Formats

Software Used

At present we use the SAS system (ver. 6.12) for data entry, data management, and as a tool to serve researchers with extraction and processing of information from the Roteman Files. We are migrating to version 8.0. Physical properties of the dataset are fixed length flat files.

The data are stored on disk, tape and CD using an IBM RS/6000 system/NT with the operating systems Unix AIX 4.3 and Windows NT.

Logical Properties of The Dataset

Since the Roteman Archives are relational we use the inherent properties in order to handle the data as a relational model.

Data Storage

The data are stored as flat files divided into libraries in accordance with the ward-divisions. For each ward, there are a number of flat files with relational linking capabilities in the form of variables in the tables. Thus, the digitised information is system-independent.

Units of Observation in the Dataset

Today there are 16 complete wards (rotar) in our database, which consists of about 2.8 million entries. Table 13–1 shows the distribution of these units among the rotar in Stockholm

We are now working with Ward 17, which also is a part of *Kungsholmen*. During 2000, the CDs for *Gamla Stan* and *Klara* will be presented. A CD for *Södermalm* with more than 1.7 million entries was presented in 1998.

No sampling is undertaken. The whole archive is being transferred to digitised form. We work on one ward at a time, aiming to complete the archives of all 36 wards. In principle, we render all the information from the main ledgers into our forms. The completing ledgers of moves, deaths and births have primarily been used for control of some information. The only exception from this is that the approximate dates of moves usually have been extracted from the ledgers of moves.

Table 13–1. Units of Observation in the Stockholm Historical Database (as of June 2000)

Area	Wards (Rotar)	Parishes	Entries	Availability
Gamla Stan	1	Nikolai (Storkyrko)	265 000	The database/ CD/microcards
Klara	2, 3	Klara	385 000	The database/ CD
Kungsholmen	4	Kungsholmens (Ulrika Eleonora)	265 000	The database
Södermalm	15, 16, 19, 31 12, 13,	Maria/Högalid	780 000	The database/ CD/microcards
	14, 25, 36	Katarina/Sofia	940 000	The database/ CD
Brännkyrka	32, 33, 34	Brännkyrka	155 000	The database

Comparability

As mentioned earlier, the roteman system lasted for nearly fifty years and was consistent over time. The comparability over time is excellent, with just minor changes in the record keeping. We simplify comparability issues for the user by the way we digitise the source.

Variable Availability

Being as true to the source as possible is crucial in our work. The information about the property on the front page of the ledger is kept in a specific register which can be linked to the forms filled in by the coder by means of the ledger number.

The Form

A form is filled out for each line (person) in the source. The form consists of two major sections. The first eleven lines contain the permanent fields for the basic information. The permanent fields reflect the person's situation when he/she moved into this property (this ledger). Table 13–2 shows the Swedish and English names of the permanent variables as well as information about the collecting and coding information of each one.

The other section of the form consists of ten free code fields and text lines where supplementary details under codes are entered, as well as information about changes in civil status, head of household, family standing and relation to head of household.

This completes the information about the first section of the form with the basic information. The codes found in the second section of the form consisting of code-fields and textlines are available upon request.

In addition, miscellaneous codes are used for information not fitting in the permanent fields or under any of the field-codes or free-codes. The miscellaneous codes go from Ö01 to Ö41, but are rarely used.

Standardization

When we fill in our forms, we try to be as true to the source as possible. Especially with regard to place names and professions, a large variety of spellings and abbreviations of the same place or profession exist. Therefore, some registers give standardised spellings of place names and titles. Our titles are currently undergoing standardisation work, applying the HISCO-scheme.

Table 13–2. Variable Names and Notes for the Stockholm Historical Database

Swedish Name	English Name	Variable Notes
HEFTE	LEDGER	This unique number of the ledger consists of a five-digit number, assigned to the ledgers after the fact. The ledger is a population register for a specific property for a specific time span.
SIDAR	PAGE-LINE	The page and line number in the ledger where the entry for a person can be found. Page is always the first three figures in the SIDAR field. Page 1 is thus 001 and so on. In the fourth position, which is normally empty, a 5 and an A or a B is seen, which refers to half-page, respectively to A- or B-page. The line number on the page where you can find this person. Normally there are 27 lines on a page, numbered from 01-27. The line number is written in positions 6-7 in the SIDAR field. If one person is written between two lines there will be a 1 in the last or 9th position in this field. If there is a 2 or a 3 in the last position, it means there are 2 or 3 persons respectively written between 2 lines. The combination of the numbers of the ledger, page and line gives each person a unique source-address.

