Social Mobility in the Russia of Revolutions, 1910-2015: A Surname Study

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In *The Son Also Rises,* Gregory Clark shows that social mobility rates can be measured parsimoniously for past societies using surname distributions, and that so measured social mobility is both slow, and invariant to social institutions. Here we apply this method to Russia, using a rich dataset, students enrolling at Moscow State University, 1910-2013. Russian surname types pre-1917 did indeed vary in average social status, as measured by the shares enrolling at the university relative to the population shares in 1910. In this preliminary paper we estimate social mobility rates for birth cohorts 1889-1995, and the effects of the Communist Revolution and the end of Communism 1991. But in future work we hope to estimate social mobility rates by decade 1880-2016.

Introduction

Clark et al. (2014), and Clark, Cummins, Hao, and Diaz Vidal (2015) show how it is possible to measure long run social mobility rates using just three pieces of information on societies: the surname distribution in general over time, the surname distribution among an elite, and the rank in the status distribution that elite represents. They show that in England we can thus use the record of those attending Oxford and Cambridge 1300-2014 to measure social mobility rates across 700 years, and across many different social and political epochs. The finding of that study in England was first that social mobility rates were always low, with a correlation of intergenerational status across generations of 0.7-0.8. But second this intergenerational correlation is surprisingly constant despite profound social changes across these centuries. The reform of the church in the 16th century had no impact, nor does the Glorious Revolution of 1688-9, nor does the Industrial Revolution, the rise of mass schooling in the late nineteenth century, or the extension of the political franchise 1833-1920.

This paper attempts a similar exercise for Russia, 1850-2013 where our source on Russian elites is the enrollment records of Lomonosov Moscow State University,

1755-2013. In the period we look at we can measure social mobility in the Czarist regime, the effects of the 1917 Revolution and the subsequent Stalinist regime, and then the end of Communism in 1990.

The Method

We follow the method outlined in Clark, Cummins, Hao, and Diaz Vidal (2015). This estimates social mobility rates by first finding some set of surnames that are on average elite in earlier generations. For example, in medieval England any surname that was the name of a place also tended to be higher status. This was because the elite would name themselves in the fashion "Roger de Berkeley" where Berkeley was the estate of the family, and the surname was eventually abbreviated to Roger Berkeley. We can thus use such surnames as marking average initial higher status. In Sweden any surname ending in "ius" was typically elite in the eighteenth or nineteenth century. This was because men graduating from university in these periods who had come patronym surnames such as Andersson or Persson that changed with each generation adopted new latinized surnames upon graduating from university as a mark and accompaniment of their new status. So first we need to establish that Russia had its own set of elite surnames in the nineteenth century.

We then estimate over time the mean status of this group of surnames, $\bar{y}_t$, relative to the social mean (where that social mean is measured as 0, and deviations from the social mean are measured in standard deviation units). The intergenerational persistence of status (the intergenerational correlation) is then just

$$b = \frac{\bar{y}_{t+1}}{\bar{y}_t}$$

(1)

If that intergeneration correlation is 0.5, for example, then in each generation the elite surname average status will move halfway towards the social mean. If the mean status is generation t is 1.2 standard deviations above the mean, then the mean in generation t+1 will be 0.6, and in generation t+2, 0.3, and so on. That intergenerational correlation of 0.5 also implies that even a group which deviates from average status by 1 standard deviation will be within .13 of a standard deviation from mean status within 3 generations.

If we have data on earnings by surname, or years of education, then we can directly calculate $\bar{y}_t$ by surname type and generation, and hence the implied rate of social mobility. However, in many cases the information about social status comes in a different form in each generation. This is where we get information only on the name composition in each generation of an elite group – in our case students enrolled at Moscow State University – compared to name composition for the population as a whole. Clark et al., for example, have evidence on surname composition at Oxford and Cambridge compared to the English population as a whole. To estimate mean educational status in this case Clark et al. make three assumptions.

(1) Educational status in any society can be assumed to follow a normal distribution with constant variance.
(2) For elite surname type there will be an equivalent distribution of status, but with the mean displaced upwards.
(3) The elite institution represents some upper n% of the general normal distribution of educational status assumed in (1).

