JEWS IN RUSSIA: A CENTURY OF DEMOGRAPHIC DYNAMICS*

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The population of the Russian Federation in the 1990s has reached the stage of steady decrease. However, already for a long time the Jews in Russia have demonstrated rapid population decline, and study of this decline and its components can shed more light on demographic history and the prospect of demographic development in the country.

The Jews are a unique ethnic group. Most of them in today's Russian Federation originate from the former Tsarist Pale of Jewish Settlement (Belorussia and Ukraine) and either they themselves or their immediate forebears migrated to Russia proper during the First World War, in the 1920s and early 1930s, or as recently as the Second World War and after. They are mostly Ashkenazic Jews whose traditional language was Yiddish, which for the great majority has been replaced by Russian as a native language.

The Jews are the most highly educated population group in the Russian Federation, and the level of education of these Jews is similar to that of Jews in the United States (see Altshuler, 1987, Ch. 5; Tolts, 1997b, pp. 164-168). The occupational profile of this group is very different from the majority of population in the country, the main professional activities of Jews in Russia being science, education, health, culture and art, as well as engineering positions in industry, construction and transportation; business has become prominent in the post-Soviet period. (Ryvkina, 1996; Sacks, 1998). As a consequence, the social status and living standards of the Jews are higher than average.

To understand the long-term population decline of Jews in Russia, the number of this group during the last century should be examined. We shall analyze the dynamics of Jewish marriage, fertility and mortality. The role of the negative balance of births and deaths should be compared with the influence of migration. Special attention will be paid to the post-war period as a whole, and particularly the period following the start of the recent Jewish exodus from the former Soviet Union (FSU) in 1989.

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The "Core" Jewish Population

By the end of the 19th century in the contemporary territory of the Russian Federation the number of Jews, based on the data of the first general Russian census of 1897 on religion, could be estimated at about 250,000 (0.4 percent of the total population). Of this number only approximately 75,000 Jews were living in the small part of the Tsarist Pale of Jewish Settlement (areas in the Chernigov, Mogilev and Vitebsk guberniyas) which is within what is today the territory of the Russian Federation. Most of the Jews lived outside the Pale, but at this date the numbers of Jews in the two major Russian cities of Moscow and St. Petersburg were very low: about 8,000 and 17,000, respectively (Table 1).

Table 1. Number of Jews in Russia,[(a)] 1897-1998, Thousands

Year	Total[(b)]	Thereof:	
		Moscow	St. Petersburg
1897	250[(c)(d)]	8	17
1920	...	28	25
1923	...	86	52
1926	539	131	84
1933	...	242[(e)]	186[(e)]
1939	891	250	202
1959	880	239	169
1970	816	252	163
1979	713	223	143
1989	570	177	107
1994	409	135	61
1998	325[(c)]	...	...

(a) According to census/microcensus data for the contemporary territory of the Russian Federation (not including Crimea); data for Moscow and St. Petersburg mostly cover territory of the cities at census date.
(b) From 1959 to 1998, includes Jews who were counted in censuses as Tats.
(c) Author's estimate.
(d) By religion.
(e) According to the administrative statistics.

Sources: Altshuler, 1998, pp. 220-221; EE, 1913, Vol. 11, col. 538; ESO, 1917, *passim*; KEE, 1996, Vol. 8, col. 300; Tolts, 1997a, p. 149; Tolts, 1997b, p. 152 [updated].

For the Soviet period we have direct data on ethnicity, and these figures show the fast growth of the Jewish population in the 1920s and 1930s which was caused largely by migration from the former Pale (Ukraine and Belorussia). According to the 1926 census, the number of Jews in Russia within contemporary borders was 539,000 (0.6 percent), of whom 40 percent were in Moscow (131,000) and Leningrad (the Soviet name of St. Petersburg -

84,000). By 1939 in the Russian Federation (not including Crimea), the number of Jews recorded in the census data had reached its maximum: 891,000 (0.8 percent); about 50 percent that number resided in Moscow (250,000) and Leningrad (202,000).

Soviet census numbers on ethnicity depend entirely on self-declaration of the census respondents. Conceptually, this corresponds to what has been defined as the “core” Jewish population (DellaPergola, 1993, p. 277). The “core” Jewish population is the aggregate of all those who, when asked, identify themselves as Jews, or in the case of children, are identified as such by their parents; it does not include persons of Jewish origin who reported another ethnic nationality in the census. The alternative definition, of the “enlarged” Jewish population, includes Jews as well as their non-Jewish household members, and this group may be significantly larger than the "core" Jewish population (see below).

During the Second World War in 1941-1942 the Wehrmacht occupied territories of the Russian Federation in which 16 percent of Russia’s Jews lived according to the 1939 census (not including Crimea; computed from Altshuler, 1998, pp. 16, 221). The main centers of Jewish concentration (Moscow and Leningrad) were not occupied, but the war losses of the Jewish population, as well as of the total population of Russia were very large. However, for the Jewish population in Russia these losses were nearly compensated by war-time immigration of Jews from German occupied territories (mainly Ukraine), in combination with post-war immigration from this republic, although the pre-war population size has never been restored.

According to the data of the first post-war census of 1959 the number of Jews in Russia was 880,000 (0.7 percent), including “Tats”;[1] in Moscow the number had decreased to 239,000, and in Leningrad the drop was even more pronounced - to 169,000.

Between 1959 and 1989 Russia’s Jews consistently made up about 39 percent of the Jewish population in the whole of the Soviet Union. The rate of decrease of Jews in Russia (35 percent), was the same as in the entire Soviet Union, and according to the last official

[1] In the post-war period, a growing number of Jews in the North Caucasus were counted as “Tats” in Soviet censuses. This is misleading since the “Tats” are actually Mountain Jews. By labeling them in this way, the Soviet authorities sought to separate these Jews from the rest of the Jewish people (see Altshuler, 1990, pp. 129-132; Zand, 1991, pp. 424-426). Recently, however, they have emigrated to Israel in large numbers as Jews under the Law of Return. All our estimates of the total number of Jews in Russia for the post-war period include those Mountain Jews who were listed as “Tats.”

