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Demographic behaviour in the Yaroslavl loamy area. The results of cohort analysis for two typical rural parishes

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Introduction

This paper focuses on the peculiarities of demographic behaviour in two typical rural parishes in the Central Russian province of Yaroslavl in the nineteenth century. The research has been conducted within the framework of a joint Dutch-Russian project on regional societal development, which started in 1992 and is based on the method of cohort analysis.¹ The research material is related to the history of two conventional groups of small villages in the Yaroslavl loamy area. Both have similar soil conditions and are situated in neighbouring districts. The first was the parish with the dominant village Sandyrevo in the Roman-Boris-Gleb'sky district (*uezd*) which incorporated 15 settlements. The landed classes were dominant in eight of these while the State Economic Department owned the other seven. The second one, Archangelsky *pogost* on the Kast River, was a typical rural settlement – a church with a cemetery, rectory and adjacent buildings. It was situated in *Danilovsky volost* and had control over 30 small villages with peasant serfs accounting for 85% of the population. All the inhabitants belonged to the same religious faith, the Russian Orthodox Church.

The Danilovsky district had the smallest territory of the 10 districts in the Yaroslavl province, occupying 1,632 sq. *versta* (an outdated Russian unit equivalent to 1.6 sq. km). Part of the soil was not suitable for cultivation because of loam and only strips (16.7%) were arable (8,538 sq. *desiatina*, – an outdated Russian unit equivalent to 2.7 acres); another part of the land (45,786 *desiatina*) was covered with forests and boscages. Local landowners and peasants cultivated grain (rye and oats), but only for themselves and their

¹ P. Kooij (ed.), *Where the twain meet. Dutch and Russian regional demographic development in a comparative perspective 1800-1917* (Groningen/Wageningen 1998).

families. The flax industry and market gardening were also developed. People did not breed cattle and there was no dairy production.

In 1858 the population numbered 69,671 (31,119 males – 44.7% and 38,552 females – 55.3%),² and in the last decade of the nineteenth century it had grown to 73,350 (32,244 males – 44% and 41,106 females – 56%).³ The population density was 34 per sq. *versta* and on average there was only 3.83 *desiatina* of arable and hay producing land per head, which was 1.5 times less than in the rest of Yaroslavl, where there was about 5-6 *desiatina* per head.⁴

The Roman-Boris-Gleb'sky district where the Sandyrevsky parish was situated had a territory of 2,263 sq. *versta* with loamy soil, partly containing silt.⁵ Forty percent of the land was occupied by forests (generally not of timber quality) and boscages. The population numbered 87,058,⁶ giving a population density of 39 inhabitants per sq. *versta* in 1850.⁷ According to nineteenth-century local statistical surveys, there was 5.94 *desiatina* of arable and hay producing land per male, but according to the Sandyrevsky *volost* (cantonal court in Russia) the family share (*zemel'ny nadel*) was less than this and usually amounted to only 4.5 *desiatina*.⁸

The special statistical committee of 1887 found that husbandry in the Roman-Boris-Gleb'sky district did not provide sufficiently for the local population because of the lack of suitable land. This committee noted the following proportions: arable land 28%, hay and grassland 21%, forest 39%, 'other useful' land 3.5%, and 'unqualified' land 8.5%. In such a situation, seasonal work in handicrafts and trade which required people to leave home was an accepted phenomenon.⁹ Cattle breeding was a famous business in this area. The 'romanovsky' (from the Roman-Boris-Gleb'sky district) breeds of cattle, sheep, and horses were well known in pre-revolution Russia.¹⁰

There are sufficient primary sources to allow the formation of cohorts. With regard to the Archangelsky parish, only the church registers for 1853–1854 are missing and there are also some lacunas in the wedding and

² Памятная книжка Ярославской губернии за (1862) 72.

³ К.Д. Головщиков, *Город Данилов и его уезд* (Yaroslavl 1890).

⁴ Памятная книжка Ярославской, 72.

⁵ К.Д. Головщиков, *Ярославская губерния. Историко-этнографический очерк* (Yaroslavl 1888) 7.

⁶ М. Гуревич, *Историко-статистическое описание Ярославской губернии* (Yaroslavl 1922).

⁷ Головщиков, *Ярославская губерния*, 7.

⁸ Обзор Ярославской губернии. Вып. 2. *Отхожие промыслы крестьян Ярославской губернии* (Yaroslavl 1896) 137.

⁹ Главные данные поземельной статистики по обследованию (1887) 50.

¹⁰ К.Д. Головщиков *Город Романов-Борисоглебск* (Yaroslavl 1889).

death notices for 1871–1872.¹¹ Fortunately this situation can be remedied by using the data provided by confessional books,¹² as well as the primary lists of the first Russian census of 1897.¹³ The clerical statistic materials for Sandyrevsky for the period from 1802 to 1918 lacks the registers of 1812, 1814–1817, 1895–96, and 1898–1899. Information from confessional books is also inserted here.¹⁴ Information for 1811, 1816, 1834, 1850 and 1858 from tax lists (*revizskie skazki*)¹⁵ and the census lists of 1897¹⁶ have also been used.

