

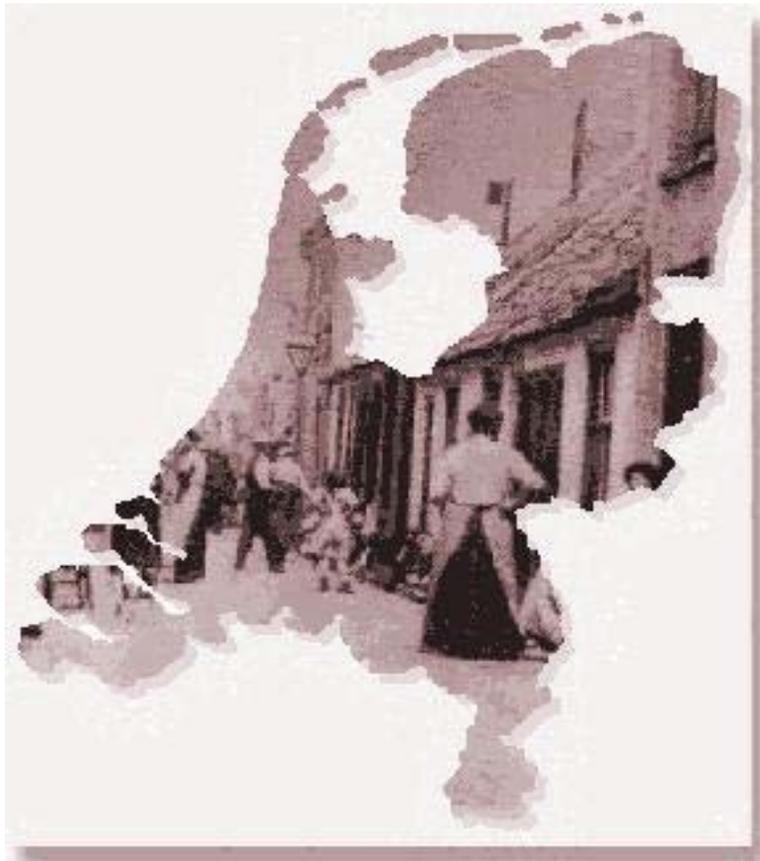
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# **New kinds of research using the Historical Sample of the Netherlands**

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## 1 Introduction

The Historical Sample of the Netherlands (HSN) aims to compile life course data as completely as possible for a representative portion of the 19th and early 20th century population. This sample with longitudinal data is based on the birth register from the period 1812-1922 and counts 78.000 births.

The HSN was founded in 1987 by academics from the historical, social and demographic sciences. In 1991 the International Institute of Social History adopted the HSN and provided it with adequate housing and facilities. In the first years data input was financed by the Ministry of Education and Science. Since 1996 investment funds of the Netherlands Organization for Scientific Research (NWO) have taken over. The database is still under construction, but during the next few years the 40.000 life careers from the birth period 1863-1922 will be completed in the project *Life Courses in Context*.

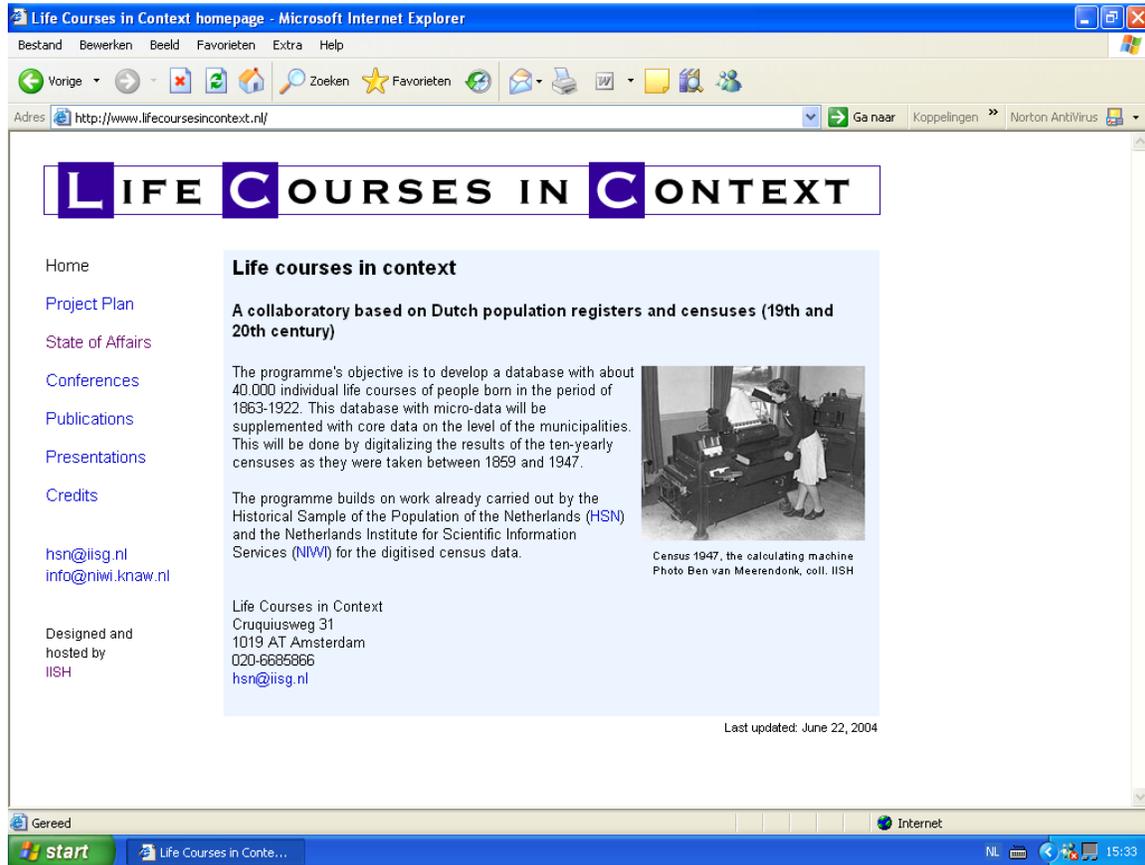
The purpose of this paper is to give an impression of the enormous possibilities the HSN-database offers for research, esp. historical demographic research. Not only by high-lighting the possibilities of research on the life careers itself, but also by showing possibilities for doing research on multiple generations, connecting it to other important databases and by introducing contextual data.