The relative share of the elite surname type at institutions such as Oxford and Cambridge, compared to the share of the elite type in the general population, can then be used to infer the mean status of the initial elite surname group over time, as can be seen in figure 1. For example, suppose the elite institution represents the top 1% of the population, and the elite-type surname is 5 times more frequent at the institution than in the population as a whole. Then the implied mean educational status of the elite type surname is 0.65 standard deviations above the general population. Suppose that in the next generation the elite-type surname declines to 3 times more frequent at the institution than in the population as a whole. Now the mean of the elite-type surname has declined to an implied 0.45. From equation (1) the intergenerational correlation of educational status is 0.65.

For the case of Oxford and Cambridge, figure 2 shows the calculated mean educational status of an elite set of surnames for people attending the universities 1800-2015, divided up into 30 year generations. The mean is shown in standard deviation units. Also shown in the dashed line is the best fitting constant intergenerational correlation of status across these 215 years. That intergenerational correlation is 0.65, and this one intergenerational correlation fits well for most of this

Figure 1: Regression to the Mean of Elite Surnames
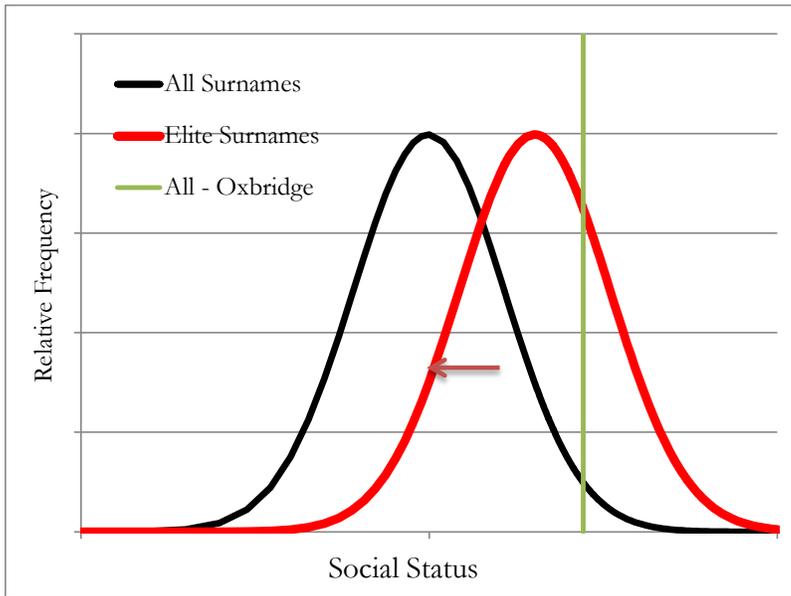
Source: Clark et al, 2015, figure 3.

Figure 2: Implied Intergenerational Correlation, Oxbridge, 1800-2014
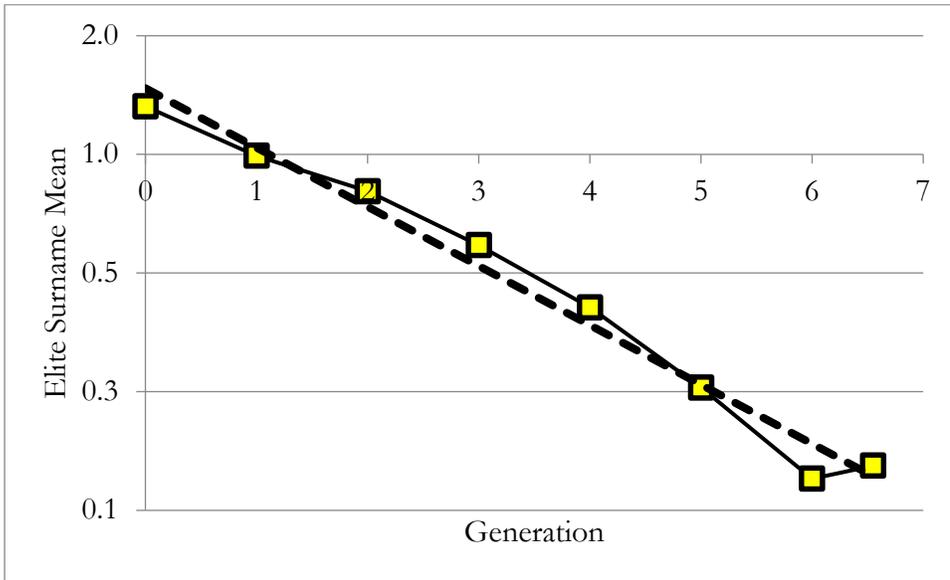
period. It also implies a strong persistence of educational status. The advantaged surnames in 1830 are still somewhat advantaged 7 generations later in 2010.