Soviet census of 1989, the Jewish population of Russia at the start of the recent great exodus was about 570,000 (0.4 percent). The number of Jews in the two major cities of Russia further decreased: to 177,000 in Moscow and 107,000 in Leningrad.

Before the 1970s, almost the entire decrease in the number of Jews in Russia was caused by internal processes: the balance of births and deaths, and assimilation. Between 1970 and 1989, approximately 51,000 Jews and their non-Jewish family members from Russia left the USSR (Florsheim, 1990, p. 320). Nevertheless, the main cause of Jewish population decline in this period was the negative balance of births and deaths, and only about 20 percent of the decrease was due to emigration (Tolts, 1993, p. 101). In this period, as well as previously, Russia's Jewish migratory balance with Ukraine was decisively positive (see Tolts, 1997a, pp. 148-149). This compensated to some extent for the losses caused by emigration from Russia to outside the Soviet Union.

Since 1989, the situation has changed due to the great exodus of Jews from the FSU, and a new stage has begun. According to official Russian data, from 1989 to 1997 alone more than 160,000 Jews emigrated from the Russian Federation to outside the FSU (see Appendix 1). However, it was estimated that even in 1989-1993, which included the period of the highest emigration (1990-1991), 38 percent of the total decrease was caused by the negative balance of births and deaths (Tolts, 1996b, p. 10).

By the beginning of 1998 the number of Jews in Russia had decreased to approximately 325,000 (0.2 percent of the total population). During the first nine years of the great exodus, the Jewish population fell by 43 percent in Russia (that is, more than between 1959 and 1989, when the rate of decrease in the republic, as noted above, was 35 percent).

On the basis of the 1994 microcensus, one can estimate the numbers of Jews in the two largest Russian cities: about 135,000 in Moscow and 61,000 in St. Petersburg; the declines from the 1989 census were 24 and 43 percent, respectively. During the recent great exodus Jewish emigration was higher from St. Petersburg than from Moscow and the provinces (outside Moscow and St. Petersburg) as a whole (see Tolts, 1998).

At the start of the great exodus, Russia's Jews made up 39 percent of the total number of Jews in the FSU. However, between 1989 and 1998 the population decline of Russia's Jewry was only one-fourth of the total Jewish population decline in the FSU. As a

result, by the beginning of 1998 Russia's Jews accounted for about 60 percent of the total number of Jews in the FSU.

Today, Russia differs from parts of the FSU in that it has retained more than half of its pre-1989 Jewish population. Ex-Soviet Jewry remaining in the FSU is concentrated more and more in Russia. Thus, by place of residence it is rapidly turning into Russian Jewry.

Jews in Russian Marriage Market

In the demographic study of an ethnic minority, the question of the existence of potential marriage partners within the group is of great significance. An examination of the ratio of females to males at relevant ages shows the limited and narrowing possibilities for Jewish males in Russia to select a suitable marriage partner from their own ethnic group (Table 2).

Table 2. Number of Females per 100 Males in the Same Age Group among Jews in Russia, 1939-1994

Age group	1939[(a)]	1959[(b)]	1970	1979	1989	1994[(b)]
15-19	96	97	91	91	91	90
20-24	89	92	89	89	87	86
25-29	99	93	90	88	87	83
30-34	100	107	89	88	88	80
35-39	127	127	89	90	88	86
40-44	103	130	98	88	89	85
45-49	92	122	126	91	92	85
50-54	96	128	126	107	89	74
55-59	117	166	130	131	94	95
60-64	124	130	137	140	114	85
65-69	127	120	174	140	141	115
70+	134	150	148	170	172	165

(a) Including Crimea.
(b) Ashkenazic Jews only.
Sources: Altshuler, 1998, pp. 236, 258; Tolts, 1997a, p. 171; Tolts, 1997b, p. 154.

According to the 1939 census, before the Second World War as a result of different propensities to migrate into Russia, the number of Jewish males aged 20-24 greatly exceeded the corresponding number of females, while there was an evident excess of females in the

marriage market within the total population of the Russian Federation, as well as in the urban population as a whole.[2]

The data of the first post-war census of 1959 show a prevalence of males over the number of females among Jews in Russia in all age groups under 30. In this period, there was a shortage of males in the total urban population in all marriageable ages. The data of the next censuses show progressively narrowing possibilities for male Jews in Russia to select suitable marriage candidates from their own ethnic group. In 1970 males outnumbered females in all ages up to 45; in 1979 the number of Jewish males in Russia was higher than that of Jewish females in all ages up to 50, and in 1989 even up to 60.

Analysis reveals that the analogous unique sex structure in the total Soviet Jewish population (according to the 1989 census, the male surplus was up to 55) was a consequence of the small sex difference in mortality (Tolts, 1992, pp. 4-5). In part, this dearth of potential Jewish brides in Russia stems from the earlier migration of predominantly male Jews from Ukraine to this republic (see above).

According to the 1994 microcensus, in Russia this shortage had advanced to ages 60-64, but among all those under fifty at the time of the 1989 census, the sex ratio had even worsened during these five years. For example, the ratio was 87:100 at ages 25-29 in the 1989 census, but had fallen to 80:100 for the same cohort at ages 30-34 in the 1994 microcensus. A plausible explanation for this would be that in the period of the recent great exodus more females than males emigrated.

A distinctive feature of the age structure of the Jewish population of Russia in the post-war period is its “regressive” nature; that is, younger generations tend to be consistently less numerous. In view of sex ratios in adjacent age groups of the Jewish population, a male’s chances of finding a candidate for marriage within his ethnic community are further reduced. For instance, in 1989 in Russia the number of Jewish females aged 25-29 was 13 less than needed to balance each 100 Jewish males of the same age group, while for this same age group of males, the imbalance was much higher when they were compared with the adjacent group of females aged 20-24 - by almost two fifths (Tolts, 1993, p. 105).

[2] For the census data for different years on sex ratio by age for the total and urban population of the Russian Federation, see: Goskomstat Rossii, 1998b, pp. 48-49.

