

## 11

## Dutch and Russian regions compared. Demographic development in the 19th century.<sup>1</sup>

### Introduction

Since 1991, Dutch research groups in Groningen and Utrecht have been co-operating with Russian research groups in Moscow, Yaroslavl and Tambov in the field of regional history of the nineteenth century. This joint research programme is sponsored by NWO, the Dutch organisation for scientific research, which in 1993 initiated a programme for support for scientist in the former Soviet Union.

The start of this joint programme was completely accidental. In 1990 a group of Russian scholars, mainly from the Moscow archives, attended the centennial of the Dutch organisation of archivists in Groningen. There they became acquainted with the Dutch research programme 'Integral History' of the (economic) historical departments of the universities of Groningen and Utrecht. This programme contained many aspects which in Russia also were studied within the context of the programme 'Culture of the Russian province' which had been initiated by the Cultural Institute in Moscow.

Dr Vitaly Afiani, at that time the coordinator of the project 'Culture of the Russian Provinces', was looking for a new methodology. In his view regional history was a neglected item in Russian history, yet the events of 1917 can only be understood if a regional setting is involved. However, what was done in the field of regional history was too archeographic and encyclopedic, and also too top-down oriented to offer relevant explanations. He thought that our Dutch project Integral History could offer the framework they needed.

### The project 'Integral History'

The aim of the 'Integral History' project is to reunite a number of diverging paths within the historical discipline, which at the moment is characterised by growing specialisation and mutual misunderstanding. In many ways the project is a tribute to the French *Ecole des Annales* which always promoted 'histoire totale'. Our approach, however, will be more theoretical. We intend to develop, along empirical ways, a model of societal change in a regional setting. This, indeed, is a pretentious effort which only has a chance of succeeding if it is begun

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<sup>1</sup> First published in: Carel Horstmeier, Hans van Koningsbrugge, Ilja Nieuwland, Emmanuel Waegemans (eds.) *Around Peter the Great. Three Centuries of Russian-Dutch Relations* (Institute for Northern and Eastern European Studies: Groningen 1997) 115-124.

on a modest scale.

Therefore restrictions in time and space have been set. The project covers the period 1770-1914, a period in which major transitions took place in every field of society. As yet our research is also restricted to two regions: the Groningen clay area in the north east of the Netherlands and the 'Meierij van Den Bosch' in the province of North Brabant in the south of the country. Both regions show clear differences. The Groningen clay area was characterised by large-scale agriculture, while in the sandy area of North Brabant farms were rather small. Moreover in the 'Meierij van Den Bosch' almost all inhabitants were Roman Catholics. In the Protestant Groningen clay area the Catholic denomination consisted of only a small minority of the population. This region was the cradle of an important secession movement of orthodox Protestants.

Nevertheless there were some resemblances. At the beginning of the period under research both regions were dominated by large regional capitals, the cities of Groningen and 's-Hertogenbosch. However, during the course of the nineteenth century the central position of 's-Hertogenbosch was challenged by Tilburg and Eindhoven. The fast growth of these two cities was caused by industrialisation: woollen industry in Tilburg, and Philips and other plants in Eindhoven. In the Groningen area there was also some industrialisation (potato-flour, strawboard, machinery) but the city of Groningen remained the gateway to other regions and outnumbered by far second rank cities like Winschoten and Appingedam.<sup>2</sup>

At first sight politically there were also some resemblances, such as the large distance from The Hague, the political centre of the Netherlands. But a second look shows that the situation was quite different. Until 1813 North Brabant was governed directly by the central administration while Groningen was a fully fledged member of the Dutch Republic. When the Netherlands became a united kingdom, politicians from North Brabant tried to become involved in the national government whereas Groningen tried to stay as independent as the new order admitted.

By comparing the two regions we are trying to find out which developments had a more universal character and can be used for the model, and which ones were region-specific. Then our conclusions must be tested in other regions to show whether the interrelations between the societal variables we have figured out are also manifest elsewhere.