These assumptions may not seem obviously correct, but they produce stable and consistent estimates of social mobility rates in a variety of societies over many generations.

Thus to implement the same type of estimates in Russia we need three things:

(1) The surname distribution at Moscow State at benchmark dates 1850-2013.
(2) The general population surname distribution for the same dates.
(3) An estimate of the position of Moscow State in the educational status distribution at each date.

(1) and (3) we have. The difficulty in applying this method to Russia is to estimate (2), the surname population shares.

The Data

Our main source on elite surnames is the enrollment records of Moscow State. Founded in 1755 Moscow State has been since then, along with St Petersburg State University, one of the most elite educational institution in Russia. By 1860 there were 1,500 students attending the university (which then had a substantial medical school that became a separate facility in 1918). In this same decade in the nineteenth century Oxford and Cambridge together enrolled around 2,500 students, so this source is sufficiently large to replicate the results by Clark in England.

After the October Revolution there were substantial institutional changes at the university. In 1919 the university abolished tuition, and students received grants for living costs. There were active attempts to recruit students from working class and peasant families, and from 1919 to 1936 a preparatory department for potential students from such backgrounds operated. We shall see, however, that the major beneficiary of the new admission regime in the 1920s were Jewish Russians, who increased their enrollment share significantly.[1]

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[1] http://www.msu.ru/en/info/history3.html

By 2013 the university enrolled around 5,400 students per year. From these enrollment records we get a measure of the surname distribution among the intellectual elite of Russia across multiple generations.

So far we have surname distributions from 1910, 1920, 1930 and 2013. The 1910 list, which is comprehensive, also includes information on the religion of the student (Orthodox, Jewish, Old Believer, Episcopal, etc.), and their social class background. There are 1,774 students in this list. The terms used in the social class background are such things as *noble, peasant, merchant, government official, doctor, colonel*. The 1920 list covers just enrollees in the department of social sciences, and has 1,460 students (which implies that the university has expanded its enrollment, which will affect the mobility estimates). The 1930 list is for graduates, as opposed to enrollees, for the literature and social sciences departments and covers 397 students. For 2013 we again have a comprehensive list of enrollees.

An ancillary source on elite surnames is the list of the Russian members of the World Chess Federation, chess being a highly respected activity in Russia (21 of the current 100 top ranked players in the world are Russian). FIDE, the world chess federation, maintains a database which gives the name, nationality, birth year, and ranking of all members.[2] The modern ranking system was introduced in 1971, and there are available rankings of thousands of the top players for each year since then. Thus we use ranking cross sections for the USSR in 1972 and 1991, and for Russia 2001 and 2016 to also estimate modern social mobility rates. But because the FIDE database still includes rankings for people born in Russia as early as 1919, we can also construct cohort based measures for earlier years.

General Surname Distribution

The second element we have to estimate is the general surname distribution in Russia. Here Russian sources are much inferior to those for England. In England the parish registration of baptisms, burials and marriages 1538-1837, and then the general registration of these vital events 1837-2016, means that we have a good measure of the general surname distribution from 1538 onwards. In Russia no such sources exist.

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[2] https://ratings.fide.com/

However, one source we do have for those born in the USSR 1890-1930 is German records of Soviet prisoners of war in WWII. The Germans registered all such prisoners used for forced labor in Germany by name, and also for most recorded their year of birth. The surviving registration data is available online at the Stiftung Sächsische Gedenkstätten Dresden (Saxon Memorial Foundation). This covers roughly 912,000 Soviet prisoners, most born between 1895 and 1925. Column 4 of table 1 shows the distribution of surname types among a 20,000 person sample of these prisoners, where we distinguish surnames mainly by their endings: ..ov, ..ev, ..in, ..ko, ..uk, ..ich, ..sky. The average age of birth of these prisoners was 1912.