Table 3. Currently Married Among Jewish Males and Females in Russia, 1939–1994

Sex and age group	1939[a]	1959[b]	1970	1979	1989	1994[b]
			Percentage currently married, by age			
Males						
16-19	0.9[c]	1.3	1.3[c]	2.4	2.5	1.9
20-24	23.1	17.7	25.3	30.8	28.2	27.0
25-29	61.2	66.2	68.4	71.1	67.3	60.6
30-34	80.6	85.9	83.6	83.4	81.6	76.9
35-39	87.6	92.4	89.5	88.0	86.1	81.8
40-44	90.7	94.4	92.1	89.7	86.5	84.1
45-49	91.5	94.3	93.5	90.4	87.2	86.6
50-54	91.3	93.5	93.9	91.6	88.2	88.5
55-59	90.3	91.8	93.0	92.3	88.6	88.6
60-64	79.8[d]	89.9	90.9	91.3	89.2	84.3
65-69	...	87.2	87.0	88.5	88.0	84.6
70+	...	74.0	75.6	75.3	73.4	73.1
Females						
16-19	5.5[c]	3.3	3.8[c]	6.0	7.6	5.7
20-24	49.6	29.3	38.8	44.5	48.9	46.3
25-29	70.4	67.3	70.1	70.7	72.2	74.3
30-34	73.3	75.8	76.4	75.0	75.3	70.5
35-39	74.7	74.8	76.2	75.1	74.0	73.3
40-44	72.6	67.1	75.2	73.5	71.9	71.3
45-49	68.7	60.8	72.0	71.3	69.8	68.2
50-54	62.2	52.9	63.1	68.2	67.8	67.6
55-59	53.8	47.8	54.2	61.1	63.6	63.3
60-64	30.7[d]	40.9	42.8	48.6	56.3	60.3
65-69	...	31.0	33.8	37.6	44.5	49.2
70+	...	14.9	19.2	18.7	18.5	21.2
			Number of currently married Jewish females per 100 currently married Jewish males			
16(15)+	90	81	77	73	71	66
			Average number of years in marriage for females in fertile period (15-49 years) [e]			
Total	20.7	18.9	20.6	20.7	20.9	20.4
thereof:						
15-29	6.3	5.0	5.6	6.0	6.4	6.3
30-49	14.4	13.9	15.0	14.7	14.5	14.1

(a) Including Crimea.
(b) Ashkenazic Jews only.
(c) 15-19
(d) 60 and above.
(e) Of total duration of 35 years, disregarding mortality; based on percentage currently married, by age (for method of computation, see: United Nations, 1973, p. 26).

Sources: Altshuler, 1998, pp. 261, 266; Goskomstat Rossii, 1992, Vol. 1, pp. 69, 160-161; Goskomstat SSSR, 1989, Vol. 4, Part 2, Book 1, p. 308; TsSU SSSR, 1963, pp. 414-415; Tolts, 1992, p. 17.

Male Jews could not fully realize their marriage potential within the framework of their ethnic group. However, census data on the currently married (Table 3) show that Jewish males successfully realized their marriage potential due to the "shortage" of males in the total urban population, but inevitably the "excess" Jewish males married outside their ethnic group.

According to the data of the 1959 census, the proportion of Jewish males currently married above age 25 was higher than it had been in 1939. Between the two censuses, this indicator for Jewish females had fallen above age 40. This coincided with the unfavorable dynamics of sex ratios above age 40 for the females in the Jewish population of Russia during this period.

During the same period, in the Jewish population the proportion of currently married males below age 25 fell. This may be seen as an indirect indicator of rising age at first marriage between the two censuses, for which we have no direct data. The same dynamics show decrease of this proportion for Jewish females at young ages.

Between the 1959 and 1970 censuses the proportion of currently married at young ages for Jewish males and females rose, from which we may conclude a decrease in age at first marriage. According to the 1979 census singulate mean age at marriage was 25.0 years for Jewish males and 23.1 years for Jewish females. During the next decade this indicator remained almost unchanged in the Jewish population for males and decreased by 0.4 year for females: according to the 1979 census it was 25.1 and 22.7 years, respectively (Tolts, 1992, p. 13).

According to the 1979 census, final celibacy (percentage never-married for the 45-49 age group) was as low as 2.8 percent for Jewish males; according to the 1989 census, this indicator was 3.3 percent for Jewish males. For Jewish females the same indicator was at medium level: 8.8 and 7.3 percent, respectively.

The average number of years for women in marriage during their fertile period disregarding mortality,[3] fell between 1939 and 1959, but had risen again by 1989; this indicator was even higher in 1989 than it had been before for all ages under 30 (Table 3). From these figures, we can see that the dynamics of marriage were rather favorable for Jewish fertility.

[3] Estimate based on census data on percentage currently married, by age; for method of computation, see, e.g.: United Nations, 1973, p. 26. For some of these indicators for entire population of Russia and Soviet Union, see: Tolts, 1986, p. 80.

. As a result of the above-noted sex imbalance, during the period under analysis the total number of currently married Jewish males per 100 currently married Jewish females decreased considerably: from 90 in 1939 to 81 in 1959 and 71 in 1989, and even to 66 in 1994.

Since the Second World War one of the outstanding features of Jews in Russia has been the great increase in mixed marriage. This process had actually begun already between the two world wars (Table 4). In 1988, the frequency of mixed marriages among all marriages involving Jews was 73.2 percent for males and 62.8 percent for females (a relative increase of 23 and 46 percent respectively, as compared to 1978). According to my estimate, by 1994 the percentage mixed-married among all currently married reached 63 percent for males and 44 percent for females.

Table 4. Indicators of Mixed Marriage among Jews in Russia, 1926-1994

Year	Males	Females
	Percentage of mixed marriages among all registered marriages in given year[a]	
1924[b]	17.4	8.9
1926[b]	25.0	16.5
1936[c]	42.3	36.8
1978	59.3	43.0
1988	73.2	62.8
	Percentage mixed married among all currently married[d]	
1979	51	33
1989	58	40
1994	63	44

(a) According to the vital statistics data.
(b) European part.
(c) Partial data.
(d) Author's estimates, based on census/microcensus data (for the method used see: Tolts, 1996b, p. 19).
Sources: Altshuler, 1998, p. 74; Tolts, 1997a, p. 152.

