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THE POPULATION CRISIS AND THE BALTICS

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In a world which is undergoing a disastrously rapid population growth, the Baltic nations of Estonia and Latvia have practiced zero population growth for half a century, and they are running the risk of being penalized out of existence as a negative reward for their demographically responsible behavior. The zero growth of population has resulted in immigration from demographically less responsible areas, and the immigrants are disquietingly close to the point of outnumbering the local nations. The third Baltic country, Lithuania, serves as a control case to test whether the immigration is due more to the local zero population growth than to other factors, such as a conceivable purposeful Soviet policy of Russian colonization.

From the Baltic viewpoint, the low birth rate is often considered to be a threat to national survival, a threat that recently has been spreading from Latvia and Estonia to Lithuania as well. This concern should be tempered by a realization that the world as a whole faces a potentially catastrophic population increase.

Conversely, it is important, for the world as a whole, to ponder the Baltic sample case of negative rewards for zero population growth. In a world of unevenly distributed birth rates, is further reduction of births desirable in any and all of the areas, so as to reduce the world average birth rate? Or could excessive reduction at a local level actually be counterproductive, because it encourages and enables high-growth populations to emigrate, and thus expand the area where high growth is practiced? Emigration-immigration patterns may emerge as a major aspect of the world population crisis, in addition to the general imbalance between the rapidly decreasing death rates and the sluggishly decreasing birth rates.

This article will first present some evidence for the seriousness of the world population explosion. After that tables on Baltic population growth will be

presented, covering the years 1939-1980. Finally, major Baltic trends are described and placed into the world context. Some general policy recommendations will be suggested.

A Million-Year Trend is Reaching an End

Most of us are probably aware of the spectacular increase in world population during the last few centuries. It is less appreciated that the speeding up of the growth rate has continued at a remarkably uniform pace not just for a few centuries but for practically a million years. Table 1 shows the averages of world population estimates by various demographers and archeologists throughout the

Table 1
WORLD POPULATION AND ITS DOUBLING TIME

Date B C	Average Population Estimate (Millions)	Average Doubling Time (Years)
900,000	0.05	400,000
300,000	0.25	100,000
70,000	0.7	—
25,000	2.2	7,500
7,500	11	2,500
5,000	18	1,500
2,400	30	—
0	220	1,500
 A D	 Billions	
1000	0.25	620
1300	0.35	430
1500	0.42	230
1650	0.52	175
1750	0.74	140
1800	0.91	115
1850	1.21	97
1900	1.61	65
1930	2.04	46
1940	2.27	41?
1950	2.47	36?
1960	2.9	?
1970	3.6	?
1980	4.4	?

Source: R. Taagepera, "The Super-Cancer of the Biosphere," Peace Science Society (International) Western Section Meeting, Stanford University (1978), based on detailed compilation of population estimates in R. Taagepera, "People, Skills, and Resources: An Interaction Model," *Technological Forecasting and Social Change*, 13 (1979), 13-30.

last 900,000 years. It also shows the values of "doubling time," i.e., the time interval during which world population doubled after a given date. These doubling time values are plotted in Figure 1 against the dates after which they took place, for the last 700 years. It is seen that the doubling time has been decreasing practically along a straight line. In Figure 2, this straight line is extended close to one million years back. It is found that it still agrees with the data on doubling times within the range of possible error.