In these records there is little sign, however, of Soviet Jewish prisoners (there are few likely Jewish first names such as Abraham, David, and Israel). Jews were 1.8% of the population of the USSR in 1926 (Arad, 2010, 133). Jewish surnames were generally distinct from those of the rest of the Russian population. We get evidence on the surname distribution in the Jewish population from the Jewish students at Moscow State University, and from the surname distribution among Jewish members of the Communist Party in 1917-1930. The final column of table 1 shows the surname stock adding in this Jewish contingent.

Because we have birth dates for prisoners we can also examine whether the surname composition was changing over time. Table 2 shows for the decades 1890-9, 1900-9, 1910-9 and 1920-9 the population shares of the main surname types across the prisoners. As can be seen, from 1890-1929 the distribution of surname types seems relatively stable with no obvious trends. Thus we have good measures of the surname stock for Russians aged 18 in 1910, 1920 and 1930 to match with our Moscow State Records.

The problem is to estimate the surname distribution as a whole for more modern years, especially since the breakup of the USSR meant that the geographic area covered by modern Russia is very different from that of the old USSR. Thus we cannot just project forward the general distribution found for the 1920s to modern Russia. A further complication is that there likely were class differences in net fertility which would effect the surname distribution over time given there are status differences between surnames in 1920. The likely bias here from the 1920s on would be an increase in the population share of low status surnames.

Table 1: Surname distribution by common endings

Name ending Type	Name ending (Cyrillic)	Name ending (English)	Soviet Prisoners WWII %	Soviet Prisoners (adjusted) %
Russian Lower Status	ов, ова	..ov, ..ova	36.9	36.2
	ев, ева	..ev, ..eva	14.3	14.0
	ин, ина	..in, ..ina	14.3	14.1
	Ко	..ko	9.9	9.7
	ич, ыч	..ich, ..ych	2.7	2.9
	У к	..uk	2.0	1.9
Russian Higher Status	скы, скаыа	..sky, ..skaya	4.2	4.3
Germanic	ДТ, ейн, ен, ЛЬ, ер, МаН, РГ, зон, сон	..dt, ..ein, ..el, ..en, ..er, ..man, ..rg, ..son	0.5	0.9

Table 2: Surname distribution by Period, German Prisoners

Name ending (English)	Births 1890-9 %	Births 1900-9 %	Births 1910-9 %	Births 1920-9 %
..ov	38.7	35.7	36.0	39.6
..ev	16.0	14.8	14.4	13.0
..in	12.2	14.9	14.5	13.4
..ko	9.5	9.9	10.0	9.9
..ich	2.3	2.5	3.2	2.8
..sky	3.5	3.8	4.5	4.3

For 2015 we can derive a general surname distribution from the Russian equivalent of Facebook, *vkontakte*. This gives us a sample of nearly 1.7 million surnames. However, this sample will be biased towards names of higher social status, given that there will undoubtedly be a class difference in the use of such web sources, with upper classes over represented.

Another modern source that is easily available is the surnames of Russian athletes competing in recent Olympics. We have such information for 2,359 athletes competing in the Summer and Winter Olympics, 2002-2016. If athletic ability is orthogonal to other elements of social status then this would be a good source on the current population name distribution. But that independence is an untested proposition.

As witness of these potential biases consider the share of the high status ending *..sky*. For *vkontakte* 2015 this is 3.85%. For Olympic athletes 2002-16 it is 3.31%. For chess players born 2000-9 registered with FIDE the proportion of *..sky* is 3.12%. These are all likely upper bounds of this name share circa 2000 since there is evidence from the FIDE data that even by 2000 *..sky* was still an elite surname group. Thus if we take the 9,040 Russian players registered with FIDE born 1990-99, then the share with the ..sky surname overall is 3.7%. But for those with ranking score 2000 and above that share is 4.5%, and for those with scores of 2400 and above 9.0%.