The higher frequencies of mixed marriage among males reflect the already mentioned peculiarities of Jewish population structure in Russia, namely the "shortage" of females. A

more balanced Jewish age-sex structure would probably be associated with a more similar frequency of mixed marriage by sex.[4]

In the post-war period rising intermarriage was accompanied by a great increase in the proportion of children born to mixed couples. Corresponding to Russia's high percentage of mixed marriages, the proportion of these children among all children born to Jewish mothers was greater there than in the other Slavic republics: 58 percent in 1988, or 2.1 times more than three decades before (Table 5). Following the start of the recent great exodus, the proportion of children born to mixed couples among all children born to Jewish mothers in 1997 reached 70 percent in Russia.

Table 5. Percentage of Children to Jewish Mixed-Married Couples in Russia, 1958-1997

Year	Among all children born to Jewish mothers	Among all children born to at least one Jewish parent	
		Equality hypothesis	Two-fold hypothesis
1958	27.4	43	53
1968	40.0	57	67
1978	42.5	60	69
1988	57.9	73	80
1993	67.8	81	86
1997	69.9	82	87

Note: According to the equality hypothesis the (unknown) number of children born to non-Jewish mothers and Jewish fathers was equal to the (known) number of children born to Jewish mothers and non-Jewish fathers. According to the two-fold hypothesis the (unknown) number of children born to non-Jewish mothers and Jewish fathers was twice the (known) number of children born to Jewish mothers and non-Jewish fathers.
Source: Vital statistics data (see Appendix 2).

Soviet/Russian vital statistics give no data on the number of children born to those couples with Jewish husbands and non-Jewish wives. However, this information is very important to any analysis of the dynamics of the "enlarged" Jewish population. As the number of these births cannot be lower than the vital statistics figure for children born to Jewish mothers in mixed couples, in order to obtain a minimal estimate, one may assume these figures to be equal.

Approximately twice as many Jewish men were currently married to non-Jewish women as were Jewish women to non-Jewish men (Tolts, 1996b, p. 15; Volkov, 1989, p. 18).

[4] For the US see, e.g.: Goldstein, 1992.

Hence, the proportions of children born to mixed couples as a whole of all newborn children with at least one Jewish parent in Russia was about one half in the late 1950s, perhaps 80 percent in the late 1980s, and even 87 percent in 1997.

The data on offspring of mixed couples collected before the start of the great exodus show clear preference for non-Jewish ethnic affiliation for the children (Volkov, 1989, p. 18). According to the most recent data of the 1994 microcensus, non-Jewish ethnic affiliation was clearly preferable among offspring of mixed couples. For children under 16, the percentage declared Jewish was about the same regardless of the composition of the mixed couples - only 11 percent. Among offspring aged 16 and above, the percentage was even lower: 6.2 percent for couples consisting of a Jewish husband and a Russian wife and 4.1 percent for couples consisting of a Russian husband and a Jewish wife (Tolts, 1996b, p. 15).

However, during the entire period under consideration including the pre-1989 emigration, mixed marriage and its consequences were not the main reasons for the Jewish population decline in Russia.

Fertility Decline

Fertility transition generally starts in the urban population and Jews have usually been in the vanguard. Both these facts are true throughout the world, and for Russia in particular (see DellaPergola, 1992; Tolts, 1996a).

The fertility of Jews in Russia has for a long time been too low to ensure replacement. Total Jewish fertility in the Russian Federation has not exceeded 1.6 children per woman in all the cohorts born since the beginning of the 20th century. Moreover, since 1919, the birth cohorts of Jewish women have had a very stable and low level of fertility — about 1.4 or less (Table 6).

The low level of Jewish fertility in Russia is only partly caused by a high frequency of permanent infertility. According to the 1979 census, among the women of the oldest cohort (born before 1909) 19 percent had had no births, and the share of childless among women born in 1909-33 was about 17 percent. According to the 1989 census, in the younger 1934-48 cohorts, 14-15 percent of the women never bore children. However, the marriage pattern (age at first marriage and final celibacy; see above) was not the main factor causing low Jewish fertility in Russia.

Table 6. Fertility Indicators for Birth Cohorts of Jewish Women[(a)] in Russia, According to the Data of the 1979 and 1989 Censuses

Birth years of women	Age at census date	Average number of children ever born	Percentage of childless women[(b)]
	1979 census of the population		
before 1909	70+	1.59	19.0
1909-1913	65-69	1.59	17.5
1914-1918	60-64	1.56	17.4
1919-1923	55-59	1.43	17.7
1924-1928	50-54	1.41	17.3
1929-1933	45-49	1.34	17.2
	1989 census of the population		
1934-1938	50-54	1.34	15.1
1939-1943	45-49	1.33	14.7
1944-1948	40-44	1.33	14.2

(a) All marital statuses.
(b) Among women for whom the number of children ever born is known.
Sources: Adapted from Goskomstat SSSR, 1989, Vol. 6, Part 3, p. 132; Statkomitet SNG, 1993, Vol. 4, pp. 174-175.

The main cause was low marital fertility. According to the 1979 census, the average total number of births in the Russian Federation has not exceeded 1.8 children per married Jewish woman born in the first part of the 20th century; and fertility of married Jewish women born since 1919 was as low as 1.6 or less.

Table 7. Index Numbers (1958=100 and 1988=100) of Births among Jewish Population in Russia, 1958-1997

Year	Births to endogamous Jewish couples		Births to Jewish mothers		Births to at least one Jewish parent[(a)]	
	1958=100	1988=100	1958=100	1988=100	1958=100	1988=100
1958	100		100		100	
1968	58		71		83	
1978	49		61		73	
1988	24	100	42	100	58	100
1990	14	57	27	66	40	69
1993	6	23	13	30	19	33
1997	4	17	10	24	16	27

(a) According to two-fold hypothesis (see note to Table 5).
Source: Vital statistics data (see Appendix 2).