### **The research programme**

The research programme consists of four main streams:

1. cohort analyses: From 1810 on, with intervals of 20 years, birth cohorts are taken from the parish registers and the registers of population. The cohort-members are followed throughout their lives, as long as they stay within the area.

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<sup>2</sup> Pim Kooij, 'Peripheral cities and the Dutch urban system in the Netherlands until 1900', *The Journal of Economic History* (1988). See also this volume.

This enables us to analyse demographic behaviour, social mobility, migration, and the functioning of the labour market.

2. structure analyses: For benchmark years, a complete survey of the population is derived from the registers of population in order to reconstruct the occupational structure, and, combined with financial and other sources, the social structure.

3. the analysis of municipal accounts: These accounts are computerized in a certain way to create a possibility to reconstruct the occupations of the municipal administration over a period of 150 years. They reflect the major changes in the local community as far as money was concerned. Of course the minutes of the Municipal Council are used to obtain additional information. Moreover, the appendices of the municipal accounts, which escaped destruction in some places, provide valuable data on wages and prices, which enables us to reconstruct the standard of living.

4. the analysis of regional newspapers: This line of research is intended to collect events and opinions in the political, social, cultural, and economic domains, which cannot be found in the archives. This includes the analysis of advertisements and announcements.

As an addition to these main streams, individual graduate students are preparing doctoral dissertations on specific subjects such as: production and the labour market, trade and transport, industrialisation, education, health care, group and party formation, social control and criminality, the impact of the Roman Catholic church, and urbanisation.

Since it has proved impossible to perform these analyses in all municipalities in the two areas, 10 municipalities are selected from each region: the regional capital, two smaller cities and seven villages. Of course the other municipalities have also been taken into account, but in a less detailed way.

For these villages and the regions as a whole, the impact of the major societal transitions are being studied:

- demographic (leading to low birth and mortality rates)
- political (the breakthrough of liberalism and socialism)
- economic (the transition from a mainly agricultural production structure to one characterized by industry and services)
- social (the emergence of new forms of social inequality related to higher social and geographical mobility)
- cultural (the impact of the Enlightenment)
- religious (the rise of secession movements within the established church, emancipation of discriminated denominations).

### **Russian involvement**

The Dutch regions have been analysed in a number of books and articles.<sup>3</sup>

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<sup>3</sup> See for instance Pim Kooij (ed.) *Dorp naast een stad. Hoogkerk 1770/1914* (Groningen 1993), and Jan van Oudheusden and Gerard Trienekens (eds.) *Een pront wijf, een mager paard en een zoon op het seminarie. Aanzetten*

The aim of the cooperation with Russian researchers is an initial international comparison. For this comparison, two regions have also been selected in Russia which, as in the case of the Netherlands, show clear differences. These are the Yaroslavl region and the Tambov region.

The city of Yaroslavl, the centre of the Yaroslavl region, dates from the 9th century. In the 16th and 17th century this city was at its zenith. At that time, the city on the Volga was a distribution centre for goods from the harbour of Arkhangelsk and at the same time a distribution centre for agrarian products from its own region. The foundation of Saint Petersburg hampered the further development of Yaroslavl as an interregional distribution centre, but in the nineteenth century, partly due to the connections to the railway system, Yaroslavl developed into an industrial city (textiles, leather, food processing, including tobacco).

In the Yaroslavl regions three villages were selected:<sup>4</sup>

- Velikoye in the Yaroslavl district (districts were founded in 1777) an industrialised village characterised by linen and boots industry.
- Vyatskoye in the Danilov county, an agricultural village which had also some trade.
- Ilyinskoye a typical bears nook in the Poshekhoniye district in the north, which was owned by lady Ekaterina Khanykova. In this village dairy farming was the main source of income.

All villages in the Yaroslavl region were characterized by strong seasonal migration towards the cities. This was already happening before 1861 in the times of serfdom. The productivity of the soil was very low. Therefore the owners of serfs preferred to be paid taxes instead of receiving a part of the harvest (this phenomenon is called *quitting*).