Population and occupation

During the nineteenth century, the population of the Archangelsky parish consolidated at about 2,000 people: 1,808 inhabitants (1,007 female – 55.7% and 801 male – 44.3%) in 1821,¹⁷ 2,169 (1,142 female – 52.7% and 1,027 male – 47.3%) in 1836¹⁸ and 1,910 (1,046 female – 54.8% and 864 male – 45.2%) in 1860.¹⁹ For the period during the 1860s, the legal status of Archangelsky peasants showed the following division: 85% (761 male and 865 female) belonged to landowners and 15% (103 male and 181 female) to the State Economic Department.²⁰ The whole range of the social structure of the Archangelsky parish is given in Table 1.

Sandyrevsky numbered 1,386 inhabitants (779 female – 56% and 607 male – 44%) in 1842 and 1,242 (737 female – 59% and 505 male – 41%) in 1859. Table 2 shows the social structure of this parish.

¹¹ Archangelsky church registers in the State Archive of Yaroslavl Region (SAYR): Ф. 230. Оп. 1. Д. 4205, 4588, 5044, 5679, 5956, 5657, 6609, 7020, 7422, 8192, 8924, 8923, 9744, 10055, 10058, 10513, 10788, 14220, 14466; Оп. 2. Д. 52, 54, 55, 156, 990, 1301; Оп. 11. Д. 2658, 2637, 2659, 2661, 2669, 2673, 2677, 2681, 2693, 2696, 2699, 2706, 2797, 2799; Ф. 937. Оп. 1. Д. 175, 195, 214, 215, 219, 220, 221, 223–227; Ф. 1118. Оп. 1. Д. 4289, 4308, 4311, 4313.

¹² For more information about the specific nature of the composition of the Russian Orthodox Church confessional book see A. Danilov and N. Obnorskaja, 'Sources for research on demographic behaviour in the Yaroslavl region in the nineteenth century', in: Kooij, (ed.), *Where the twain meet*, 131–135. Archangelsky confessional books in the State Archive of Yaroslavl Region, SAYR: Ф. 230. Оп. 1. Д. 3911, 3912, 4695, 5507, 5761, 6031, 7927, 8290, 8639, 9026, 10201, 10644, 11828, 12086, 12637, 13280, 13585; Оп. 2. Д. 212; Оп. 3. Д. 417, 568, 734, 735, 1107; Ф. 940. Оп. 1. Д. 21.

¹³ Archangelsky parish primary lists of the first Russian census of 1897 in SAYR: Ф. 642. Оп. 3. Д. 714–723.

¹⁴ Sandyrevsky church registers and confessional books in SAYR: Ф. 235. Оп. 1. Д. 1, 4, 7, 22, 34, 41; Ф. 230. Оп. 1. Д. 45, 7032; Оп. 3. Д. 2054, 2469, 3137, 3364; Оп. 4. Д. 397, 630, 801; Оп. 11. Д. 3094, 3100, 3107 a, 3109, 3111, 3113, 3118, 3126, 3131, 3135, 3226; Ф. 1118. Оп. 1. Д. 4275; Ф. 940. Оп. 1. Д. 35.

¹⁵ The tax lists of Sandyrevsky parish settlements in the SAYR: Ф. 100. Оп. 8. Д. 2603, 2426.

¹⁶ Sandyrevsky parish primary lists of the first Russian census of 1897 in the SAYR: Ф. 642. Оп. 3. Д. 729, 731, 735, 736, 737.

¹⁷ SAYR, Ф. 230. Оп. 1. Д. 7927.

¹⁸ SAYR, Ф. 230. Оп. 1. Д. 12983. Л. 261–293 об.

¹⁹ SAYR, Ф. 230. Оп. 4. Д. 725.

²⁰ SAYR, Ф. 230. Оп. 4. Д. 725.

Table 1 Social structure of Archangelsky parish (%)

Status	1821	1836
peasants	85.56	79.02
house serfs	7.27	12.86
military (including retired soldiers)	6.01	3.96
clergy	1.16	1.81
tradesmen	-	0.97
'middle class'	-	1.38

Table 2 Social structure of Sandyrevsky parish (%)

Status	1842	1859
peasants	91.34	90.66
house serfs	4.47	4.03
military (including retired soldiers)	1.52	2.74
clergy	1.66	1.45
tradesmen	-	0.72
'middle class'	0.58	-
gentry	0.43	0.40

As has been observed, husbandry was not economic for the Danilovsky and Roman-Boris-Gleb'sky districts and therefore cottage industries developed there. Small handicraft workshops with 3–5 labourers were common at the beginning of the nineteenth century.²¹ Later on the number of trade and manufacturing shops increased, requiring more labour and generating more profits.²² Making carts, springless carriages, sledges and wood sledges,²³ processing coal²⁴ and handling wool (production of felt boots and mittens)²⁵ were all activities taking place in the Archangelsky parish.²⁶

Advanced cattle breeding was an established trade in Sandyrevo and adjacent parts of the Roman-Boris-Gleb'sky district.²⁷ According to a legend, breeding of special so-called '*romanovsky*' sheep was a consequence of Emperor Peter the Great's idea of cross-breeding local sheep with Silesian stock. The new breed, popular because of the mildness of the wool, gave rise to a clothing industry making coats with the fur inside; '*romanovsky*' sheepskin coats had a reputation all over Russia.²⁸ '*Romanovsky*' cattle were also famous for being oversized, heavy and producing rich milk, and 500–800 cows were

²¹ *Памятная книжка (Ярославской) 74.*

²² М.С. Кропотков, *Крестьянство Ярославской губернии и его податные силы.*

²³ In the village of Morugino.