Based on the different categories of births (to endogamous Jewish couples, to Jewish mothers, and to at least one Jewish parent), one can reconstruct the dynamics of birth decline

among Jews in Russia (Table 7). However, the figures for each category relate to quantitatively different aspects of internal processes among the Jews.

Births to endogamous Jewish couples form the basis (in Soviet conditions in the Russian Federation, even about the only source) of reproduction of the "core" Jewish population. Births to at least one Jewish parent by definition of course include endogamous births, as well as births to Jewish mothers with non-Jewish fathers and births to non-Jewish mothers with Jewish fathers. This largest and most inclusive of the three figures gives Jewish fertility as a whole, and in doing so, allows analysis of the dynamics of the "enlarged" Jewish population. Only births to Jewish mothers are considered Jewish according to Jewish religious law ("Halakha"), but this category of births had very little specific relevance to secular Soviet society.

By 1926 the crude birth rate to Jewish mothers in the European part of the Russian Federation had fallen to 19.6 per 1,000 Jews (Binshtok and Novoselskii, 1929, p. 75). By 1936, according to partial data, this rate was as low as 15.8 per 1,000 Jews (KEE, Vol. 8, col. 295). That is, the Jewish population of the Russian Federation had, before the Second World War, reached an advanced stage of fertility transition.

In the post-war period, all the birth categories showed dramatic decline, but this was greatest among the children born to endogamous Jewish couples, and smallest among those children born to at least one Jewish parent. During the three decades from 1958 to 1988, the number of births to endogamous Jewish couples fell by a factor of 4.1, and the number of children born to Jewish mothers fell by a factor of 2.4. During this same period, the total number of births to at least one Jewish parent fell by a factor of 1.7.

The vital crisis of Jews in Russia has been intensifying rapidly due, *inter alia*, to the great exodus. In the short period between 1988 and 1993 in the Russian Federation, the decline was more pronounced, by a factor of 4.3, 3.3 and 3.0, respectively. However, emigration and its consequences were not the main cause of this dramatic decline.

We arrive at this surprising conclusion by estimating the expected number of births in 1993-1994, assuming that the age composition and absolute number of Jewish women remained as it was in 1989 (Table 8). In 1988-1989, the number of births to Jewish mothers was 6,895; by 1993-1994, the number had declined by 4,662 (see Appendix 2). According to our estimate, even if the age composition had not changed, the decrease in the number of

births should have been 3,158. Thus, 68 percent of the recorded decrease cannot be attributed to the change of age composition which was a consequence of mass emigration.

Table 8. Dynamics of the Number of Births to Jewish Mothers in Russia, 1988-1989 to 1993-1994

Years	Births		Expected number as % of registered number
	Registered number	Expected number, assuming age composition as in 1989[a]	
1988-1989	6,895	6,895	100
1993-1994	2,233	3,737	167
Decrease	4,662	3,158	68[b]

(a) According to actual age-sex fertility rates.
(b) Percent of decrease due to change in fertility.
Sources: Vital statistics and 1989 census.

We must seek another cause. In 1988-1989 the total fertility rate of Russia's Jewish population was 1.492 (Barkalov and Darsky, 1994, p. 9). For 1993-1994 the fertility indicator was estimated at about 0.8; that is, it had fallen dramatically by 46 percent (Tolts, 1996b, p.12). This coincides with the general negative dynamics of fertility in Russia during this period (see, for example: Andreev et al., 1998; Zakharov and Ivanova, 1996). Between 1988 and 1994, however, the fertility indicator for the total urban population fell by only 34 percent, from 1.9 to 1.25. And in 1994, even in the two major cities of Russia - Moscow and St. Petersburg - the total fertility rate was higher than that of the Jewish population: 1.1 and 1.0, respectively (Goskomstat Rossii, 1995, pp. 80-81)

One special aspect of the interrelationship between emigration and Jewish fertility in Russia should perhaps be noted here. According to Israeli statistics, the level of fertility among immigrants (*olim*) from the FSU was rather high during their first year in the country (Israel. CBS, 1998a, p. 79): some Jewish women obviously preferred giving birth in Israel.

As a result, in almost four decades between 1958 to 1997, the total number of births to endogamous Jewish couples fell by a factor of 24. During this same period the number of children born to Jewish mothers fell by a factor of 10, and the total number of births to at least one Jewish parent fell by a factor of 6 (Table 7). In 1997 in the Russian Federation the total recorded number of births to Jewish mothers was 905, with only 272 of these children having

Jewish fathers. For that year the total number of births to at least one Jewish parent can be estimated at about 2,200, if we assume the number of children born to non-Jewish mothers and Jewish fathers to be twice that born to Jewish mothers and non-Jewish fathers.

Vital Balances and Aging

For the pre-war period we have data only on the balance of births to Jewish mothers, and Jewish deaths. In 1926 in the European part of the Russian Federation the number of births to Jewish mothers exceeded that of Jewish deaths by 11.1 per 1,000 Jews. In 1936 according to partial data, this balance was 7.1 per 1,000 Jews.

Table 9. Balances of Crude Birth and Death Rates in Russia, 1926 to 1993-1994, Per 1,000 Jews

Year	Birth rate to:			Death rate	Balance[b]		
	Endoga-mous Jewish couples	Jewish mothers	At least one Jewish parent[a]		A	B	C
	(1)	(2)	(3)	(4)	(5)= (1)-(4)	(6)= (2)-(4)	(7)= (3)-(4)
1926[c]	...	19.6	...	8.5	...	11.1	...
1936[d]	...	15.8	...	8.7	...	7.1	...
1958-59	7.4	10.2	15.6	10.2	-2.8	0.0	5.4
1968	4.7	7.8	14.0	14.0	-9.3	-6.2	0.0
1978-79	4.3	7.5	14.0	19.9	-15.6	-12.4	-5.9
1988-89	2.6	6.3	13.6	24.4	-21.8	-18.1	-10.8
1993-94	0.9	2.8	6.5	30.0	-29.1	-27.2	-23.5

(a) According to two-fold hypothesis (see note to Table 5).
(b) Balance of birth rate of designated category and death rate:
A - birth rate to endogamous Jewish couples minus the death rate;
B - birth rate to Jewish mothers minus the death rate;
C - birth rate to at least one Jewish parent minus the death rate.
(c) European part, including Crimea.
(d) Partial data.
Sources: Binshtok and Novoselskii, 1929, pp. 73-76; KEE, 1996, Vol. 8, col. 295; Tolts, 1997a, p. 160.