Table 13–2. Variable Names and Notes for the Stockholm Historical Database (continued)

Swedish Name	English Name	Variable Notes
HUSHF	HEAD OF HOUSEHOLD	The page number and line number for the head of household for this person. The rules for writing the page and line are the same as above.
		If the page and line numbers in the SIDAR and the HUSHF fields are identical, this person is his or her own head of household.
		Five 9s in this field (999-99) means there is another head of household on an unknown page and line in the ledger.
		In a family household, the head of the family (usually the father)—who also is the head of household—supplies the surname, while the other family members are indented under his name. This may also be the case for foster children and servants.
		For lodgers and others, the name of the head of household (if there is one) is often written in column 34 or column 01. In such cases the name of the head of household can be found under the code HUSHF F in their forms. If the head of household can be found, his/her page-line is entered in the permanent field; otherwise this will be filled with 9s.

Table 13–2. Variable Names and Notes for the Stockholm Historical Database (continued)

Swedish Name	English Name	Variable Notes
FAMRE	FAMILY- STANDING/RE LATIONSHIP	FAMILYSTANDING (first two digits)
		10 Single, no child
		20 Couple, no child
		30 Single, with child
		40 Couple, with child
		51 Illegitimate child
		52 Foster child
		53 Orphanage child
		54 Adopted child
		55 Step child
		90 Other relatives
		RELATION (the last two digits)
		01 Single
		03 Head of household (HH)
		04 Family member to the HH
		05 Employee of HH
		06 Lodger of HH
		07 Unknown relation to HH
KOPPL	ASSUMED HOUSEHOLD	Adult children are often written as if they had their own household even though they still live with their parents; this is because they normally have their own priest certificate when they are older than 15 years.
		In some cases it can be assumed that people live together in a household but it is not clear that they comprise an ordinary household
		For all persons in the same assumed household, the page and line numbers for the first person serves as a connection key (which does not mean that he/she is the head of household).
KLAMM	BRACKET	K in this field means that there are square brackets around the people in the assumed household.

Table 13–2. Variable Names and Notes for the Stockholm Historical Database (continued)

Swedish Name	English Name	Variable Notes
FORTS	FORM- NUMBER	If there is more than one form used for this person it is shown in this field.
		"11" is the normal information reflecting that there is no continuation on another form.
		"12" means the first form of two, "22" means the second of two, "13" means the first form of three and so on.
ENAMN	SURNAME	"00" means that the person is deleted or is an absent owner of the property. The spelling of the surname follows the
		source. An altered name is written between two slashes with the new name directly after.
		A woman's maiden name is written between two slashes directly after the name she got by marriage; for instance LINDGREN/ASP/. Sometimes there is an F (Fødd) before the maiden name.
		If a name is written between quote signs (" "), it is an alisas. If a name is written between less than and greater than signs (< >), it means the person received this name through marriage.
FNAMN	FIRST NAME	The spelling follows the source. An altered first name is written between slashes / / with the new name directly after. When the first name field begins with "ODÖPT," it means not yet baptised.

Table 13–2. Variable Names and Notes for the Stockholm Historical Database (continued)

Swedish Name	English Name	Variable Notes
TITEL	TITLE	The profession or title follows the source.
		An altered title is written between slashes / / with the new title directly after.
		In a family household, the wife and children will get the following titles if they have no titles of their own: Title H means wife (hustru). Title S means son (son). Title D means daughter (dotter).
FODAT	DATE OF BIRTH	The first four figures is the year, the next two the month and the last two the day.
		(A string of 9s in this combination means missing data.)
FOORT	PLACE OF BIRTH	The name of the parish where the person was born. The spelling follows the source.
FOLEN	COUNTY- CODE	The county code for the place of birth is written in the field directly above the place of birth.
		Sweden is divided into 25 counties or provinces, each of themhaving a code from 01 through 25.
		The county code is only given if that information was in the source or if the town is a county town or if it is a parish within the city of Stockholm. Places of birth abroad are coded 50.