Building multi-generational datasets is not a new project for the HSN. In several projects part of the HSN-database was already used as starting point for data collection on special projects that included second or even third generations of research persons. This was done by collecting the life careers of the children, the grandchildren and/or the parents of the original sampled research persons.

The building of two other databases in the Netherlands: GENLIAS and the CENSUS-database are opening new perspectives for linking with the HSN-database. GENLIAS is a genealogical database which covers now over 27.000.000 entries. The CENSUS-database collects data for the period 1795-1971 at the level of all Dutch municipalities. This will give the individual life careers the necessary contextual information. The project *Life Courses in Context* combines the data entry of the period 1859-1947 with the collecting and digitization of the 40.000 HSN life careers from the period 1863-1922 (see figure 1).

Before I will go into these new research possibilities, I will give a short introduction to the concept of the HSN and the sources used by the HSN. Subsequently I will go into the opportunities which can be

delivered with the HSN-database with life careers as such and with combining it with other sources. In the end I will present several multi-



generational studies which have already been realized.

Figure 1. Home page project *Life Courses in Context* ([www.lifecoursesincontext.nl](http://www.lifecoursesincontext.nl)).

## 2 The Historical Sample of the Netherlands (HSN)

### 2.1 Concept and main sources

The HSN is based on a research concept in which the Netherlands is treated as one area and the civil registry offices, population registers, land registry archives, church rolls, tax records, etc. kept there are treated as one source, despite the geographical spread and occasional local differences in survival, quality and accessibility of this research material (for a more elaborate description of the HSN, see Mandemakers 2000 and/or

<http://www.iisg.nl/~hsn>).

The sample of the HSN has been drawn from all persons born in the Netherlands between 1812 and 1922. In 1810 French civil law was introduced which provided for the standardized recording of vital events. At varying dates in the course of the year 1811 the Dutch municipalities introduced this civil registration. The choice for the certificates of births as sample framework excludes immigrants. For this group additional samples will be and already have been drawn from the population registers. Besides, a sample based on the certificates of birth has the advantage of including all persons who emigrated.

Almost every certificate of birth, marriage and death ever filed in the Netherlands is still available, as each was made in duplicate. The duplicates have been assembled in the provincial archives, at least for the nineteenth and early twentieth centuries. The registrars had to note the name, age, occupation and (actual) municipality of residence of the informants and witnesses. This information served to identify these individuals. Certificates had to be signed by informants and witnesses. In case they were not able to sign, the reason was made explicit (usually because of illiteracy). The marriage certificates e.g. give information on the occupations, illiteracy (absence of signature) and places of residence of the bride, the groom, their parents and the -usually four- witnesses, often relatives or friends of the marrying couple. By means of these certificates it is possible to do research on such topics as social and geographical mobility, marital mobility and illiteracy.

Besides the certificates of vital events, the main sources for the HSN database are the population registers, which aimed at a continuous registration of the composition of households and the whereabouts of each individual. On the basis of names and addresses it is possible to link other sources to the database, like tax registers, militia rolls, church records, notarial deeds and land registry archives. These sources, however, are not as complete for the whole of the Netherlands as the certificates are. The population register of Arnhem for example was destroyed during the battle in and around this city in september 1944. Not every municipality has sufficient tax records, some people who migrated have disappeared from sight because of inadequate registration in some population registers, and so on. However, the sample is large enough and the research consistent enough to overcome a lot of these problems. The following offers a further introduction into the Dutch population registers.