²⁴ In the villages of Grigorkovo, Pasynkovo, Okulovo and Markovo.

²⁵ In the villages of Pasynkovo and Noven'koe.

²⁶ *Список селений с кустарями. Даниловский уезд (Yaroslavl 1858) 45.*

²⁷ П.А. Критский, *Наш край. Ярославская губерния – опыт родиноведения (Yaroslavl 1907) 95, 287.*

²⁸ *Ярославский губернский статистический комитет. Труды. Вып. 8: Сведения о кустарных промыслах по Ярославской губернии, собранные через волостные правления в 1874–1875 годах (Yaroslavl 1866) 17.*

sent to both capitals (Moscow and Petersburg) every year.²⁹ As Table 3 shows, nineteenth-century statistics reveal that there were also some other cottage industries in the Sandyrevsky area.³⁰

Table 3 Cottage industry in Sandyrevsky parish in 1875

	settlement	number of cottagers	annual income (roubles per person)	place of business
furriery and currying	Sandyrevo	2	100	Vyatskoe, Davydkovo
felting	Kurmanovo	4	50	to order
carting	Yasino	1	25	on site
flax spinning	Duboviki	2	15	on site
blacksmith and metal work	Zubarevo	2	50	on site

In the nineteenth century, a large majority of the population of Yaroslavl province, in common with the populations in other provinces in Central Russia, were actively engaged in seasonal work in handicrafts or trade, for which they sometimes had to leave home, but few of these people left agriculture altogether. For instance, they participated in crafts or trades, worked in inns or acted as servants (lackeying). If they were going to work in a location (village, town, city or capital) situated more than 50 *versta* from their domicile they were obliged to obtain a special permit (passport). Often the difference between carrying out local cottage work or moving to find seasonal work did not depend on the specialisation of the labourer but on how remote his (or her) home was.

Significant numbers of the men from the Archangelsky parish left their households to earn income elsewhere. At the end of the nineteenth century, local peasants were granted 848 passports (707 to males – 83% and 141 to females – 17%) for terms of three months, six months or one year. Regularly living in St. Petersburg was particularly common for the male peasants from the Yaroslavl area. The areas most commonly visited for seasonal work by people from the Roman-Boris-Gleb'sky district had the pattern shown in Table 4.³¹

²⁹ Ярославский край в «Энциклопедическом словаре» Брокгауза и Эфрона (Yaroslavl 1996) 76.

³⁰ Ярославский губернский статистический, 17.

³¹ Статистическое бюро Ярославского земства. Отхожие промыслы и торговля Романов-Борисоглебского уезда (Yaroslavl 1907).

Table 4 Distribution of the labour migration from the Roman-Boris-Gleb'sky district (n=15,133)

Place of destination	male	female
Roman-Boris-Gleb'sky district and surroundings	4.14%	2.97%
Yaroslavl and province of Yaroslavl	18.58%	26.62%
Petersburg and province of St Petersburg	63.75%	56.48%
Moscow and province of Moscow	13.53%	13.94%
Total	(80.61%)	(19.39%)

Going to St Petersburg for work away from home seemed to have been the most profitable choice for people from the Sandyrevsky area. Peasants and labourers worked there as stove-makers, sawyers and carriage-makers. Large numbers of seasonal workers from the Sandyrevsky parish worked in the market or served as valets or lackeys. Generally speaking, the social and economic development of the Archangelsky and Sandyrevsky parishes was typical for the province of Yaroslavl during the nineteenth century.³²

The data showing the status of cohort members at the ages of 20, 30 and 40 (Tables 5–10) records 45 – 68% of deaths at the age of 20 and a growing number of 'unknown' individuals. Twenty to thirty percent of the people of adult age in the cohorts for 1850 and later studied for the Archangelsky parish are 'lost'. The percentage of cohort members documented in the sources who left their domiciles for different reasons (see Table 11) is low, about 10%. A similar situation concerning migration of members of the cohort can be seen for the Sandyrevsky parish, where 12.5% of the inhabitants relocated (Tables 6, 8, 10 and 12).

The terms 'unknown' and 'lost' are used for cohort members who possibly migrated between the ages of 10 and 30, and were not listed as having died in church registers. In many cases such a cohort member who was recorded in the registers and other lists was a young, sexually mature woman or a young man of military age. In the cases of the women, the story often continued later with the women reappearing on the pages of the registers after a few years of absence, as mothers of newborn babies. This meant that they had married and moved to the husband's residence, very often a neighbouring district or parish. There was an old tradition of visiting the wife's parents on parish holidays and ethnographic accounts of village life often mention the traditional practice where a young wife, when she was expecting her first child, came back home and lived there temporarily until the birth. This is why children, especially the firstborn, were born in their mother's native parish.