Tambov is situated in the south in the region of chernozem – black earth. The city of Tambov has its origin in the middle of the 17th century as a fortress for the defence of Moscow. It developed into a trading centre for agricultural products. The arable parts of the Tambov region were very densely populated. Therefore a lot of peasant migration took place, for instance towards Siberia to enlarge their allotments of land.

Apart from the city of Tambov, which is now being studied in the same way as the city of Groningen, the Tambov research group concentrated on the village of Malye Pupki (Kazinka).<sup>5</sup> This village was founded in 1648 and by the beginning of the 19th century it had about 2500 inhabitants. The main occupation of the inhabitants was arable farming. Cattle farming was less important.

### **Sources and methodology**

To enable comparisons between the Dutch and the Russian developments, in the first stage of our joint project we concentrated on cohort analysis, and to a

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*tot een integrale geschiedenis van oostelijk Noord/Brabant* ('s-Hertogenbosch 1993).

<sup>4</sup>By a research group at Yaroslavl University, headed by dr. Irina Schustrova and dr. Elena Sinitsyna.

<sup>5</sup> The research group at Tambov University is headed by prof. Yuri Mizis and dr. Sergei Esikov.

lesser extent on structure analysis. The available sources for demographic development in both countries are slightly different:

In August 1811, in the Netherlands the registration of births, death and marriages by the churches was replaced by a registration by the state, the civil registration. This was the work of Napoleon. A year later he probably wanted to do the same in Russia, but the Russians stopped him. With hindsight, from a researchers point of view this is a pity because the quality of the civil registration is much higher.

The civil registration is the main source for our research in the field of demography in Brabant and Groningen. For the years 1811, 1830, 1850 and 1870 for each village we have taken 120 birth certificates from the civil register, that is, roughly the number of children born in a year in an average village (for the capitals we take double the number). The birth certificates contain information concerning the parents (age, occupation, ability to write). We try to follow the 120 members of every cohort throughout their lives. For many of them we find a death certificate very soon, for infant mortality was very high. For the more fortunate, at a given moment we find a marriage certificate containing information on the occupations of the partners and also literacy. Very soon after that the birth certificates of the children of the married couple appear.

In a number of cases the women lived until the end of her fertile period. For such a family demographic characteristics such as the number of children, the intervals between births and other matters can be analysed.

After the birth certificates of the children, the death certificate of the cohort member finally follows.

However, the number of cohort members that stayed in their village of birth for their whole lives was a minority. In general, by the age of 20 about a third of the cohort was dead, one third still lived in the village and one third had left the village, together with their parents or alone.

Their vicissitudes, death, marriage, birth of children are written down in the civil registration of other municipalities. But in which ones? At that time the Netherlands had about 2500 municipalities. It is, of course, not possible to search all these registrations. Nevertheless we have been able to find a large number of these migrants in neighbouring villages and in the regional capitals. Fortunately lists are available covering all births, marriages and deaths in the province of Groningen as well as Brabant in alphabetical order. But if the cohort members had crossed the boundaries of the provinces, they do not figure in these lists.

For the 1850 and 1870 cohorts this problem no longer exists. The reason for this is the introduction in 1850 of population registers based on a census which was held every ten year. In large books, all families were recorded at the beginning of the period of ten years. All mutation were also noted, for instance when a family moved within the municipality, but also when it moved to another municipality. So from 1850 on we know where we have to look for them. The births of children were also written down in the registers of populations, which

gives us indications for the dates of the birth certificates which we continue to use for the period after 1850 because they contain extra information, for instance on literacy. However, some people have still been lost because not everyone informed the municipality about their departure.

The population registers also provide information about changes in occupation and religion because the actual situation was written down every ten years, after the census.

In Russia the first real census was not held until 1897. This, however, is a magnificent source of information. The number of questions was very large and it also contains some retro-information. Unfortunately, information on the individual level is no longer available for many villages and towns.