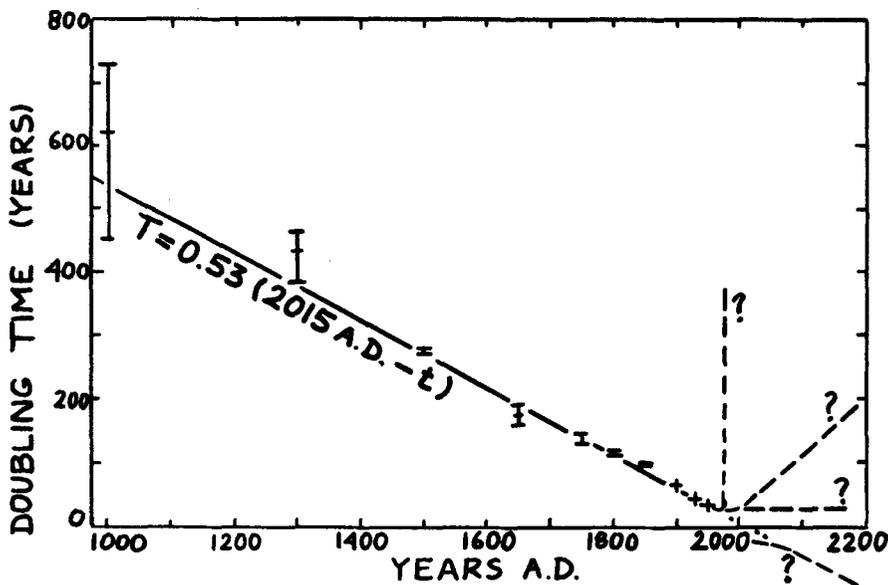


FIGURE 1. THE STRANGE CASE OF THE VANISHING DOUBLING TIME OF WORLD POPULATION

Sources: Table 1 and its sources.

The unusual nature of such an extrapolation should be stressed. Our straight line was based on the data of seven centuries. When extending such a line, experience tells us that usually we can expect to be grossly off the actual values if we extrapolate for another seven centuries. But here we have kept extending the line for seven *thousand* centuries, and we are still remarkably close to the actual data. The steady reduction in population doubling time would seem to be the longest-lasting regular trend in human history and pre-history.

A reverse surprise is waiting for us when we try to extend the line in the other direction—toward the future. We would usually expect that a trend line which has been valid for many centuries would not be too much off during the next century. However, this is utterly impossible here: in about 30 years from now we would reach a zero doubling time. Shortly before that time, the world popu-

lation would double in one year, then in one hour, then in one fraction of a second . . . Clearly the shortening of the doubling time must stop before that state is reached. Maybe it has already. But that would mean that a million-year trend is reaching its end and reaching it very suddenly.

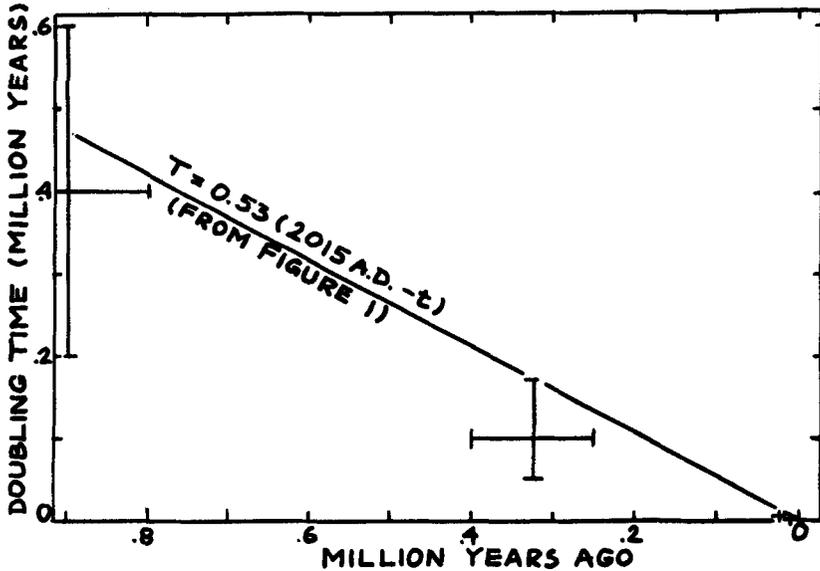


FIGURE 2. THE PALEOLITHIC PERSPECTIVE FOR THE NEXT THIRTY YEARS

Sources: Table 1 and its sources. Cross sizes indicate range of estimates.

The implications are staggering. I have discussed elsewhere the “super-cancerous” nature of the human population growth up to now: malignant cancer cells maintain a *constant* doubling time while humankind has insisted on speeding up the process even further by *reducing* the doubling time.¹ This super-cancerous pattern came about as a result of interaction between population growth and growth of technology.² This interaction has also produced what is effectively the prevailing popular religion of today: the belief in growth, the belief in “progress.” This “progress” is about the only notion on which Soviet Marxists and Western capitalists agree. Yet within 30 years we are bound to have a major change toward slowdown. One can only hope that it will not be catastrophic. The sooner the world (and everyone of us) starts adjusting to the perspective of slow or no growth, the sooner we give up the outdated notion of “progress” through growth, the better our chances are of avoiding a catastrophe. As it is, a serious crisis in about 30 years appears unavoidable: shortage of raw materials, of clean air and water, and even of space.