## 2.2 Dutch population register.

The Netherlands is one of the few countries in the world that has kept a continuous population register starting as early as the mid-nineteenth century. Its functions were, among others, to serve as a basis for the franchise and to facilitate the systems of poor relief and conscription. In the early registers, each household was entered on a double page, see figure 1, with the head of the household first; he was followed by his wife -in

case the head was a married male-, children, other relatives, and other members of the household. Date and place of birth, relation to the head of the household, sex, marital status, occupation, and religion were recorded for each individual. All changes occurring in the household were recorded in the register. New household members arriving after the registration had started, were added to the list of individuals already recorded, and those moving out because of death or migration were deleted with reference to place and date of migration or date of death. In fact, the population register combines census listings with civil registration in an already linked format for the entire population. Families and individuals could, in principle, thus be followed on a day-by-day basis for a long period. In most municipalities, registers cover a time span of ten years between the censuses. Population registers remained in use until 1910 or 1920, after which a new form of continuous registration was introduced, consisting of single sheets, so-called family cards. The registration unit was no longer the household, but the family (for an introduction to the old Dutch population registers, see Gordon 1989).

Figure 2 Page from Dutch population register.

Volgnommer.	Dag-teekening en Jaar der Inschrijving.	FAMILIENAAM. (Familienaam der vrouw.)	VOORNAMEN. (Voluit geschreven.)	Geslacht { M. (masculijk) v. (vrouwelijk)	Betrekking van elken persoon tot het hoofd van het huizezin. (Niet in te vullen voor afzonderlijk leersak.)	Dag-teekening en Jaar der Geboorte.	Geboorteplaats. (Met aanwijzing der provincie voor inboorlingen, van het land voor vreemdelingen.)	Burgerlijko staat.		3 genoo (Elk op te
								H. (gebuid.) W. (weduwestaat.) S. (gescheiden van echt.)	Tijdens de Inschrijving. Veranderingen en hare Dagteekening.	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	
1		Bromelow	Henry	M.	hoofd	12 July 1828	Utrecht (Utr.)	EE		A.
2		Verhoef	Maria Nomica	V.	vrouw	16 Jun 1825	Herstogenbosch	EE		O.
3		Bromelow	Henry Johannes	M.	Zoon	6 Apr 1850	Utrecht (Utr.)		129 Mei 1872	O.
4		"	Johannes Hubertus	M.	id.	14 d <sup>e</sup> 1852	" "			O.
5		Honsterman	Hendrius Johannes	M.	mitbewerger	9 Oct 1842	Oegstgeest (Z.H.)			A.
6	23 Junij 1871	Verhoef	Elizabeth Johanna	V.	Wcht.	6 Nov 1855	Utrecht (Utr.)			O.
7		Alsmarkt	Anna Hend <sup>r</sup> Jacoba	V.	sch. dochter	26 Aug 1857	Utrecht (Utr.)	EE		A.

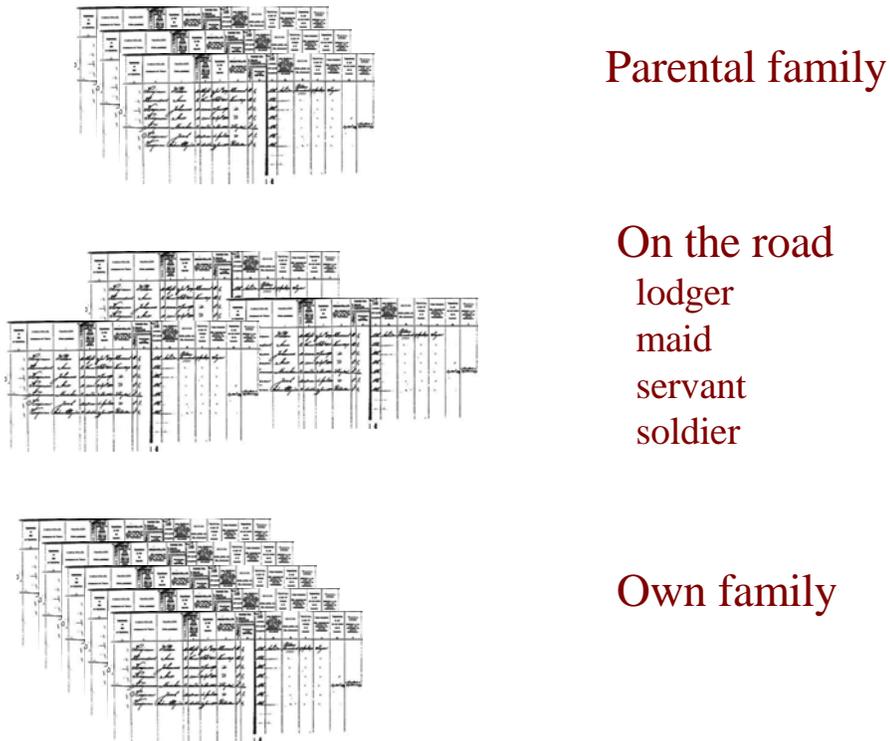
A Left page: Date of entry, Last name, First name, Date of Birth, Place of Birth, Civil Status, Marriage Date