³² *Ярославский губернский статистический*, 17.

Table 5 The situation of cohort members (born 1810-1870) in the Archangelsky parish at the age of 20

	1810		1830		1850		1870	
Died	61	(51%)	59	(49%)	74	(62%)	66	(55%)
Migrated	8	(7%)	12	(10%)	10	(8%)	11	(9%)
Stayed	40	(33%)	45	(38%)	10	(8%)	6	(5%)
Unknown	11	(9%)	4	(3%)	26	(22%)	37	(31%)

Table 6 The situation of cohort members (born 1810-1870) in the Sandyrevsky parish at the age of 20

	1810		1830		1850		1870	
Died	54	(45%)	58	(48%)	67	(56%)	82	(68%)
Migrated	12	(10%)	15	(13%)	5	(4%)	6	(5%)
Stayed	5	(4%)	19	(16%)	13	(11%)	9	(8%)
Unknown	49	(41%)	28	(23%)	35	(29%)	23	(19%)

Table 7 The situation of cohort members (born 1810-1870) in the Archangelsky parish at the age of 30

	1810		1830		1850		1870	
Died	67	(56%)	64	(53%)	76	(63%)	68	(57%)
Migrated	9	(8%)	12	(10%)	10	(8%)	11	(9%)
Stayed	33	(28%)	40	(33%)	8	(7%)	4	(3%)
Unknown	11	(9%)	4	(3%)	26	(22%)	37	(31%)

Table 8 The situation of cohort members (born 1810-1870) in the Sandyrevsky parish at the age of 30

	1810		1830		1850		1870	
Died	56	(47%)	63	(53%)	68	(57%)	84	(70%)
Migrated	12	(10%)	15	(13%)	5	(4%)	6	(5%)
Stayed	3	(3%)	14	(12%)	12	(10%)	7	(6%)
Unknown	49	(41%)	28	(23%)	35	(29%)	23	(19%)

Table 9 The situation of cohort members (born 1810-1870) in the Archangelsky parish at the age of 40

	1810		1830		1850		1870	
Died	71	(59%)	68	(57%)	78	(65%)	71	(59%)
Migrated	10	(8%)	12	(10%)	10	(8%)	11	(9%)
Stayed	28	(23%)	36	(30%)	6	(5%)	1	(1%)
Unknown	11	(9%)	4	(3%)	26	(22%)	37	(31%)

Table 10 The situation of cohort members (born 1810-1870) in the Sandyrevsky parish at the age of 40

	1810		1830		1850		1870	
Died	58	(48%)	67	(56%)	71	(59%)	87	(73%)
Migrated	12	(10%)	15	(13%)	5	(4%)	6	(5%)
Stayed	1	(1%)	10	(8%)	9	(8%)	4	(3%)
Unknown	49	(41%)	28	(23%)	35	(29%)	23	(19%)

Table 11 Reasons for migration of cohort members (born 1810-1870) in the Archangelsky parish

	1810	1830	1850	1870
Marriage (female)	6	2	9	1
Marriage (male)	1	4	-	4
Military service	2	6	-	1
Work	-	-	1	5
Unknown	1	-	-	-

Table 12 Reasons for migration of cohort members (born 1810-1870) in the Sandyrevsky parish

	1810	1830	1850	1870
Marriage (female)	8	12	-	1
Marriage (male)	-	-	-	-
Military service	4	3	-	-
Work	-	-	4	5
Will of landowner	-	-	1	-

Childbirth and infant mortality

It is known that in 1900 the rates of infant mortality in pre-revolution Russia were the highest among the European countries.³³ Infant and childhood mortality remained consistently high during the nineteenth century with the death rate for children up to the age of three being particularly high. The cohort data concerning the Yaroslavl loamy area provides information which is in agreement with this. It is a well-known fact that children are particularly susceptible to environmental influences and to various infections during the first year of life. In addition, family life and living conditions play an important part. Thus, the infant death rate is significant in relation to the characteristics of the population in general and a measure of the level of modernity of society. The birth cohort observations made since 1810 at intervals of 20 years clearly demonstrate these fundamental points. According to the cohort data, infant mortality fluctuated

³³ N. Frieden, 'Child care: Medical reform in a traditional culture', in: D.L. Ransel (ed.), *The family in Imperial Russia* (Urbana/Chicago/London 1978) 160.

between 42% and 52% in the Archangelsky parish and between 40% and 57% in the Sandyrevsky area. Such a situation was typical for Central Russia in the late nineteenth century. Childhood mortality was also very high in the province of Moscow, where 51.6% of children died before the age of five, in the province of Tula where the figure was 52.4% and in the province of Nizhniy Novgorod where it was 53.8%.³⁴

Table 13 Infant mortality in Archangelsky parish (number of cases and percentage)