The Russian counterparts to the Dutch sources are the parish registers (*Metricheskie Knigi*) They do not have the disadvantages of the Dutch parish registers of the 18<sup>th</sup> century because in Russia there was a dominant religion whereas in the Netherlands there were many churches each with its own registration.

The parish registers were kept in duplicate by the priests. Nevertheless, some of them have gone missing. In Tambov, for instance, 10 volumes concerning the years between 1875 and 1890 have vanished, which is indeed a great problem.

The parish registers contain three sections; on births, on marriages and on deaths.

The reliability of the parish registers depends on the accuracy of the priests. Unfortunately they contain a lot of variations in information about ages and names. For instance: when a man lived in his wife's parents' house, he sometimes adopted the name of that family, returning to his own name when he started to live on his own. This does not make it easy to identify the same person in the registers.

On the other hand the parish registers contain some information which cannot be found in the Dutch civil registration, for instance about illegitimate children and about migration. Even the causes of death are given, although these are usually not very accurate. Some priest give as a diagnosis: 'God's will'.

Before the introduction of the census, the counterpart of the population registers were the revisor's books. In these books the data on families was noted and compared to the previous revisor's books, which had been completed some years before. The revisor's books, which were mainly tax lists, also contain some information on migration. Unfortunately, the last revision was held in 1858. Therefore there is a gap between 1858 and 1897.

In the Yaroslavl region there is an extra source, the confession books (*Ispovednye Rospisi*) which were also kept by the priests and were controlled by army officers. They contain information on age, legal status and also temporary absence.

By comparing carefully these three sources, the Russian research groups, which the help of the Dutch computer programmes, succeeded in constructing

the lives of a large number of cohort members. And the search is going on, in Russia as well as in the Netherlands. The last part of this article contains some preliminary results, which will soon be published in a wider context in the book *Where the Twain Meet. A Comparison of Dutch and Russian Regional Development in the 19th Century*.

### Some results

#### A. Infant mortality

Table 11.1 presents the results for two Russian villages, the village of Hoogkerk in the Groningen region, and the villages of Veghel and Schijndel in the Brabant region.

Table 11.1. *Infant mortality (percentage of cohort members)*

|             | 1830 |     |      |     | 1870 |     |      |     |
|-------------|------|-----|------|-----|------|-----|------|-----|
|             | 0-1  |     | 1-5  |     | 0-1  |     | 1-5  |     |
|             | male | fem | male | fem | male | fem | male | fem |
| Malye Pupki | 5    | 4   | 6    | 11  | 18   | 12  | 6    | 7   |
| Vyatskoye   | 41   | 42  | 4    | 17  | 51   | 39  | 2    | 9   |
| Hoogkerk    | 10   | 6   | 4    | 9   | 20   | 7   | 9    | 16  |
| Veghel      | 40   |     |      |     | 44   |     |      |     |
| Schijndel   | 28   |     |      |     | 32   |     |      |     |

Cohort analysis is not an appropriate technique for an overall view of child mortality. The death certificates of the Population Registration are a better source because they contain deaths at all ages whereas cohort analysis pivots on one generation. For instance, in the north of the Netherlands there was a smallpox epidemic in 1871. Therefore the mortality rates are very high for children in the 1-5 range.

Nevertheless, some information can be obtained from cohort analysis because it provides the opportunity to link together several characteristics of the deceased, for instance social status. In Hoogkerk we noticed that until the end of the century a higher social status did not reduce the risk of dying for young children.

The most striking information in table 11.1 is that there are large differences in the death rate between the villages. It is high in the Yaroslavl village and the Brabant ones, and rather low in Malye Pupki and Hoogkerk. We are not quite sure what the reasons for these differences are, but one important reason may have been in the Netherlands that children in Groningen were breast-fed and children in Brabant bottle-fed, but there is an on-going discussion about that point.