The data indicate that an unfavorable balance of births to endogamous Jewish couples and Jewish deaths first occurred in Russia before 1958 (the first year for which we have post-war vital data). The negative balance of births to Jewish mothers and Jewish deaths in the Russian Federation was first registered in 1959. At the same time, also still before the

emigration of the 1970s, in 1968 the balance of births to at least one Jewish parent and Jewish deaths reached zero, after which it became negative in Russia (Table 9).

In 1988-1989 the number of Jewish deaths exceeded that of births to Jewish mothers by 18.1 per 1000 Jews. The rise in mixed marriage led to a further decline in endogamous birth rates as compared with crude birth rates of Jewish mothers. Over the three decades between 1958-1959 to 1988-1989, the endogamous birth rate declined by 65 percent, while the crude birth rate of Jewish mothers declined by only 38 percent.

On the other hand, also due to the rise in mixed marriage, the decrease in crude birth rates to at least one Jewish parent was rather moderate. Over the same time span (1958-1959 to 1988-1989) this indicator fell only from 15.6 to 13.6 per 1,000 Jews (13 percent) in Russia.

Finally, the "effectively Jewish" birth rate, that is, the total number of newborns identified as Jewish per 1,000 Jews, must be considered in particular, for this directly determines the dynamics of the "core" Jewish population (Schmelz, 1981). This indicator includes some newborns of mixed origin who would grow up as Jews. A comparison of vital statistics and census data shows that in Russia roughly 20 percent of children born to mixed couples in 1988 were reported as Jews in the 1989 census (Tolts, 1997b, p. 161).

For 1989 the "effectively Jewish" birth rate corresponding to these figures has been estimated at about 5 per 1,000 Jews in Russia. On the eve of the recent great exodus the balance of these births and Jewish deaths was decidedly negative: -19 per 1,000 Jews in Russia. The 1959 census data show that the “effectively Jewish” birth rate was as high as about 8 per 1,000 Jews in Russia. In this period the balance of these births and Jewish deaths was negative in Russia.

After the start of the great exodus, the vital balance of Russia’s Jewry worsened. From 1988-1989 to 1993-1994 the number of births to Jewish mothers dropped by more than half, from 6.3 to 2.8 per 1,000 Jews. During the same period the number of Jewish deaths rose by 23 percent from 24.4 to 30. Thus, the negative balance of births and deaths increased by one half and reached more than 27 per 1,000 Jews. In 1958-1959 the number of deaths was only 10.2 per 1,000 Jews.

Actually the most acute demographic problem in contemporary Russia in general is mortality; the total Russian population has the lowest life expectancy for males among all the

developed countries. Between 1988 and 1994, the life expectancy of males in the total Russian urban population fell by 7.5 years.

However, the data clearly show that the vital crisis of Jews in Russia is not linked to mortality and longevity levels. For 1993-1994 the life expectancy of Russia's male Jews has been estimated at 69.6, which is about the same level as at the end of the 1980s (Table 10). Given the demographic situation of contemporary Russia, the life expectancy of Jewish males is relatively very good.

Table 10. Life Expectancy at Birth for Jews and Total Urban Population in Russia, and Total Jewish Population in Israel, 1988-1989 and 1993-1994

	Males		Females	
	Russia	Israel	Russia	Israel
Russia's Jews				
1988-1989	69.7	-	73.5	-
1993-1994	69.6[a]	...	73.2[a]	...
Total population				
1988	65.4[b]	74.2[c]	74.2[b]	78.0[c]
1994	57.9[b]	75.9[c]	71.3[b]	79.7[c]

(a) Author's estimates for 1993-1994, based on indirect method.
(b) Total urban population
(c) Total Jewish population.
Sources: Israel. CBS, 1998b, table 3.20; Goskomstat Rossii, 1998b, pp., 164-165; Statkomitet SNG, 1995, p. 257; Tolts, 1996b, p.12

In 1994 male life expectancy among the total urban population was only 57.9; the difference between the life expectancy of these males and Jewish males rose dramatically to about 12 years. From these figures we see that the Jewish population has adapted to the recent economic transition in Russia better than the rest of the population (on this problem, for the total Russian population see, e.g.: Heleniak, 1995, pp. 451-453).

Nor were the dynamics of Jewish life expectancy lowered by the selective character of mass emigration as one might have supposed. Although unwell people usually have less tendency to migrate, and this would have been expected to raise Jewish mortality somewhat, this factor was offset by successful Jewish socioeconomic adaptation.

At the same time, a comparison of Jewish life expectancy in Russia and in Israel shows a large differentiation between them. In the mid-1990s this differentiation for both males and females was more than 6 years. However, during this period in Israel, standardized

rates of female mortality were lower for the new immigrants from the former USSR as a whole than for the total Jewish population of Israel, while the indicators for males of both groups were rather close (Israel. CBS, 1998a, p. 20).

The level of crude death rates of course depends heavily on the age structure. Given the condition of stable longevity, the older a population, the higher this indicator will be. Before the Second World War Russia's Jewish population was rather young. According to the 1939 census, the median age of Jews in Russia was 30.5, and only 4.6 percent of them were aged 65 and over (Table 11).