Mobility 1910-1920

The first thing we need to establish is that there were indeed elite surnames in Russia prior to the Communist Revolution. This we can show quite easily in table 3. This lists three groups of Russian surnames. First there are Common Russian surnames – those that end with the letters *..ov, ..ev, ..in, ..ko,* and *..uk* and that in 1910 tended to have less than average status. These constituted in the prisoner population of 1941-45 about 76% of all surnames in the USSR (from table 1). There lower than average status is revealed by the fact that in both 1910 and 1920 a smaller share of entering students at MSU had these surnames than did the population as a whole. The second group of elite Russian surnames consists of those that ended in the letters *..sky* (and variants). These were 4.3% of the 1941-5 surname stock. But in 1910 they were 17% of students enrolling at MSU, nearly 4 times their population

Table 3: Surname distribution at MSU, 1910 and 1920

Name ending	General population %	Moscow State 1910 %	Moscow State 1920 %
Common Russian	75.97	65.04	54.24
Elite Russian (..sky)	4.26	16.98	11.63
German/Jewish	0.89	5.41	12.79

Table 4: Surname distribution by Religion, MSU 1910

Name ending	All %	Orthodox %	Jewish %	Episcopal %	Roman Catholic %
Common Russian	65.0	70.9	18.0	11.5	3.1
Elite Russian	17.0	16.5	6.6	3.3	52.8
..ich	3.2	2.9	9.8	0.0	5.7
German/Jewish	5.4	1.9	34.4	39.3	5.7

share. The third group of surnames are those of German origin, strongly associated with the Russian Jewish community also. We focus on a subset of such names, those identified as ending with ..dt, ..ein, ..el, ..en, ..er, ..man, ..or, ..rg, and ..son. These constituted only 0.9% of the population in 1941-5, but 5.4% of MSU entering students in 1910. They are thus six times overrepresented at the university.

The MSU records of 1910 also give the religious affiliation of the students, and information about their social class background. We can thus investigate more who held the two types of elite surnames, and the low class surnames also. Table 4 shows this breakdown by religious affiliation.

In 1910 the enrolling student population was 85.7% Orthodox (including Old Believers), 3.6% Jewish, 3.6% Episcopal, and 3.1% Catholic.[3] From table 4 we can see that the elite ...*ski* type surnames were most common in the Orthodox and Roman Catholic student groups. This type of surname was relatively uncommon in the German origin communities, including the Protestant groups and Jewish students. There what predominated was names of a Germanic type. Thus any change over time in the proportion of sky surnames among elites will reflect and measure largely social mobility within the Orthodox and Roman Catholic communities. Conversely, social mobility among the German Protestant and Jewish communities as a whole can be largely measured by the frequency of the German type surnames.

The MSU enrollment records for 1910 conveniently also give a summary of the social background of students. Table 5 shows the breakdown of surname types by ascribed social background for the following groups: nobles, clergy (mainly Orthodox clergy), peasants, professionals and merchants. The numbers in each of these groups was nobles, 553, clergy, 135, peasants, 200, professionals, 247, and merchants, 128. There were also a group of military officers, and some for whom no status was ascribed (women), or just the status "Citizen of Prussia" and the like.

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[3] With some Armenian Orthodox and Muslims also.

Table 5: Surname distribution by Social Background, MSU 1910

Name ending (English)	All %	Nobles %	Clergy %	Peasant %	Professional %	Merchant %
Common Russian	65.0	59.9	70.4	**77.5**	62.3	67.2
Elite Russian	17.0	**24.2**	**31.9**	**3.5**	18.6	6.3
..ich	3.2	4.0	0.7	2.5	4.5	0.8
German/Jewish	5.4	1.8	0.0	3.0	4.9	2.3

The elite Russian surname type, *..sky*, is particularly common among two groups: the children of clergy, and the children of nobles. It is particularly uncommon among the children of peasants. It is indeed reported for Russia that it was the habit of men who achieved the priesthood to adopt a new surname, and that these priestly surnames often took the *..sky* form.[4] Nobles would form names by adding the ..sky ending to the location of their estates. Similarly it is notable that the children of peasants have a larger share of the low status Russian surnames than any other group. Thus the *..sky* ending seems to be mostly found among upper class Russians of the Orthodox religious background. We can track the movement of this social elite 1910 on by observing what the average status of this name type is. Similarly we can track the status of the Jewish population by considering the frequency of Germanic ending surnames.