B Right page: Religion, Profession, Address, Date of arrival, Municipality of origin, Date of leaving, Place of destination, Date of decease, Official place of living, Remarks

Kerk- genootschap. (Elk bepaald op te geven.)	Ambt, Hoofdberoep of Beroep, waarvoor men het hoogst is aangeslagen.  (Elke soort bepaald aan- duiden; voor gepaten- teerden in overeenstem- ming met het patent.)	Huizing.  (Straat, gracht enz., wijk, huisnummer.)	Dag- teekening en Jaar der vestiging in de Gemeente.	Vorige Woonplaats.  (Met aanwijzing der provincie voor in- boorlingen, het land voor vreemdelingen.)	Dag- teekening en Jaar van het vertrek uit de Gemeente.	Waarheen vertrokken.  (Gemeente en provincie voor inboorlingen, het land voor vreemde- lingen.)	Dag- teekening en Jaar van het Overlijden.	Opgaven omtrent het wettig Domicilie.	Aanmerkin-
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
M. h.	Oppersijter bijde	Wassersstraat 300 N. 1007	30/11/1877	Utrecht					—
O.R.	Gasfabriek	G. 309. K	"	"					
O.R.	Handarb.		"	"	7 juni 1872	Delfhaven			
O.R.	Zaamen		"	"					
R.C.	Oppersijter bijde			D. 12/228/3	3 maart 1870	Leiden			
O.R.	gas		23 juni 1871	Utrecht	12 Jan 1871	Utrecht			
R.C.				D. 1/12/3	7 juni 1872	Delfhaven			

In the late 1930s, the population register was replaced by the *personal card*; from that time on, the *individual person* became the registration unit in all municipalities. Since then the population register in each municipality consists of a collection of personal cards, containing nearly the same information as the old population register. All persons who were alive in 1939 or were born after that year received a personal card and these cards are sent to the Dutch Bureau of Genealogy after one's death. More than five million cards, sometimes containing information dating from the beginning of the 19th century, are available for research at this bureau. Copies of the cards are made available to the public, although without the kind of information that might infringe on privacy (Van den Brink 1966). In this way a lot of people can be tracked down who were lost in the system itself before the introduction of the individual record. In addition, many of the research subjects born after 1870 can be found in the personal cards archive of the Central Bureau for Genealogy, so that migration patterns can be followed for these subjects from the opposite direction and the chance of "losing" the research subject is minimized. Since October 1994 this system has been computerized on a central level. This means that sampled persons who died after the first of October 1994 can be found in a computerized way.

Figure 3. Typical Sequence of Entries in Dutch Population Registers.



The outstanding feature of the population register for the period 1850-1940 is that it presents the sampled or Research Person (RP) in constantly changing stages in the life course. The following example gives a typical sequence (see figure 3):

- 1) as a son or daughter of the head of the household,
- 2) living independently or living with another household (for instance as a servant)
- 3) as a head of one's own household (or as a wife)
- 4) living as an elderly father or mother within the household of a child or living in an institutional environment.

In short, the research in the population registers provides us with data on migration, religion, occupation, moves and family structure for the complete life cycle. Frequent movers may have up to fifty entries in the registers during their life.

### 3. Research possibilities

The HSN database contains individual data from birth certificates, death certificates, personal cards, marriage certificates and population registers. The data entry of all 78.000 birth certificates have already been completed; with about 20.000 death certificates, 18.000 personal cards and almost 22.000 marriage certificates all kinds of other data are well under way. During 2006-2007 the data of the life careers of the birth period 1863-1922 will be delivered (n=41.000) by way of the already mentioned project *Life Courses in Context*. This will not only include the data from the population registers, but also all the corresponding marriage certificates of the RP's over the whole period till 1980, up to a total of about 40.000.

We will then have information on the following subjects: the occupational history of the sampled individual or the research person (RP); the marriage and family history of the RP, including age at marriage, religious affiliation and number of children; the parents and parents-in-law of the RP, including occupation, place of birth and indication of illiteracy via absence of signatures; social network of the RP through the same information about the marriage witnesses; and the migration history of the RP (see also figure 3).

By this database a wide time perspective can be applied to study the effect of changes over time in the role played by various life-conditions. The period covers the fertility and mortality transition in the Netherlands from the middle of the nineteenth century to the late twentieth century. The comparison of the fertility and mortality patterns of individuals remaining in their region of origin with that of migrants, and with the population residing in the region of destination offers the opportunity to study the effects of a variety of environmental conditions during different stages of life.

In connexion with the *Life Courses in Context* project a research program was developed in which possibilities for research were explored. The data will serve numerous research projects in the historical demography, but as an example we will here concentrate on two special fields of interest: a) Social inequality in health and mortality and b) Households and changing labour relations. The research program was a collective enterprise like the whole of the HSN. The following two paragraphs were originally written by respectively Frans van Poppel and Jan Kok.