Age	1810		1830		1850		1870	
	Female	Male	Female	Male	Female	Male	Female	Male
0-1	12	8	18	22	26	21	17	38
	19%	14%	38%	30%	41%	37%	39%	50%
1-5	14	16	5	4	8	7	3	3
	23%	28%	11%	5%	13%	12%	7%	4%
0-5	26	24	23	26	34	28	20	41
	42%	41%	49%	36%	54%	49%	45%	54%
N	62	58	47	73	63	57	44	76

Table 14 Infant mortality in Sandyrevsky parish (number of cases and percentage)

Age	1810		1830		1850		1870	
	Female	Male	Female	Male	Female	Male	Female	Male
0-1	12	13	19	21	17	14	27	27
	26%	18%	33%	34%	33%	21%	48%	42%
1-5	11	12	4	3	13	12	6	8
	23%	16%	7%	5%	25%	18%	11%	13%
0-5	23	25	23	24	30	26	33	35
	49%	34%	40%	39%	58%	38%	59%	55%
N	47	73	58	62	52	68	56	64

The clergy, not doctors or professional nurses, recorded the deaths in the registers together with what they regarded as the most important cause of death so that the descriptions of the diseases do not usually contain medical terminology but instead many demotic colloquial terms. The sources reveal that the local children were liable to suffer from several serious illnesses, including smallpox, gastroenteritis, scarlet fever, measles, colds, pneumonia, rickets and convulsions at the time of birth.

Children between the ages of 2-10 were often affected by scarlet fever and measles. Scarlet fever occurred in epidemics and affected the greatest number of children at the same time. According to the obituary notices in the registers, outbreaks of scarlet fever occurred in the Sandyrevsky parish in 1863, 1882 and 1892.³⁵ At the end of the nineteenth century, scarlet fever

³⁴ А.Г. Рашин, *Население России за 100 лет: 1811-1896 гг* (Moscow 1956) 198.

³⁵ SAYR: Ф. 1118. Оп. 1. Д. 4275; Ф. 230. Оп. 11. Д. 3131, 3126.

was considered the most serious childhood disease and it was only at the beginning of the next century that a serum to combat it was discovered. However, there was no chance of applying medication or vaccinating ill babies because there was no cottage hospital in the Sandyrevo area and surroundings.³⁶

Another dangerous childhood illness was smallpox.³⁷ This was often the reason behind a high infant death rate, for instance 33% of children died from this in the Sandyrevo parish in 1823, 36% in 1838, 40% in 1847–48, 24% in 1852 and 31% in 1873. After 1873 there is no mention of a smallpox epidemic in the sources studied.³⁸ The mortality rate caused by smallpox among the cohorts was low: 5% for the cohort of 1830, 10% for the cohort of 1850, and 7% for the cohort of 1870 (Table 22). In the Archangelsky parish, smallpox was the cause of death of 47 people (39%) of the cohort formed for 1810 (Table 21).

The registers also mention *rodimets*, a demotic colloquial term from the Russian for ‘bear children,’ which means an attack accompanied by convulsions of the child or the pregnant woman about the time of birth,³⁹ and *kolo't'e*, a demotic colloquial term from the Russian for ‘shaking with fever, beating,’ which has the same diagnostic meaning as ‘*rodimets*,’⁴⁰ as causes of infant mortality. In Russian medicine in the pre-revolution period, ‘*rodimets*,’ ‘*rodimchik*’ or ‘*koto'e*’ were qualified as a severe form of rickets brought about by calcium deficiency in the infant organism.⁴¹ Rickets was usually caused by wrong or poor food, bottle-feeding, lack of light and warmth and inherited defects. According to medical statistics from the beginning of the twentieth century, 80 of the 100 children who were sent to hospital at that particular time suffered from rickets.⁴² Common first symptoms of the illness were throat spasms, body convulsions, gasping, unconsciousness and turning blue and such attacks usually ended in a fatality. It is noteworthy that *rodimets* as a cause of death increased markedly. The cohort analysis shows that rickets mortality for Archangelsky and Sandyrevsky parishes was 4% for the cohort of 1810, 4% for that of 1830, 3% for 1850 but 40% for that of 1870.

Another cause of infant mortality was death by misadventure, most commonly for children under two years of age. During the summer months many women left their infants at home in order to work in the fields and nursed them only early in the morning and late at night. Children were

³⁶ Народная энциклопедия научных и прикладных знаний Медицина Т. 5. М (1910) 310.

³⁷ Народная энциклопедия научных, 245.

³⁸ SAYR: Ф. 230. Оп. 1. Д. 7032; Ф. 1118. Оп. 1. Д. 4275.

³⁹ С.И. Ожегов, *Словарь русского языка*, 680.

⁴⁰ *Словарь русского языка*, 286.

⁴¹ *Справочный энциклопедический словарь/Под ред. А. Старчевского* Т. 3. Спб. (1854).

⁴² Народная энциклопедия научных, 355.

therefore left to their own devices and accidents occurred frequently, usually playing with fire or careless river bathing.