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[4] Unbegaun, 1972, reports that the Orthodox seminaries would frequently confer new surnames on newly enrolled students, typically adding the ..sky ending to a name with Biblical meaning. Thus *Rozhdestvo* (Christmas) could lead to a surname *Rozhdestvensky*.

Returning to table 3, we can now consider the effect of the Russian Revolution on social mobility. This question is complicated, however, by the substantial rise in educational status for the Jewish population after the Revolution. If we were to measure mobility just by looking at how much the elite pre-revolution population moved towards mean status 1910-1920 then we would note that the relative representation of the ..sky elite at the university dropped from 3.99 relative to their population share in 1910, to 2.73 by 1920. That implies, assuming that MSU represented the top 1% of the educational distribution, that the average educational status of the ..sky surname group was 0.57 standard deviations above the mean in 1910, but only 0.40 standard deviations above the mean in 1920. If we thought of what as a change across generations that would still not imply rapid mobility. It would imply an intergenerational correlation of status pre and post Revolution for this group of

$$\frac{0.40}{0.57} = 0.70$$

which is nearly as high as Clark et al. find for England over the same years.

However, another standard to judge social mobility among elite Russians of the majority population is how they were doing relative to the lower status Russians also of the majority population. For it turns out that the shares of both these groups at Moscow State University declines in 1920, as a result of the seeming large increase in the population of Jewish students then admitted. The share of Germanic type surnames at the university, characteristic of the Jewish population, increased from 5.4% to 12.8% between these years. Measured relative to common Russian surnames the overrepresentation of the ..sky surnames fell much less, from 4.66 to 3.82, from 1910 to 1920 (or from a mean status of 0.65 standard deviations above the mean to 0.55). If this represents a generational change then it implies an astonishing intergenerational correlation of

$$\frac{0.55}{0.65} = 0.86$$

However, if we allow for the fact that we are only observing people 10 years apart, and assume that a full generation is 30 years, then the implied intergenerational correlation of status 1910-1920 is

$$\left(\frac{0.55}{0.65}\right)^3 = 0.63$$

This is a very high rate of persistence of status by most modern estimates. For a period of Revolution, social convulsions, violence and turbulence, it represents a surprising persistence in the first years of the Revolution of upper status groups. If the Revolution had allowed the admission to Moscow State University of a whole new class of students from the class of peasants and workers, then the surname distribution between low status and high status surnames would have changed much more substantially than we observe.

Mobility 1920-30

Because we are dealing with graduates in the 1930 data, this is really measuring mobility 1910-1927, not yet a full generation. Table 6 shows the enrollment shares for the university in 1930 compared to the general population and to 1910 and 1920. By 1930 there had been a radical change from the 1920 enrollment figures. One important element was a dramatic decline in the share of the German/Jewish surnames to 4%, less than their share in 1910. The implication is that having entered the university in large numbers in 1910, Jewish students were now being systematically excluded, since their share of graduates in 1930 was less than the share on enrollees 1910. The elite Russian surname endings fared better, being still 9.8% of graduates, more than double their population share. But along with the decline in the Jewish share, their was a substantial rise in the common Russian surname share.

Measured relative to common Russian surnames the ..sky surnames had a relative representation at MSU compared to their population share of

1910	4.66
1920	3.82
1930	2.39

Thus 1920-1930 there is sign of much greater social mobility, though even in 1930 the former Russian Orthodox elites remained at the university in greater than expected numbers. If we think of this change 1910-1930 as representing a

Table 6: Surname distribution at MSU, 1910, 1920, 1930

Name ending	General population %	MSU 1910 %	MSU 1920 %	MSU 1930 %
Common Russian	75.97	65.04	54.24	73.30
Elite Russian	4.26	16.98	11.63	9.82
German/Jewish	0.89	5.41	12.79	4.03

generation then the intergenerational correlation of status implied is 0.54 – still relatively high. However, if we calibrate this as occurring over a 17 year interval, and project the same rate of change for the next 13 years, then the implied intergenerational correlation would be 0.33, which now implies relatively rapid social mobility.