#### *Social inequality in health and mortality*

Following complete life careers including migrants offers more opportunities to judge a person's advantage or deprivation than income or wealth. Sen introduced 'dying not prematurely' as a value people appraise intrinsically and which can be measured over a quite longer period of time and much more unequivocal than other measures of inequality (Sen 1998). Long-term developments of inequality in mortality are not only part of core historical issues (Preston et al. 1981) but are also important issues in contemporary

discussions on socio-economic inequalities in health. Possible persistence of mortality differences indicates that efforts that have been made to improve the health of the lowest socio-economic groups have not been fully effective (Smith, 1991; Woods and Williams, 1995).

The socio-historical context in which groups of individuals are embedded – socioeconomic status of the area, level of segregation of socio-economic groups – proves to have strong associations with mortality levels independent of individual characteristics (Hummer *et al.*, 1998, Wilkinson, 1996). The question which processes underlie these inequalities is still largely unanswered. Several authors have argued that socioeconomic health differences in adult life are partly explained by processes much earlier in life, in particular by childhood socio-economic conditions (Kuh and Ben-Sholomo 1997 Lundberg 1993). To study long-term effects of early-life conditions the HSN-prospective birth cohorts are the most appropriate research design. Retrospective data have a high risk of biased information, in particular as far as childhood conditions are concerned, and only describe the surviving part of the cohort.

Data from the HSN can be used to study the issue of socio-economic inequality in a very sophisticated way. The data make it possible to study time trends in completely differing epidemiological environments; they allow the use of identical socioeconomic status variables over regions and time; they make it possible to examine in one model the impact of area and of socioeconomic characteristics of individuals, and, finally, to study mortality differences over the whole age range. By focussing on specific dangerous occupations the effect of the working environment can be studied separately.

#### *Households and changing labour relations*

The HSN-dataset offers unique opportunities to study interactions between changing labour relations and individual households. In their responses to macro level changes, families themselves created the conditions for further changes, e.g. by emigration or by fertility change (Baud and Engelen, 1994). The family is seen as a dynamic constellation of individuals. Consequently, conflicts between individual and group interests, as well as between generations and sexes, occur. Besides, families have very different strategic ‘repertoires’ and scopes for future planning, depending on their socio-economic position and cultural preferences.

The material of the HSN will considerably enhance our knowledge of the household within the societal context (Wall et al. 1983, Verdon 1998). The nature of intra familial relations depends, among other factors, on the stability and duration of cohabitation and the presence of strangers (step family, boarders) in the household. Taking in relatives or boarders, or expelling children was used to increase the welfare of the family as a whole or of some of its individual members. Very little, though, is known about the reasons for variation in household composition. Hypotheses on the influence of household production, inheritance and regional customs concerning the living-in of unmarried relatives exist, but have hardly been tested till now. With the HSN data the types of

households in which individuals lived across their life course can be observed. Herewith researchers can go beyond the classic concept of the family life cycle. The integration of the experiences of broken families, permanently single persons and infertile couples into social and demographic history is feasible because HSN breaks with the traditional preference for married couples and complete families.

The internal division of tasks within families relates both to the strategic behaviour of families and to potential conflicts within families. However, little is known about the extent and nature of women's and children's work, which generally elude official recordings (Tilly and Scott 1978, Mitterauer 1992). HSN offers a variety of ways to fill the existing gaps. Civil registers and population registers offer occupational titles for men and women of differing ages. This information can be compared with the occupational censuses and be placed within the familial context as well. Secondly, the life courses themselves show how careers were formed, e.g. by transmission of the parental occupation, by apprenticeships or by formal education. And finally, information will come available on differential family strategies. Families may spread their risks by placing children in different sectors of the economy. Also, the timing of leaving home elucidates the choices within labouring families between employing children within the household itself and employing them elsewhere to bring in wages (Van Poppel *et al.*, 2003).

#### 4. Other large databases in the Netherlands

##### 4.1 The genealogical database GENLIAS

GENLIAS stands for GENEalogy and LIAS which is the name for an old method of bundling paper (by way of threading). Aim of the database is to help genealogists reconstructing families by offering them an index on the most important archives for genealogical research. The scope of the database is national and the result of a joint effort of regional history centres and provincial state archives.

Presently the database consists of over 27.000.000 different entries derived from over 6.000.000 documents. Most important are the certificates of marriage which have been completely entered for the period 1811-1922 for all provinces except parts of the provinces of North- and South-Holland. Besides the marriage certificates indexes have been compiled of parts of the certificates of birth and death and the church registers (baptism, marriage and burial records) which date back to before 1811, probate office records and statements of succession (for more details, see [www.genlias.nl](http://www.genlias.nl)).

Marriage certificates not only give the names of bride and groom but also of their parents. By linking these certificates it is possible to create 'marriage links' for 2, 3 or 4 generations. This is the more interesting because for some provinces the volunteers not only extracted the names of the actors but also their ages and professions. GENLIAS

offers the HSN easy possibilities of extending the life careers of the Research Persons with life career data of other related persons like the parents and/or children and even further forwards and backwards in time: grand-parents and grand-children. Esp. in case there are no professions recorded, some data entry is still necessary, but searching for the certificates which is the most difficult and time-consuming part of the job can be done automatically. In fact we already use GENLIAS very intensively in case HSN Research Persons got lost in the archives and we want to find them back.