Table 11. Jews in Russia, by Age Group, 1939-1994, Percent

Year	All ages	0-14	15-29	30-44	45-64	65+	Thereof 75+	Median age
1939[a]	100.0	21.1	27.8	29.7	16.8	4.6	...	30.5
1959[b]	100.0	13.7	18.8	22.8	35.8	8.9	2.3	41.2
1970	100.0	10.3	15.7	23.1	33.9	17.0	4.2	45.5
1979	100.0	8.3	14.7	20.8	31.4	24.8	8.0	49.2
1989	100.0	8.4	11.4	19.5	33.8	26.9	12.7	52.3
1994[b]	100.0	6.2	9.9	16.5	35.0	32.4	14.5	56.0

(a) Including Crimea.
(b) Ashkenazic Jews only.
Sources: Altshuler, 1998, p. 236; Tolts, 1997a, p. 163.

In the post-war period till the start of the great exodus Russia's Jewish population aged substantially, a factor which is linked mainly to the decline in fertility. According to data from the 1989 census, among the Jews in Russia, the population aged 65 and over reached 26.9 percent of the total, or three times more than in 1959 (8.9 percent for Ashkenazic Jews). During the same period, the median age of Russia's Jews rose from 41.2 to 52.3 years.

The recent great exodus has accelerated this process. According to data from the 1994 microcensus, 32.4 per cent of the Ashkenazic Jews in Russia were aged 65 and above. At the same time the median age of these Jews reached 56.0, which was 3.7 years more than for all Jews in 1989. In the entire previous decennial period between the 1979 and 1989 censuses this indicator for all Russia's Jews rose by only 3.1 years.

The influence of aging on the negative balance of births to Jewish mothers and Jewish deaths (negative natural increase) can be estimated.[5] Of the decomposition (breakdown) seen from the 1988-1989 data, 81 percent of the negative natural increase of the Jewish population in Russia was attributable to the age structure and only 19 percent to fertility (see Appendix 3).

By 1993-1994, due to the dramatic decline of the fertility level, a somewhat lower percent of the negative balance of births and deaths was attributable to the age structure and a higher percent to fertility: 75 and 25 percent, respectively. However, aging is still without doubt the leading cause of contemporary Russia's Jewish demographic collapse.

Dynamics of the "Enlarged" Jewish Population

Rising intermarriage has caused an increase in the percentage of Jews living in ethnically heterogeneous households which are part of the "enlarged" Jewish population.[6] According to our estimates, in Russia between 1979 and 1989, the total number of family households with at least one "core" Jew fell by about 11-13 percent (Tolts, 1993, p. 108). During the same period, the decline in the number of Jewish uninational family households reached 30 percent. Correspondingly, between 1979 and 1989, the proportion of Jews living in ethnically heterogeneous households among all Russian Jews living in family households rose from 39 to 49 percent.

Theoretically, stagnation or decline of a "core" Jewish population could occur concomitantly with the growth of the respective "enlarged" Jewish population, as has been shown by American Jewry (Goldstein, 1992, p. 92).

By the late 1970s the "enlarged" Jewish population in Russia could be estimated at 1,083,000 (or even about 1,100,000, including "Tats"). According to our estimates based on the dynamics of family households, during the 1980s not only the "core" but also the "enlarged" Jewish population decreased (Table 12). One may assume that the start of this stage of decline began in the 1970s in Russia, when a significant negative balance of births to at least one Jewish parent and Jewish deaths appeared in the republic (see above).

[5] On the method used see: S. Preston, 1970, p. 419.
[6] The "enlarged" Jewish population includes all persons living in households with at least one "core" Jew, see: DellaPergola, 1993, p. 277.

Table 12. “Enlarged” Jewish Population, by Components, Russia, 1979, 1989, 1994 and 1998, Thousands

	1979[(a)]	1989[(a)]	1994[(b)]	1998
1. Jews living in uninational households	463.8	315.5	211.0	...
1a. Thereof, households with 2 or more members	369.1	249.6	165.4	...
2. Jews living in multinational households	236.9	235.5	183.2	...
3. “Core” Jewish population [(3)=(1)+(2)]	700.7	551.0	394.2	325
4. Non-Jewish members of multinational households with Jewish presence[(c)]	382.5	341.0	321.8	260
5. “Enlarged” Jewish population [(5)=(3)+(4)]	1,083.2	892.0	716.0	585[(d)]
6. Ratio of “enlarged” to “core” Jewish population [(6)=(5)/(3)]	1.55	1.6	1.8	1.8

(a) Not including Tats.
(b) Ashkenazic Jews only.
(c) Persons living in households with at least one "core" Jew.
(d) Estimate based on the ratio of “enlarged” to “core” Jewish population, as for 1994.
Sources: Estimated from 1979 and 1989 censuses and 1994 microcensus (see: Tolts, 1996b, p. 16, 19), and Table 1.

According to estimates on the basis of the 1989 census and the 1994 microcensus, the “enlarged” Jewish population was 892,000 at the start of the great exodus, and 716,000 five years later. The first figure, however, does not include “Tats,” and the second one covers Ashkenazic Jews only. By adding the sectors of the Jewish population which were not covered, we arrived at a rough total estimate of 910,000 for 1989 and 730,000 for 1994. This indicates a decrease of 20 percent for the first five years of the great exodus.

Thus, the “enlarged” Jewish population declined less than the “core” population did. In fact, the decline in the number of non-Jewish members of heterogeneous households was very moderate. According to our estimate, the ratio of “enlarged” to “core” Jewish population was 1.6 to 1 for the late 1980s, and 1.8 to 1 for 1994.[7]

Interestingly enough, the estimated share of the “core” within the “enlarged” Jewish population in 1994 – 55 percent - is very close to the percentage of Jews among all emigrants from Russia to Israel in the same year – 58 percent. In 1995 the second indicator dropped to 53 percent.[8] The similarity in figures, however, should not be seen as a sign of equal propensities to aliyah for homogenous and mixed Jewish families.