Table 15 Number of children in Archangelsky parish

	1810	1830	1850	1870
1	8	4	1	2
2	4	5	2	2
3	3	4	2	4
4	5	1	-	1
5	2	6	2	7
6	3	5	-	2
7	3	4	2	6
8	4	2	2	6
9	2	6	1	1
10	2	3	1	2
11	2	1	2	1
12	-	2	-	-
13	1	1	2	-
14	-	-	-	1
15	-	1	1	-
N	39	45	18	35
Average	5	6	7	6

The Russian feeding practice was also a cause of death. Mothers who had to be absent to work in the fields or out of season jobs away from home placed their infants on solid food very soon after they were born. The special method of providing food for the infant (*'soska'*) was to place a piece of cloth filled with grain or other food (usually bread) partially chewed by the mother in the baby's mouth. The solid food introduced gastrointestinal pathogens and led to diarrhoea (*'ponos'*) and rapid dehydration frequently ending in death. David Ransel, an American historian of nineteenth-century Russian demography, claimed this feeding practice was the cause of 50% of the loss of life among Russian children.⁴³

Birth rate, infant mortality and sexual maturity are all interrelated and dependent on the local traditions and the current economic situation. In general, peasant women who had been married at the age of 20 and had not been widowed before the end of their fertile period could bear children for 20-22 years. The first child was generally born after 2-2.5 years of marriage, and a woman could give birth to 8-10 children during her reproductive life. Cohort data from the Archangelsky parish is in approximate agreement with this theoretical outline. There were 6-7 children per family with a maximum

⁴³ D. Ransel, 'Infant care cultures in the Russian Empire', in: B.E. Clements, B.A. Engel and C.D. Worobec (eds.), *Russia's women* (Berkeley 1991) 114-123.

of 12 (in the cohort of 1870 there was one woman who gave birth to 12 children during 23 years of marriage). The figure is lower (3-4 children per family) for Sandyrevo. The birth of twins is recorded frequently in the registers and such an event was not considered as something extraordinary. Triplets were found very rarely (cohort 1870, Archangelsky parish).

Table 16 Number of children in Sandyrevsky parish⁴⁴

	1810	1830	1850
1	6	6	4
2	2	5	3
3	7	8	5
4	3	6	3
5	6	5	-
6	3	2	1
7	2	-	-
8	1	3	-
9	1	1	-
10	1	-	-
11-15	-	1	-
N	32	37	16
Average	4	4	2-3

The birth rate was not consciously manipulated in most cases since effective methods of contraception and termination of pregnancy did not reach the countryside before the early twentieth century. At the same time, the fact that the men left the villages to seek work elsewhere in the summer months or for longer periods and being widowed early will have affected the number of children born in marriage. High rates of childhood mortality and the large number of stillborn children could have reduced the length of the interval between births.

Table 17 Intervals between births in Archangelsky parish (months)

Interval in months	1810	1830	1850	1870
marriage – child 1	24.6	25.3	26.1	19.7
child 1 – child 2	27.5	23.8	24.3	21.5
child 2 – child 3	28.6	26.4	29.6	21.7
child 3 – child 4	29.4	28.5	29.8	20.9
child 4 – child 5	35.7	39.8	40.7	25.7

For N see Table 15.

⁴⁴ The data on the 1870 cohort members' status concerning the children were omitted because of the high death rate and migration (by the age of thirty 70% had died and 24% had migrated or were not listed as having died in the church registers).

Table 18 Intervals between births in Sandyrevsky parish (months)

Interval in months	1810	1830	1850
marriage – child 1	26.7	27.3	20.6
child 1 – child 2	25.5	24.9	27.4
child 2 – child 3	28.6	25.6	27.5
child 3 – child 4	26.6	27.6	29.3
child 4 – child 5	36.4	37.9	38.9

For N see Table 16.

Age and patterns of marriage

The observation of family patterns in the Archangelsky and Sandyrevsky parishes allows the dynamics of marital ages for benchmark years to be *traced*.

Table 19 Age at first marriage in Archangelsky parish, cohorts born 1810-1870

Age	1810		1830		1850		1870	
	Female	Male	Female	Male	Female	Male	Female	Male
15	-	1	-	-	-	-	-	-
16	3	5	-	3	-	-	-	-
17	3	1	-	7	-	2	-	1
18	2	4	1	8	-	2	-	1
19	2	5	4	4	2	3	1	1
20	1	1	4	2	-	6	1	4
21-23	-	4	2	4	2	6	2	10
24-26	2	-	-	-	1	-	4	4
27-30	1	-	2	1	-	-	1	2
31-35	-	-	-	-	-	-	-	1
36-40	1	-	1	1	-	-	-	-
41-50	-	-	-	-	-	-	1	-
N	15	21	14	30	5	19	10	24
Average	20.5	18	22	20.5	21	20	25	22.5

During the nineteenth century the average age of spouses varied in the different provinces of the Russian empire, with early marriages being typical for regions with economies based on agriculture. In the province of Yaroslavl, where the rural population was engaged in seasonal work and handicrafts away from home, the majority of young women married between 18 and 22 years of age, and young men between 19 and 21 years of age. An appreciable difference in the ages of spouses, with the husband being much older than the wife, was observed only in cases of second marriages, usually with widows. Divorces were extremely rare; they were not mentioned at all in the registers used for this research.