At any rate, table 11.1 shows that the mortality pattern in some Groningen village resembles that of Russian villages more than that of Brabant villages.

### B. The age at marriage

It is well known that people in Russia married very early. Table 11.2 reflects that pattern. On the other hand, the age at marriage in the Netherlands was rather high. This is what Hajnal had in mind when he formulated his Western European marriage pattern. People in Western Europe did not marry before they could support a family of their own, while the people in the East, because of the special occupational structure in the villages - they worked in family units - had the opportunity to marry earlier.

The demographic transition in the west changed this pattern. The table indeed reflects the fall of the age of marriage, first in the city and later in the country. However, in Russia the opposite was the case. There a rise in the age of marriage occurred. As a result the differences between Russian and Dutch villages became minimal by the end of the century, especially when we compare the Groningen villages with Vyatskoye.

What we cannot explain yet is that the girls in Malye Pupki were older than their husband, whereas in all other cases the grooms were older. Such a pattern of older brides mostly occurs when there is a lot of migration. Migration, however, was much higher in the Yaroslavl district.

*Table 11.2. Average age at marriage*

|                    | 1810 |      | 1830 |      | 1850 |      | 1870 |      |
|--------------------|------|------|------|------|------|------|------|------|
|                    | male | fem  | male | fem  | male | fem  | male | fem  |
| Malye Pupki        | 18.5 | 20.8 | 18.6 | 19.8 | 18.3 | 18.7 | 19.7 | 20.0 |
| Vyatskoye          | 22.0 | 22.4 |      |      | 23.3 | 23.7 | 26.3 | 25.3 |
| Velikoye           | 20.5 | 18.9 | 20.5 | 20.1 | 22.7 | 20.6 | 24.5 | 21.9 |
| Groningen villages | 28.9 | 26.9 | 28.7 | 26.6 | 27.9 | 25.8 | 26.4 | 25.3 |
| Groningen city     | 28.2 | 27.7 | 28.1 | 27.9 | 26.9 | 27.1 | 27.0 | 26.1 |

### C. Intervals between births of successive children

Cohort analysis enables us to measure the intervals lying between the births of successive children. In this way we can measure the effects of different feeding methods. We also obtain information on the practising of birth control. Although our information is not yet complete for all the regions involved (Yaroslavl is still missing) the tables 11.3 and 11.4 offer interesting information.

In 1830 the intervals in Russia (Malye Pupki) were rather large. The reasons given for this are the practise of breast feeding and also poorer working conditions. Both of these affect fertility. Moreover, infant mortality was rather low, which increases the negative effects of breast-feeding on fertility. In Groningen and in Brabant the intervals were also rather large, with the exception of the first which was considerably lower than in Russia. This had to do with premarital sexual intercourse; many children were born within a few month of marriage. In Russia customs did not admit this premarital sexual behaviour.



*Table 11.3. Intervals between births of successive children. Cohort 1830 (months)*

|                    | 0-1  | 1-2  | 2-3  | 3-4  | 4-5  | 5-6  | 6-7  | 7-8  | 8-9  | 9-10 |
|--------------------|------|------|------|------|------|------|------|------|------|------|
| Malye Pupki        | 28.9 | 40.6 | 34.5 | 36.9 | 45.7 |      |      |      |      |      |
| Groningen villages | 15.1 | 26.3 | 28.9 | 35.5 | 27.8 | 31.2 | 32.2 | 32.5 | 30.5 | 43.6 |
| Brabant villages   |      | 21.1 | 23.3 | 25.7 | 28.2 | 20.3 | 20.3 | 25.8 |      |      |