Studies using the index on the marriage certificates from GENLIAS are unfolding, see e.g. Van Poppel et al (2005) that connected three generations of spouses to test whether or not the age of marriage is associated with the age of the (grand)parental marriage in the past.

### 3.2 The census database

The database of the HSN offers individual life careers. But these individuals lived in a rapidly changing environment of an industrializing and modernizing Dutch society. It is important to connect these individual careers with the changing societal context. This can be done by using the published results of the Dutch census.

The first general Dutch population census was held in 1795 under the Batavian Republic. From 1829 onward, censuses were held every ten years. The 1940 census was postponed until 1947 because of the war. No population census has been held in the Netherlands since 1971 because of growing privacy consciousness (and refusal to take part) among the general public. In some years the Dutch censuses were combined with an occupational census and a housing census.

Except for the census of 1960 and 1971 the original micro-data do not exist anymore, but about 200 volumes with results in the form of tables were published. These tables give an enormous amount of information on the level of the more than 1200 municipalities existing in the nineteenth centuries. In addition to the population size, these censuses contain information on the structural characteristics of the population, such as age, gender, marital status, religion, household status, occupational activity, and nationality. In some years the censuses were combined with an occupational census and a housing census. The results of this digitization have already been made public. See [www.volkstelling.nl/nl/](http://www.volkstelling.nl/nl/) for the images of each page of these volumes and for most of the tables also a digitization in the form of excel-spreadsheets. In figure 4 an example is given of a page from the tables of the results from the occupational census of the city of Groningen in the year 1899.



## 5 Research on multiple generations: designs and examples

### 5.1 Designs

The Dutch population registers allow following persons from address to address, from municipality to municipality. This means that it is not only possible to follow persons but also to follow different generations forwards and backwards. The whole system started in 1850 and it is possible to cover the whole period of 1850-2005. With an average of 30 years for each generation, this period includes five generations which can be followed during their traveling in time and space (of the Netherlands) and for three of them during their whole life span. Figure 5 sketches some possible research designs.

The first two designs (A and B) shows the standard way of collecting data. A research person is sampled from the birth certificate, he or she is searched in the population register and from that moment all data from the whole family are entered into the computer. The person itself may have died without leaving the family environment (before 1870 an average of a third of all born persons did not reach the age of 15 in the Netherlands), or will have started a complete life career, whether or not forming his or her own family.

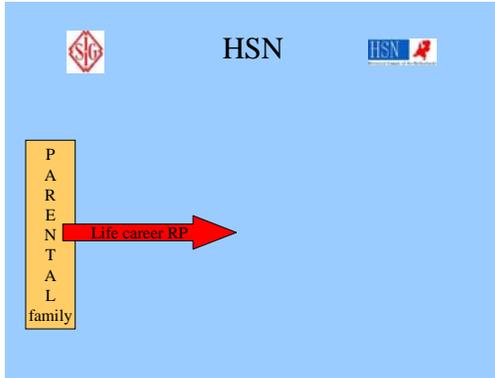
Design C is the extension of A/B with GENLIAS. In the national index of marriage certificates all certificates of brothers and sisters are searched and data are taken over as far as necessary; the same can be done for the parents. In this way it is very easy to research three generation mobility models (social mobility and marriage mobility). For three generations you get professions at the time of the marriage for bride and groom and for the parents. For two generations you even get the professions at the time of their own marriage and the professions at the time of the marriage of their children which opens possibilities for intragenerational mobility studies.

Design D shows the possibilities for research on siblings: one or more siblings of the Research Persons are selected and for these persons the life career as well as the forming of their own family is followed and collected.

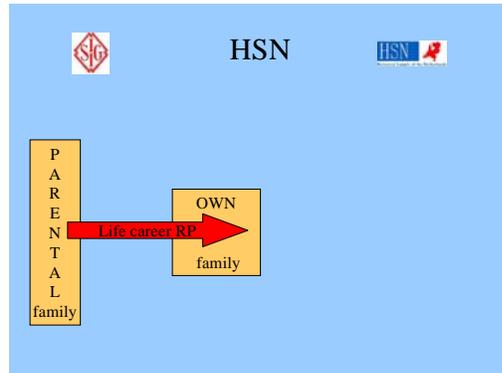
Design E en F show more-generation models. Although the models A to D also consist of information about the parents it is not a full two-generation model, because the parents are not followed during their whole life span. In Design E a complete first generation is followed by a complete second generation. The second generation RP is sampled at random or by another criterium and also followed during the whole life span. Note that the data entry of the parental family in the case of the second generation is not necessary anymore, because they are caught by entering the life career of the first generation. By way of specific developed software it is possible to generate the parental family situation of the second generation automatically from the first generation.