Table 13–2. Variable Names and Notes for the Stockholm Historical Database (continued)

Swedish Name	English Name	Variable Notes
CIVIL	CIVIL STATUS	Civil status for this person:
		O unmarried
		G married
		Ä widow/widower
		F divorced
		E not specified
GENUS	SEX	M male
		F female
		E not specified
		J judicial person
VACCI	VACCINATION	Smallpox vaccination:
		V vaccinated
		E not specified
T/T/DT/ A	D A DIGIT	S natural smallpox
KYRKA	PARISH-	The year this person was registered in
	YEAR	(normally) the territorial parish of his
		rote. If the year refers to registration in a nonterritorial parish in Stockholm (for
		instance, the Catholic parish), the name
		of that parish can be found under the
		code KYRKA F.
INDAT/	INDATE/	The date (or sometimes only year) when
UTDAT	OUTDATE	the person moved into/out of this
		property. The month and day is usually
		an approximate one extracted from the
		book on migration. (If the UTTYP is D,
		the date will be the date of death.)

Table 13–2. Variable Names and Notes for the Stockholm Historical Database (continued)

Swedish Name	English Name		Variable Notes
INTYP/ UTTYP	INTYPE/ OUTTYPE	Every type of move, either real or administrative, has a one-letter code. Below is a list of these types of moves:	
		I	From/to another property within the ward
		R	From/to another ward within Stockholm
		0	From/to another parish outside Stockholm
		U	From/to abroad
		K	Remains in the former/next ledger for this property
		F	Born in the property of this ledger
		D	Dead in the property of this ledger
		X	From or to an unknown place
		Н	Transpositioned within the ledger
		E	Deleted / Not specified
		S	Traveller (Registered elsewhere in the Census)
		Ä	Owner of this property
		В	From or to the appendix for disappeared persons

Table 13–2. Variable Names and Notes for the Stockholm Historical Database (continued)

Swedish Name	English Name	Variable Notes
INFLY/ UTFLY	INMOVE/ OUTMOVE	If INTYP/UTTYP is I, you can find the old ledger name and the page in that ledger in this field, for instance, D 12/2 where the figure after the / is the page and D 12 is the old ledger name.
		If INTYP/UTTYP is R, the number of the rote that the person has moved from/to is entered in the first two positions in this field.
		If INTYP/UTTYP is O, the name of the parish is in this field.
		If INTYP/UTTYP is U, the name of the country and/or the place is in this field.
		If INTYP/UTTYP is H, the page and line in the ledger from/to which he has been transpositioned is in this field.
		If INTYP/UTTYP is B, there can be information about the year and the page where the peron was registered in the appendix for disappeared persons.
INLEN/ UTLEN	COUNTY IN/OUT	The county code for the in-move/out-move is only given if that information was in the source or if the town is a county town. If the move is from/to some place abroad, the county code will be 50 and the INTYP/UTTYP will be U.
		For more information about county codes, see the section about county codes for place of birth.

Table 13–2. Variable Names and Notes for the Stockholm Historical Database (continued)

Swedish Name	English Name	Variable Notes
INBOK /UTBO K	INPAGE/ OUTPAGE	Page in the in/out-migration ledger for the district (either from/to another country, parish or ward). If the INTYP is F then the page means page in the ledger of births for the ward.
		If the UTTYP is D then the page means page in the ledger of deaths for the ward and the UTDAT is the date of death.
		If the INTYP/UTTYP is B, then the page means the page in the appendix for disappeared persons for this ward. (If there also is information in the INFLY/UTFLY field, the page (in INBOK/UTBOK) refers to the ledger for people moving into/out of the ward.)

Notes on the Most Important Variables

Housing

The ledger number provides information on the address and the property name and number. Other information on housing can sometimes be found under the freecode VÅN, showing on what floor a person lived and if he or she had the contract for the flat

Household and Family

Information concerning household from is contained in the variables HUSHF (head of household) and FAMRE (family standing and relation) in the coding scheme. Another variable of interest here is KOPPL or assumed household.