[7] According to the estimate based on the same microcensus which included in the “enlarged” Jewish population those children of mixed couples who had not identified themselves as Jews and who were living separately from a Jewish parent, the ratio between the “enlarged” and “core” Jewish populations was 1.93 to 1 (Andreev, 1997, p. 7).
[8] From the Russian official statistics based on the nationality (ethnicity) recorded in the internal

Migratory movements are more frequent at younger ages. Among Russian Jews, the younger the population, the higher the percentage of intermarriage and offspring of mixed couples. Aggregate aliyah data are heavily dependent on the age structure of the "enlarged" Jewish population, and such data can not show propensity to aliyah for homogenous and mixed Jewish families. These figures clearly show that processes involved with any explanation of the dynamics of the "enlarged" Jewish population are complicated.

For a conservative estimate of the "enlarged" Jewish population of Russia for 1998, we used the ratio of "enlarged" to "core" Jewish population, as for 1994. Accordingly, the estimated number was about 585,000. This figure includes "core" Jews and only those close relatives who were living with them. At the same date, the "enlarged" Jewish population which includes children of mixed couples who did not identify themselves as Jewish and who were living apart from their Jewish parent, was more than 600,000. The total number of people eligible to emigrate from Russia to Israel according to the Law of Return is even higher.

Concluding Remarks

Jews in Russia reached an advanced stage of demographic transition earlier than most of the population of the country. By 1926 their infant mortality rate was as low as 54 per 1,000 newborns, which equals these indicators for such countries as Sweden and Norway in the same period (this comparison was made by L. S. Kaminskii [1930, p. 173]); the total urban population of the Russian Federation arrived at about this same low indicator only in 1955 (Goskomstat Rossii, 1998b, p. 86).

Serious differences in past and contemporary demographic processes in Russia were found by position of different groups in the social system (see, e.g.: Bondarskaya, 1994; Shkolnikov et al., 1998). And peculiarities of Jewish demographic transition in the Russian Federation and the recent level of their demographic indicators are a striking example which cannot be ignored in understanding the fate of the total population of Russia in the 20th century.

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passports of emigrants, this indicator was as low as 36 percent in 1997 (Goskomstat Rossii, 1998a, p. 86). However, according to Jewish religious law ("Halakha"), of course, the proportion of Jews among the *olim* should be much higher (see DellaPergola, 1998, pp. 85-87). In the official Israeli data, which are based on this approach, the percentage of Jews among immigrants to Israel from the Russian Federation in 1997 was 60 percent (*Vesti* [Tel Aviv], September 27, 1998, p. 1).

However, Russia's Jews are a unique group, and since 1989, the situation of the Jews has changed dramatically. Official governmental antisemitism was abolished, even though it was replaced by grass roots antisemitic activity (see, e.g.: Brym, 1994). After the break-up of the USSR, Russia's Jews received all rights, and community-building activities were initiated with the help of world Jewry (Gitelman, 1994). At the same time, as our analysis reveals these activities were started after these Jews had already reached an advanced stage of demographic collapse, caused mainly by low fertility of long duration.

In Russia, major and rapid changes are taking place in all areas. These economic, cultural, and intellectual changes are likely to have a significant effect on the number of Jews in the country and their propensity to emigrate. If the economic and political situation further deteriorates and/or the regime becomes more unstable, the Jewish population is likely to be seriously affected.

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Appendix 1. Registered International Migration Events of the Jews[(a)] in Russia, 1989-1997, Thousands

Registered events	1989	1990	1991	1992	1993	1994	1995	1996	1997
Number of arrivals	3.0	3.1	2.4	2.8	2.8	3.5	2.8	2.3	1.9
from:									
other parts of the FSU	2.9	2.9	2.1	2.2	2.1	2.7	2.0	1.5	1.1
outside the FSU	0.1	0.2	0.3	0.6	0.7	0.8	0.8	0.8	0.8
Number of departures	14.0	31.9	33.4	23.1	19.5	16.0	13.9	13.6	9.8
to:									
other parts of the FSU	3.0	3.3	2.4	2.0	1.3	0.8	0.7	0.5	0.3
outside the FSU	11.0	28.6	31.0	21.1	18.2	15.2	13.2	13.1	9.5
Migratory balance	-11.0	-28.8	-31.0	-20.3	-16.7	-12.5	-11.1	-11.3	-7.9
with:									
other parts of the FSU	-0.1	-0.4	-0.3	0.2	0.8	1.9	1.3	1.0	0.8
outside the FSU	-10.9	-28.4	-30.7	-20.5	-17.5	-14.4	-12.4	-12.3	-8.7

(a) Including migration to and from Republics of the FSU; does not include Tats.

Sources: Tolts, 1996b, p. 7; Goskomstat Rossii, 1997, pp. 42, 44, 46; idem, 1998a, pp. 72, 74, 76.

Appendix 2. Births to Jewish Mothers and Jewish Deaths in Russia, 1958-1997

Year	Births to Jewish mothers	Thereof, with:		Jewish deaths
		Jewish fathers[a]	non-Jewish fathers	
1958	8,937	6,485	2,452	8,917
1968	6,359	3,817	2,542	11,431
1978	5,491	3,158	2,333	13,776
1988	3,710	1,562	2,148	13,826
1989	3,185	1,301	1,884	13,048
1990	2,436	896	1,540	13,035
1991	1,786	587	1,199	12,779
1992	1,462	472	990	12,158
1993	1,121	361	760	12,434
1994	1,112	341	771	11,605
1995	1,086	336	750	10,900
1996	930	289	641	9,953
1997	905	272	633	9,546

(a) Estimated residually, by subtracting the number of births to Jewish mothers with non-Jewish fathers from the total number of births to Jewish mothers.
Source: Vital statistics data.

Appendix 3. Components of Negative Natural Increase of the Jewish Population in Russia, 1988-1989 and 1993-1994[a]

Natural increase and its components	Per 1,000 Jews		% of total negative increase	
	1988-1989	1993-1994	1988-1989	1993-1994
Crude rate of natural increase	-18.1	-27.2	100	100
due to:				
Age composition	-14.7	-20.5	81	75
Fertility	-3.4	-6.7	19	25

(a) According to S. Preston's (1970) method of decomposition; not including Tats.
Source: Tolts, 1996b, p. 18.