Figure 5. HSN standard designs (RP stands for the sampled Research Persons).

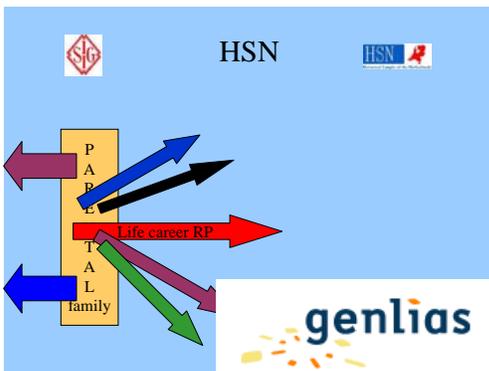
A) Parental family with RP as single



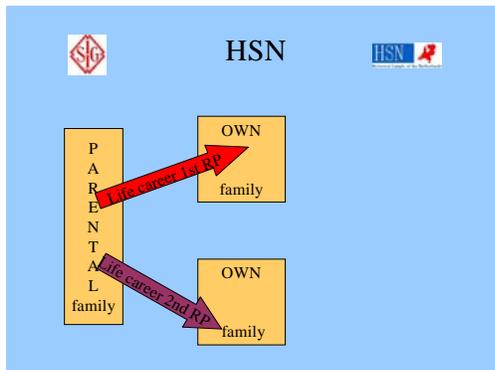
B) Parental family with RP forms own family



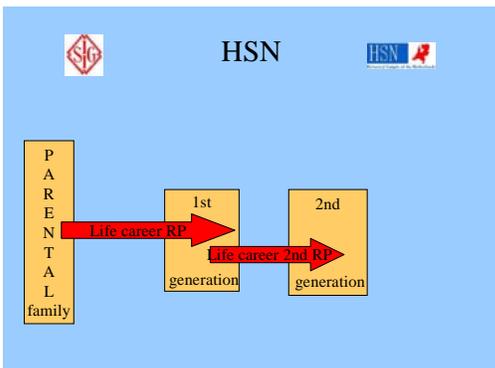
C) Extension model A with GENLIAS



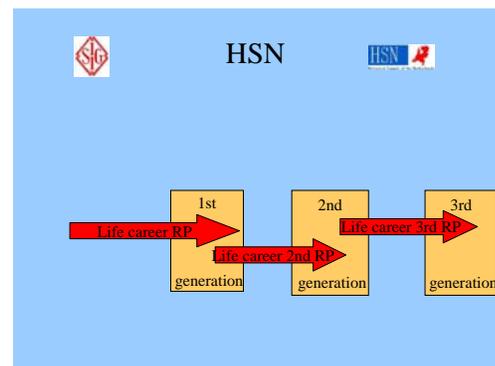
D) Extension model B with siblings



E) Two generation model



F) Three generation model without parental family.



Design F shows a three-generation model like the two-generation models except that the parental family is not included. A model without the parental family is most likely in case one is working with Research Persons born before the start of the Population Register (1850) or with immigrants coming from outside the Netherlands. Of course it is always possible to get more information about the parents by way of GENLIAS or their own registration in 1850, whether the RP is still living in the family or not.

## 5.2 Examples of more complicated designs.

In the following some examples will be given of studies following the designs D, E and F whether completely or partly. These studies are sometimes based on original HSN-research persons, sometimes based on sample criteria of their own. Immigrants who cannot be found by definition in the birth certificates were sampled from population registers, marriage certificates were used as a base for getting specific regional samples with a lot of second generation offspring etc. Moreover multi-generation research was further extended by including attributes of parents or children to the life career of the originally sampled persons.

### *'Maids from Zeeland' by Hilde Bras*

For the research project of Hilde Bras (2002, 2003) 'Geographic and Social Mobility of Female Domestic Servants in Zeeland, 1860-1920' the life careers of women born between 1845 and 1915 were reconstructed for three specific regions in the province of Zeeland. The HSN original sample contained 600 of them, 450 of whom passed the age of fifteen. To enlarge the sample size, sisters were added to the sample, with a maximum of one per family. This led to a total sample of approximately 700 women. The researcher focused on the chances in life of domestic servants compared to other female and male occupations. Data were gathered referring to migration, marriage, family situation at the time of birth and at entry into the labour force, income of the fathers, employers and spouses. The research showed that domestic service was a specific phase in the life career for a large part determined by parental interests and family circumstances. Maids proved to be geographically very mobile and had a greater opportunity to marry and settle in the large cities far away from the region of birth. Those who settled in the large cities on average found spouses with a higher social status.