Mobility 1910-2013

Table 7 shows the shares of the common Russian surnames and the elite ..sky surnames at MSU 1910 and 2013. Also shown are the estimated population shares of those names for the same years. As noted we have great difficulty estimating the population shares for 2013. The shares used in the table are those for all chess players registered with FIDE born 2000-2009. This we believe will still be biased in finding too high a share of the ..sky surnames. But we can use this to get a lower bound estimate of the intergenerational correlation of status 1910-2013. Compared to common surnames the ..sky surnames are overrepresented 4.66 times in 1910, but only 1.33 times in 2013. This implies that over the 3.43 generations lying between 1910 and 2013 (assuming a generation of 30 years), the intergenerational correlation of status averaged 0.60. However this estimate is very sensitive to the estimated population share of the ..sky surnames. Is that share was actually 3.5, then the

Table 7: Surname distribution by common endings, 1910 and 2013 Moscow State

Name ending	General population 1910 %	Moscow State 1910 %	General population 2013 %	Moscow State 2013 %
Common Russian	75.97	65.04	82.39	81.74
sky, skaya	4.26	16.98	3.12	4.13

intergenerational correlation would drop to 0.51. If the share was actually 2.5 then the intergenerational correlation would be 0.71.

The above suggests that the old elite of 1910 may have been nearly completely absorbed into the mainstream of Russian society by 2013, and that they differ little in characteristics now from the average social group. However, there is other evidence suggesting that the ...*sky* social group is still of average higher status than the general population, and that social mobility in the USSR and Russia since 1910 must hence have been low.

The other evidence we have for current social status is the chess ratings of FIDE, the international chess association, of Russian players included in its rating system. There are currently 58,336 Russian players listed on the FIDE web site, of which 32,270 have a rating, though many of these players are characterized as "inactive."[5] Women players on average have ratings which are lower than men, so when we consider performance by score we increase female scores by 200 (the maximum rating for a Russian is 2,812, the minimum 1,001).[6]

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[5] https://ratings.fide.com/advseek.phtml
[6] The 1992 international ratings of top players give men with a rating 2200 and above, and women 2000 and above.

Looking at the ends of the rating distribution we get the following average share of surnames of the ..sky type.

Rating	Number	Share ..sky (%)	Standard Error
2350-3000	1,253	5.51	0.64
2200-2349	3,296	4.16	0.35
1000-1320	1,757	2.90	0.40

There is clear sign here that the ..sky group still has higher than average ability. Since even those with scores 1000-1320 will still be in the upper tail of the ability distribution, there is also sign that the share of the ..sky ending in the general Russian population must be less than 2.90%. The average year of birth of these rated players in 2016 was 1975, so their average age was 41.

Since we have year of birth for most of the Russian members of FIDE we can partition the players into three groups – those born 1920-1949, 1950-79, and 1980-2009 – and estimate social mobility across these three generations. The first two generations are those born and growing up under Communism. The last generation had most of its schooling after the end of Communism in 1991. Looking at players with a rating of 2200 or greater (2000 for women) we get the following statistics:

Birth Date	Average	Number	Share ..sky (%)	Standard Error
1920-49[7]	1941	422	7.58	1.29
1950-79	1967	1,865	4.45	0.48
1980-2009	1988	1,950	4.15	0.45

Note the substantial standard errors of each of these estimated shares because of the smaller number involved here.

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[7] For this period there were only 359 ratings from the Russian Federation database for 2016. This was supplemented with an additional 73 persons identified in a 1992 list, the first year of ratings for the new Russian Chess Federation: http://www.olimpbase.org/Elo/summary.html.

Table 8: Summary of ..sky status 1889-1995 births

Birth Year	Elite Share ..sky (%)	..sky pop. share (%)	Elite Size (%)	Implied Mean Status ..sky	Intergen. Correlation
1889	16.98	4.26	1.0	0.57	-
1941	6.69	3.0	0.5	0.29	0.67
1967	4.45	3.0	0.5	0.14	0.42
1995	4.13	3.0	1.0	0.12	0.87

Notes: 1889 and 1995 MSU. 1941 and 1967 chess masters.