Geographic Variables

Information about address and property name and number on the front page of each ledger is digitised and can be linked to each individual with the ledger number. You can also get information from the variable FOORT (place of birth usually the parish name) and FOLEN (county code). Other geographic variables, INFLY and UTFLY, provide information about place of in-migration to and out-migration from the property.

Social Services

From the free-code SOC you can get information of poorrelief, medical care, defects, sicknesses, workhouse and so on.

Sex, Marital Status

You can get information of sex from the variable GENUS and about marital status from the variable CIVIL. Since the source is longitudinal, you can also get information about changes in the civil status from the field-code CIVIL N.

Migration

Every type of move, either real or administrative, gets a one-letter-code—making it easy to get good statistics of

migration for the material. In a longitudinal source, you can also trace every move as long as the migrant is within an area already digitised.

Social (Race, Nationality, Language, Religion)

Other nationalities than Swedish are often recorded under the free-code NAT. For data on religion, cf the free-code KYRKA F where registration in a non-territorial parish (for instance the Catholic parish) can be found. Race and ethnicity are never recorded.

Record Linkage

By linking the primary entries—sex, date of birth, names, birthplace and dates of in- and out-migration— a biography for each individual can be created. In addition, by use of the page and line for the head of household in combination with the family standing and relation-codes, families and households can be reconstituted. At the Stockholm Historical Database, we also turn other sources into machine readable form which can, in the next round, be linked to the Roteman Database:

- *The Death Certificates* by using date of death, sex, and names as linkage keys.
- The Police Information on criminal records by use of date of birth, names, place of birth, and sex as linkage keys.
- Housing information flat size, rent etc by using property name and name of flat owners or head of households as linkage keys.
- The Coordinate Files with the digitised administrative maps can be linked to the individual data by using property name and address, place of birth etc.

External Linkage

Possible linkage to sources held at other archives or institutions include:

• To the Demographic Database in Umea - DDB (by use of sex, date of birth, name, and place of birth).

- To the War Archives (by use of the military enrolment number).
- To the School-Archives (by use of the schooling information).
- To the Poor Relief-Archives (by use of the poor relief information) and so on.

Confidentiality Provisions

Since some persons in the Roteman Database are still alive, several restrictions apply to accessibility to parts of the information (according to the "Data Law" as well as to the "Law of Secrecy"). Usually we are able to help the researcher find a way to deal with such problems in a sensible way. For persons who may be alive, we anonymize their information before we make it available.

A new law will become effective in a few years time, but we don't think it will complicate the utilisation of the Roteman records more than the present legislation.

Data Access

Our database is not yet published on the Internet since some persons in the material are still alive. As mentioned earlier, we have made CDs with some areas in our database—namely *Södermalm, Gamla Stan* and *Klara*. On the CDs, the regulations regarding the data are handled by the software application and the coded information is translated to self-explanatory text.

We are also able to create special files with the information the researcher needs.

Research Possibilities

All the basic demographic studies that can be done with traditional census data (age and sex distributions, place of birth, etc.) can be carried out. Not only migration and immigration on an international and national level, but also detailed intra-urban migration down to the level of moves between single properties can be studied, together with family and household composition and social standing based on titles, etc. Poverty, crime and social

welfare are other questions that can be addressed, as well as causes of death.

Since the Roteman Archives are longitudinal and based on individuals, there are research possibilities that are not easy to achieve with pure, census-based data. When processing the data, you can control for subgroups like those present between two or more censuses, comparing them with those just present at the first census or last census, etc. You will, in short, have an additional quality mark on your data, which will be useful for the interpretation of processing results.

Expert Users

With the regulations we have for keeping the files we have become the expert users and work in close co-operation and a continuous dialogue with researchers to extract the data they need for their research undertakings.

Data Expansion - Plans for the Future

We are continuing to digitise the remaining wards of Stockholm and want to make both our existing and future data available in several different ways. We will continue to produce CDs and DVDs with our data. A web-application for the Internet is also an important goal.

We have established co-operation with schools in Stockholm in order to increase their utilisation of our digital files.

We have also received special funding for classification and coding of some fields. This includes translation of titles and professions into English in order to simplify use by the international research community.

Selected Publications on the SHD

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