*Table 11.4. Intervals between births of successive children. Cohort 1870 (months)*

|                    | 0-1  | 1-2  | 2-3  | 3-4  | 4-5  | 5-6  | 6-7  | 7-8  | 8-9  | 9-10 |
|--------------------|------|------|------|------|------|------|------|------|------|------|
| Malye Pupki.       | 30.7 | 35.0 | 29.5 | 31.4 | 30.4 |      |      |      |      |      |
| Groningen villages | 13.5 | 26.4 | 25.1 | 28.8 | 27.4 | 30.0 | 28.6 | 45.5 | 29.7 | 29.1 |
| Brabant villages   |      | 17.7 | 21.1 | 20.3 | 21.3 | 27.7 | 21.6 | 21.4 |      |      |

When we compare the outcomes for the 1830 cohort with the cohort of 1870, the Dutch figures provide very interesting information. The intervals between the first four children in the Groningen villages are rather low. One reason may be the higher fertility because of the fall of the age of marriage, but we think that a kind of modern family limitation is revealed here. People had the number of children they wanted very quickly, and then they started practising birth control. But since their methods were as yet not very effective, a lot of 'accidents' occurred. As a result the intervals in the middle are rather high. After that the intervals become shorter again. When we take into account other characteristics of the cohort members who were still procreating at that time, we see that they almost all belonged to orthodox protestant religious groups. These people were not allowed to practice birth control and did not accept it.

In Brabant the pattern was quite different. There we also see large intervals in the middle which could be an indication of birth control. But on average the intervals are rather short. This had to do with the catholic religion which was dominant in that region. The roman catholic priests encouraged large families to promote catholic emancipation. The exception of the Brabant villages is accentuated by table 11.5.

*Table 11.5. Average number of children per marriage*

|                    | 1811 | 1830 | 1850 | 1870 |
|--------------------|------|------|------|------|
| Malye Pupki        | 1-3  | 4-6  | 4-6  | 4-6  |
| Yaroslavl villages | 3    | 4-6  | 4-6  | 4-6  |
| Groningen villages | 4.6  | 5.1  | 5.6  | 4.1  |
| Brabant villages   | 5.8  | 6.2  | 5.7  | 6.6  |

The third important characteristic of tables 11.3 and 11.4 is the fall in the intervals in Malye Pupki. Here again the trends are converging especially when we take into account that the Groningen pattern more strictly resembles the general Western European one.

#### D. Structure and size of families

Cohort analysis only gives information on successive generations. To obtain a more general picture structure analysis is a better instrument. To obtain a picture of the average size and structure of families, we made cross sections of the population in benchmark years based on the registers of population and confession and revisor's books. This enabled us, among other things, to discern different kinds of household. In total we had 12 different types of families (such as couples without children, parents with children, single-parent families, brothers or sisters living together, three generation families and so on). In table 11.6 we clustered nuclear families and extended families. The ideal/typical nuclear family consists of a father and mother and some children. The ideal extended family spans several generations.

*Table 11.6. Structure of the families*

|                    | 1850    |          | 1910    |          |
|--------------------|---------|----------|---------|----------|
|                    | nuclear | extended | nuclear | extended |
| Hoogkerk           | 59.0    | 41.0     | 79.0    | 21.0     |
| Yaroslavl villages | 52.7    | 47.3     |         |          |

According to Hajnal and others, the extended family was common in the East, whereas the nuclear family was common in industrial Western Europe. But here again convergence is shown. In 1850 already, the nuclear families in the villages we studied outnumbered the extended families.

#### **First conclusions**

Of course our observation are still based on the situation in a few villages. Further research is needed and will be done<sup>6</sup>, but a initial comparison on the micro level indicates that in the second half of the 19<sup>th</sup> century and at the beginning of the 20<sup>th</sup>, demographic behaviour in Russia and the Netherlands may have had more similarities than has yet been presumed. Infant mortality, the age of marriage, procreation, and the structure and size of families all show converging trends. By the end of the 19<sup>th</sup> century the differences in demographic behaviour between the sets of villages in the East and the West seems to have been not much larger than the relative differences between the villages in Russia as well as in the Netherlands.

<sup>6</sup>Fortunately the Dutch organisation for scientific research (NWO) will finance continuation of our cooperation for the period 1997-2000.