It can be concluded that most people in the parishes under observation preferred to find a marriage partner within the district or province of Yaroslavl. Marriages between the members of the same parish were very rare.

Table 20 Age at first marriage in Sandyrevsky parish, cohorts born 1810-1870

Age	1810		1830		1850		1870	
	Female	Male	Female	Male	Female	Male	Female	Male
16	4	3	4	3	-	-	-	-
17	5	5	2	-	-	-	-	-
18	3	6	2	7	3	2	-	-
19	3	4	3	5	2	4	1	1
20	2	1	4	6	2	-	1	-
21-23	2	1	2	1	1	1	1	-
24-26	2	-	1	2	-	-	-	3
27-30	-	-	1	-	-	-	-	-
31-50	-	-	-	-	-	-	-	-
N	21	20	19	24	8	7	3	4
Average	19	18	19	19	19	19	20	23.5

Mortality: age and causes of death

The high rate of childhood mortality among cohort members of the Archangelsky and Sandyrevsky parishes (40-57%, see Tables 13 and 14) and particularly the number of migrated and 'unknown' villagers (13-40% in Archangelsky and 24-51% in Sandyrevsky) resulted in a lack of information about older cohort members. The consolidated material concerning the ages of death is deduced on the basis of cohort analysis.

The causes of death are divided into categories in order to allow a thorough analysis to be made (Tables 24-25). The clergy who filled out the church registration books clearly did not have a great deal of knowledge about health and causes of death, since between 11% and 43% of the obituary notices concerning the cohort members were recorded as 'unknown illnesses' (Tables 24-25). This makes drawing conclusions very uncertain. Moreover, the so-called 'senile diseases' are also very difficult to interpret. These causes of death were always recorded as 'old age' and comprised 3-11% of the causes of death of the cohort members, but sometimes this reason was also given for the death of a person who had only just turned fifty.

It is not possible to suggest that there was a drop in the number of cases of tuberculosis in the late imperial period since the high level of childhood mortality (especially for Sandyrevo in the 1870s) reduced the number of cohort members while the number of 'unknown' and migrated people increased.

Another fatal infectious disease in this period was fever. Very often there was an epidemic in the winter and at the beginning of spring, usually in March and April. According to cohort data fever was the cause of death of about 2-4% of adults in Sandyrevo and rather fewer, 1-3%, in Archangelsky. Cholera, which was notorious in Russia with epidemics in 1823, 1829, 1831, 1848, 1866, 1892-95 and 1904-07, by chance did not affect the Sandy-

revsky or Archangelsky areas. Only isolated cases for both parishes can be found (maximum 3%). Illnesses among teenagers were also low and accidents among the elderly were an exception.

Table 21 Age at death in Archangelsky parish, cohorts born 1810-1870 (number of observations and percentage)

Age	1810		1830		1850		1870	
	Female	Male	Female	Male	Female	Male	Female	Male
Less than 1 year	12 19%	8 14%	18 38%	22 30%	26 41%	21 37%	17 39%	38 50%
1-5	14 23%	16 28%	5 11%	4 5%	8 13%	7 12%	3 7%	3 4%
6-10	3 5%	1 2%	2 4%	3 4%	-	5 9%	-	2 3%
11-20	3 5%	4 7%	2 4%	3 4%	3 5%	4 7%	1 2%	2 3%
21-30	2 3%	4 7%	1 2%	4 5%	-	2 4%	2 5%	-
31-40	3 5%	1 2%	2 4%	2 3%	-	2 4%	2 5%	1 1%
41-50	1 2%	3 5%	-	2 3%	2 3%	2 4%	-	1 1%
51-60	1 2%	5 9%	2 4%	7 10%	-	-	-	-
61-70	4 6%	2 3%	4 9%	15 21%	1 2%	1 2%	-	-
71-80	7 11%	2 3%	2 4%	3 4%	-	-	-	-
81-90	1 2%	1 2%	-	1 1%	-	-	-	-
91-100	1 2%	-	-	-	-	-	-	-
N	52 84%	47 81%	38 81%	66 90%	40 63%	44 77%	25 57%	47 62%
Unknown ⁴⁵	10 16%	11 19%	9 19%	7 10%	23 37%	13 23%	19 43%	29 38%

⁴⁵ Unknown: migrated between the ages of 10 and 30 or were not listed as having died in the church registers.