Combining these chess master surname shares with the MSU student shares for 1910 and 2013 we get the following picture of social mobility for four generations born 1889-1995 as displayed in table 8. Between the students entering 1910 (born on average 1889), representing Imperial Russia, and the chess masters born 1920-49, representing a generation born and living under Communism (average birth year 1941) there are two generations. However the old elite ...*sky* surname ending remained still elite under Communism, with more than twice as many as expected among the chess elite for the 1920-49 generation. The measured rate of social mobility between these two dates is not high in international context. The implied intergenerational correlation of status is 0.67, which is not much less than the 0.7-0.8 rate typically observed looking at surnames as markers of status. Also the emigration of the White Russians 1917-1920 (estimated 0.9-2 m.), many of whom were upper class, meant that we should expect to see enhanced measured social mobility in the population remaining within the USSR. Notable White Russians disproportionately had surnames with the ...*sky* ending. So the 0.67 intergenerational persistence rate 1889-1941 represents a lower bound on the true persistence of social status within the USSR across the years of Revolution, repression, and the dislocation associated

with WWII. The implication is that the elite of the old social order persisted strongly within the new social order.

1941-1995 it is harder to measure social mobility rates in Russia using surname types because the processes of regression to the mean have made the ...*sky* surnames, while still statistically distinct from the average, elite in only a subtle way that requires large sample sizes to measure effectively. Also for Russia itself we do not have a reliable estimate of the share of the ...*sky* surname type in the general population. We see in the table above that the estimated persistence rates from the generation that lived its life under Communism (1941) to the generation that had their schooling in post-Communist Russia (1995). Over what is roughly two generations the persistence rate averages 0.62 (but with substantial uncertainty as to the true number). If this number is accurate it suggests that the end of Communism in Russia did not see any move towards restoration of the old Imperial elites. Indeed the measured rates of social mobility seem largely unaffected by substantial social upheaval 1917-20, and 1989-1991.

Further Work

The surname method employed here works best for populations where some surnames are notably elite. For societies such as England Clark et al. can find surnames that are 30 times overrepresented among elites such as Oxbridge graduates or wealth holders. Then the measures of mobility rates with surnames are much more accurate. The ...*sky* surnames even in 1910 are only 3 times overrepresented among SMU graduates so here we have a more subtle measure, which becomes more subtle over time as this surname regresses towards mean status. However, this measure will be good for Imperial Russia. Thus if we get a surname sample for MSU students 1880-1890, we should be able to get a reliable measure of social mobility rates among the elite in late Imperial Russia. Since we have identified a simple marker of an elite surname, it would indeed seem possible fairly quickly to get a census for enrollees in MSU for each year of how many students there were and how many with the ...*sky* surname. This would give us very accurate measures of the overrepresentation of the elite surname by period, and so very reliable measures of the intergeneration correlation of status, among the elites at least.

Even as the status of the ..sky surname declines towards mean status in Communist Russia, there is still information that can be extracted if we have larger sample sizes. Thus we plan to collect larger samples of the surname types of SMU students entering 1950-59, 1980-89, and 2010-16. Again the simplicity of this as a marker means we should be able to harvest significant sample sizes relatively quickly. This will give us precise estimates of the elite share of surnames 1950-2016.

The one deficiency we still have, however, is getting an accurate population share of surnames in modern Russia. We estimate this above, based on lower rated chess players, at 3 percent of the population, but that number is uncertain. In other countries – UK, USA, China, Chile, India - such information was easily available through either summaries of the population censuses, birth and death registers, or through voter rolls. We will explore whether we can get a summary of surname types from the census bureau in Russia. If we could get a precise estimate then we have the materials to estimate social mobility rates by decade in Russia 1880-2016.

Another issue that we have not dealt with systematically here is the effect of the Jewish population on these measures. Even in 1910 the Jewish population is overrepresented, based on the surname evidence, and on the reported religions of students, at MSU. Its fate 1920 and later depends on political events. As noted in 1920 there is evidence of heavy Jewish enrollment at MSU, but by 1930 a decline in Jewish enrollment below the levels of 1910. In the 1980s and 1990s many of the Jewish population emigrated from Russia. This will affect the measured mobility rates of the elites within the non-Jewish Russian population. Thus for the chess elite born 1920-49 at least 6% had German/Jewish surnames. That group had largely disappeared for chess players born 1980 and later. Should we then look at the status of ..sky surnames relative to all names, or just relative to the population of non-Jewish background within Russia?

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