World population growth will be stopped either by a reduction of births

or an increase in deaths due to hunger, cold, and war about who gets to waste the few remaining raw materials. This perspective goes against all our intuitive wisdom gained from several centuries of improving life conditions. How could "progress" stop now? Look again at Figures 1 and 2: in a million years of human development, our generation does occupy a very special place—the end of the straight line. We are the last generation before zero doubling time would be reached if it were possible.

Against this momentous background of impending world crisis, I will now turn to fiddling with Baltic population data for the last 40 years. Like anyone else, I compartmentalize my thinking.

Table 2
TOTAL POPULATION OF THE BALTIC REPUBLICS AND THE
SIZE AND SHARE OF THE REPUBLIC NATIONALITIES

Year (1 January)	ESTONIA			LATVIA			LITHUANIA		
	Total Popul. (Thou.)	Estonians (Thou.)	%	Total Popul. (Thou.)	Latvians (Thou.)	%	Total Popul. (Thou.)	Lithuanians (Thou.)	%
1939	1068 ^a	982	92	1933 ^b	1495	77	3100 ^c	2350	76?
1950	1097	845?	77?	1944	1220?	63?	2573	1930?	75?
1960	1209	896	74	2113	1303	62	2756	2187	79
1970	1356	925	68	2364	1342	57	3128	2507	80
1980	1474	950	64	2529	1353	54	3420	2737	80

Sources: Condensed from more detailed data in R. Taagepera, "Baltic Population Changes, 1950-1980," *Journal of Baltic Studies*, 12 (1981), 35-57, unless otherwise indicated. The 1939 figures refer to the present areas of the SSRs rather than those of the prewar republics.

a: Uno Mereste and Maimu Saarepera, *Rahvastiku enesetunnetus* (Tallinn: Eesti Raamat, 1978), p. 58 give 1,052,000, but this clearly omits about 16,000 people who emigrated to Germany in late 1939.

b: *Latvijas PSR tautas saimniecība 1977. gadā* (Riga: Liesma, 1978), p. 6 gives 1,905,000 for 1935, but only 1,885,000 for the "beginning of" 1939. George B. Carson (ed.), *Latvia: An Area Study* (New Haven: Human Relations Area Files, Inc., 1956), pp. 75 and 100-101 gives 1,950,500 for 1935 (prewar borders), a yearly natural increase of about 7,000, and 47,810 Germans leaving in November-December 1939. It would seem from these data that the Abrene area detached from the Latvian SSR in 1944 had a population of 45,000 in 1935, and that the remaining area would have had a January 1939 population of about 1,950,000-45,000 + 28,000 natural increase = 1,933,000, plus some possible net immigration. The Soviet official figure of 1,885,000 clearly subtracts the 48,000 Germans although they left only in late 1939.

c: Professor Benedict Maciulka (personal communication) estimates the population in January 1940 (within present borders) at 3.08 to 3.12 million. The natural increase during 1939 was about 30,000, and there was some immigration of war refugees. The Soviet official figure for early 1939 is 2,880,000—see, e.g., *Lietuvos TSR ekonomika ir kultura 1975 m.* (Vilnius: Mintis, 1976), 11. It apparently omits the Klaipėda and eastern Vilnius areas. The figure of 3,180,000 given by V. Rastenis, *Baltic Review*, No. 9 (December 1956), 17-24, may be an overestimate.

*Baltic Population Growth, 1939-1980*³

Table 2 shows the population figures for the Baltic republics at ten-year intervals. Instead of the 1940 figures, however, those for the early 1939 are used in order to show the peacetime configuration prior to the first rumblings of World War II. The total population of each republic (within its present borders) decreased considerably from 1939 to 1945 and then started to increase, surpassing the prewar level by 1955 in Estonia and Latvia, and by 1965 in Lithuania. The ethnically Lithuanian, Latvian, and Estonian populations reached their low points after the 1947-1950 mass deportations. The Lithuanians recovered their prewar number around 1965. The ethnically Latvian and Estonian populations, however, have not yet recovered the size they had in 1939. Their birth rates have not been sufficiently high to compensate for the losses suffered during the war and the postwar Sovietization period. Imperialist industrialization goals have ignored the labor shortage in Latvia and Estonia and have brought about a heavy influx of immigrants, mostly Russian. As a result, the share of Latvians and Estonians in their respective republic populations has steadily decreased while that of the Lithuanians has remained rather steady, thanks to their higher birth rate.