Table 22 Age at death in Sandyrevsky parish, cohorts born 1810-1870 (number of observations and percentage)

Age	1810		1830		1850		1870	
	Female	Male	Female	Male	Female	Male	Female	Male
Less than 1 year	12 26%	13 18%	19 33%	21 34%	17 33%	14 21%	27 48%	27 42%
1-5	11 23%	12 16%	4 7%	3 5%	13 25%	12 18%	6 11%	8 13%
6-10	2 4%	2 3%	3 5%	4 6%	1 2%	6 9%	- -	6 9%
11-20	1 2%	1 1%	3 5%	1 2%	1 2%	3 4%	1 2%	7 11%
21-30	1 2%	1 1%	2 3%	3 5%	- -	1 1%	1 2%	1 2%
31-40	1 2%	1 1%	1 2%	3 5%	- -	3 4%	1 2%	2 3%
41-50	- -	1 1%	- -	1 2%	- -	4 6%	2 4%	2 3%
51-60	- -	- -	3 5%	- -	- -	3 4%	- -	- -
61-70	- -	- -	1 2%	2 3%	1 2%	1 1%	- -	- -
71-80	- -	- -	1 2%	2 3%	- -	- -	- -	- -
81-90	- -	- -	- -	- -	- -	- -	- -	- -
91-100	- -	- -	- -	- -	- -	- -	- -	- -
N	28 60%	31 42%	37 64%	40 65%	33 63%	47 69%	38 68%	53 83%
Unknown ⁴⁶	19 40%	42 58%	21 36%	22 35%	19 37%	21 31%	18 32%	11 17%

Table 23 Percentage of cohort members suffering from tuberculosis

	1810	1830	1850	1870
Archangelsky	9	8	2	2
Sandyrevsky	7	8	3	1

⁴⁶ Unknown: migrated between the ages of 10 and 30 or were not listed as having died in the church registers.

Table 24 Causes of death in Archangelsky parish, cohorts born 1810-1870 (number of observations and percentage)

	1810		1830		1850		1870	
	N	%	N	%	N	%	N	%
Unknown illness	19	16%	48	40%	52	43%	13	11%
Convulsions of child about time of birth ('rodimets', 'kolot'e')	-	-	1	1%	-	-	34	28%
Childbirth	1	1%	2	2%	-	-	2	2%
Smallpox	47	39%	10	8%	1	1%	-	-
Tuberculosis	11	9%	9	8%	2	2%	2	2%
Old age	11	9%	10	8%	-	-	-	-
Diarrhoea	-	-	-	-	10	8%	2	2%
Dropsy	2	2%	10	8%	1	1%	-	-
Whooping cough	-	-	-	-	-	-	6	5%
Cold	2	2%	5	4%	5	4%	6	5%
Cholera	-	-	-	-	1	1%	4	3%
Fever	-	-	4	3%	2	2%	1	1%
Suffocation	4	3%	2	2%	-	-	1	1%
Appendicitis	1	1%	-	-	-	-	-	-
Gastric ulcer	-	-	1	1%	-	-	1	1%
'Hurt of legs'	-	-	1	1%	1	1%	-	-
Accident	-	-	-	-	1	1%	-	-
Swelling	-	-	-	-	4	3%	-	-
Seizure	-	-	-	-	1	1%	-	-
Inflammation of brain tissue	-	-	-	-	1	1%	-	-
Undercooling	-	-	-	-	1	1%	-	-
Paralysis	-	-	1	1%	-	-	-	-
Epilepsy	1	1%	-	-	1	1%	-	-
N	99	83%	104	87%	84	70%	72	60%
Unknown	21	17%	16	13%	36	30%	48	40%

Table 25 Causes of death in Sandyrevsky parish, cohorts born 1810-1870 (number of observations and percentage)

	1810		1830		1850		1870	
	N	%	N	%	N	%	N	%
Unknown illness	19	16%	20	17%	34	28%	-	-
Convulsions of child about time of birth ('rodimets', 'kolot'e')	10	8%	9	7%	6	5%	63	53%
Smallpox	-	-	6	5%	12	10%	8	7%
Diarrhoea ('ponos')	2	2%	2	2%	-	-	10	8%
Cold and lung fever	1	1%	7	6%	5	4%	3	3%
Tuberculosis	8	7%	9	7%	3	3%	1	1%
Fever	2	2%	5	4%	6	5%	2	2%
Dropsy	2	2%	6	5%	1	1%	-	-
Old age	6	5%	7	6%	4	3%	-	-
Suffocation	5	4%	1	1%	-	-	-	-
Scarlet fever	-	-	-	-	4	3%	2	2%
Cholera	-	-	1	1%	2	2%	-	-
Measles	2	2%	-	-	-	-	-	-
Drowned	-	-	1	1%	1	1%	-	-
Catarrh of fauces	-	-	-	-	1	1%	1	1%
Alcohol intoxication	-	-	1	1%	-	-	-	-
Atrophy of muscles ('sukhotka')	1	1%	1	1%	-	-	-	-
Stone	-	-	1	1%	-	-	-	-
Vomit	-	-	-	-	-	-	1	1%
Breast cancer	-	-	-	-	1	1%	-	-
Paralysis	1	1%	-	-	-	-	-	-
N	59	49%	77	64%	80	67%	91	76
Unknown	61	51%	43	36%	40	33%	29	24%

Conclusion

The method of cohort analysis, in combination with a thorough analysis of the primary sources obtained from the state and from church institutions (presupposing that these are correct and representative) provides historians with a range of facts and events which took place in the real life of individuals who belonged to the same generation and lived in the same area under similar natural, economic and cultural conditions. The range of similar parameters chosen for analysis makes it possible to carry out a responsible comparison in the sphere of demographic behaviour reflecting the social and economic trends which took place in different regions of pre-revolution Russia.