### *Family formation and living strategies by Jan Kok*

For the study 'Family formation and living strategies in the western parts of the Netherlands 1830-1940' a special database was built from the records of the village of Akersloot. The research is part of a comparative project, called 'Population and Society in Taiwan and the Netherlands', which compares family formations in different cultural and economical settings. The project is focussed on testing the Hajnal thesis about distinctive marriage patterns in the world. The project tries to test and refine the thesis in new ways. The comparative research is focussed on specific material conditions for marriage and

family making, like intergenerational transference of possessions. The HSN built the necessary database for this research, based on 300 marriages in Akersloot between 1830-1890. These marriages form the first generation (n=300) and from the start of the marriage onwards the whole family was reconstituted. Subsequently all offspring (n=1600) were searched in the population registers and marriage certificates, irrespective of the place one settled down in the Netherlands. This data on families will be combined with the land registers (*Kadaster*) and notarial records in order to study the effect of property transmission on household formation.

*'Reduced fecundity' by Luc Smits*

A special variant of the design under E was followed by Luc Smits in his thesis research on 'Reduced fecundity because of maternal high-risk conceptions' (1998; Smits *et al*, 2000, 2002). The research tested indications that persons conceived in situations of hormonal imbalance will run a higher risk of pathology. For women this would result in reduced fecundity. A hormonal imbalance is presumed to occur in the first years after the menarche, in the final years before menopause, in the first period after a pregnancy and after a long period of infertility. It may also occur in certain seasons. The hypothesis that female fecundity decreases when a woman gets pregnant in a situation of hormonal imbalance can be epidemiologically approached using historical demographic data. This is where the HSN data files played their role.

A sample of the female population in Rotterdam born between 1873 and 1902 was constructed. This sample consists of four control groups and four risk groups (first generation). By means of family reconstruction, it could be checked whether risk groups showed reduced fecundity. Risk groups were women born just after a short interval with a foregoing birth (parental environment), or after a very long interval with a foregoing birth, or at a young age of their mother or at an old age of their mother. Data used for testing were numbers of still-born children and twins, sex ratio, birth intervals and seasonal fluctuations in the numbers of births (second generation). The basic HSN sample and an oversampling thereof for the period 1873 to 1902 (n total = 2100) supplied the control groups. The largest portion of the risk groups was constructed by means of a direct sample from family cards. In total this database contained 2591 sample persons with family reconstructions, with 1500 of them living during their fertile period in Rotterdam and the rest spread out over the country. The thesis was confirmed for three of four risk groups, only the thesis with young mothers was not confirmed.

*'Settlement determinants for immigrants' by Leo Lucassen*

The project 'Settlement determinants for immigrants and their descendants in the Netherlands', 1860-2000 by Leo Lucassen (see <http://cf.hum.uva.nl/pion-imm/index.htm>). is an example of the design under F. Research in this project is directed on the way immigrants integrate into their new environment. Four groups of immigrants were distinguished: Germans, Italians and 'internal' immigrants from the provinces of North Brabant and Saeland. Research focuses on persons arriving in Rotterdam in the period 1870-1880 and 1920-1930. The research person was found in the population registers and registers of foreign people. Over 200 volumes of these registers were searched to build

the at random sample. Because of low numbers of Italians, additional sampling was carried out in Amsterdam.

The persons sampled were at the age of 15 to 30 years old. Family reconstructions have been carried out for these persons from arrival in Rotterdam till the end of their life. For the cohort arriving in the period 1870-1880 the second and third generation were reconstituted as well (for one of the first three children). For practical reasons for the cohort 1920-1930 only the second generation could be reconstructed. Each first and second generation counts 200 research person (3th generation about 150). Initially, for the moment of arrival, a larger group of 400 was sampled to get a very detailed view of the conditons of arrival. The total number of first generation research persons is about 1600 for each generation. The research will a.o. result in two dissertations (Margaret Chotkowski for the Italians and Gerard van der Harst for the people from Noord-Brabant and Zeeland, for early results see Delger (2003) en Lucassen (2001, 2004).

## 6 Concluding remarks

The Historical Sample of the Netherlands is especially important for historical demographic research because it is possible to follow all sampled persons from the cradle to the grave. Because of the merits of the Dutch population register there is no risk of losing people because of migration to other regions or municipalities.

The importance of the HSN for the researcher can be summarized in four points: In the first place, the HSN provides a representative data set with which research can be done into social developments in the 19th and 20th centuries. Secondly, the HSN provides control groups which researchers can compare with their own research population. Thirdly, the HSN is developing the expertise which individual researchers are usually not able to acquire in the short time at their disposal. In the fourth place, the HSN offers the possibility for researchers to use the existing HSN data set as a base for their own research projects.

In addition to functioning as an important source for research and as a source for control groups for interpretation of research into specific groups, the HSN database serves as the basis for collecting new data. In practice this is realized through: a) designing and maintaining a data structure for use by individual researchers; and b) taking the database as a starting point for further research, both through increasing the number of individuals included (oversampling) and through recording supplementary variables whether or not for a specific group of research subjects. Scholars thus kill two birds with one stone. Not only can they use the data already recorded, the software and expertise developed by the HSN are available as well. This expertise can also be considered as an important byproduct of the data entering of the past ten years. The HSN sets the precondition, that in exchange for using its software and already recorded data, new data must be added to the data set, so that they will eventually become available to other researchers too.

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