Table 3
NATURAL AND MECHANICAL INCREASE OF BALTIC POPULATION
(in Thousands)

Years	ESTONIA		LATVIA		LITHUANIA	
	Natural	Mechanical	Natural	Mechanical	Natural	Mechanical
1950-59	62	51	110	59	328	-117
1960-69	60	89	102	150	330	43
1970-79	55	62	56	110	222	68

Source: Condensed from more detailed data in Taagepera, "Baltic Population Changes," *JBS*, 12 (1981), 35-57.

Table 3 shows the extent of the natural increase (births minus deaths) and of the mechanical increase or net immigration (immigration minus emigration) since 1950. For 1940-1950, these very categories have little meaning: a person shot inside the republic would enter the death statistics while a person perishing in deportation would technically enter the emigration statistics, without much real difference. The considerable emigration from Lithuania in 1950-1959 largely involved the departure of non-Lithuanian voluntary and forced immigrants of the late 1940s and helped to increase the share of Lithuanians in their country's population. Similar outflow from Latvia and Estonia was much smaller. Russian immigration increased during the early 1960s and reached a peak in the late 1960s or early 1970s. It decreased markedly in the late 1970s. Throughout 1960-1980, mechanical increase in Latvia and Estonia tended to surpass the natural increase, sometimes by large margins. Immigration into Lithuania re-

mained small compared to the natural increase.

The average yearly increase rates are shown in Table 4 for the republics and for the republic titular nationalities. For comparison the USSR and world rates are also shown. The growth rates of the total population of the Baltic republics have been close to that of the USSR as a whole, regardless of the growth rate of the republic nationality. Compared to the world average, these rates have been on the low side, but not by much. However, the growth rate for the ethnic Latvians and Estonians has been only about one tenth of the world average since 1950. From the world perspective, this is practically zero growth. The possible larger increase rate in the 1950s is due to the return of some of the deportees of the 1940s rather than to a surge in the birth rate. If we consider the whole period 1939-1980, we actually observe sub-zero growth of the ethnically Latvian and Estonian populations. Those populations have contributed very little to the world population crisis.

Table 4
AVERAGE YEARLY POPULATION INCREASE RATES
(per Thousand Population)

Years	ESTONIA		LATVIA		LITHUANIA		USSR	WORLD
	Total	Estonians	Total	Latvians	Total	Lithuanians		
1939-49	3.8	-13?	0.5	-20?	-17	-19?	-8.3 ^a	8
1950-59	9.8	6.5?	8.4	8.3?	6.9	14.2?	17.5	16
1960-69	11.5	3.2	11.3	3.0	12.7	13.7	13.7	22
1970-79	8.3	2.7	6.7	0.8	8.9	8.8	9.1	20
1939-79	8.2	-0.5	6.6	-2.4	2.4	3.7	7.8 ^a	15

Sources: Calculated as $R=1000(P_1/P_0)^{1/N} - 1000$, using data in Tables 1 and 2, and (for USSR) *USSR in Figures 1979* (Moscow, 1980), 7, and E. Mickiewicz (ed.), *Handbook of Soviet Social Science Data* (New York: Free Press, 1973), 51.

a: Using the 1940 population within present borders.

It would seem from the data in Table 4 that the Baltic population increase was primarily determined by the Soviet Union-wide population increase. If the local natural increase rate matched the USSR rate, as it did in Lithuania, little immigration took place. But if the local increase rate fell short of the USSR rate, it was compensated by immigration. Local practice of zero population growth was not feasible. Lower local birth rates merely endangered the survival of the local culture, and more territory was penetrated by people with faster breeding habits. The Russian birth rate itself decreased rapidly in the 1960s, and the resulting labor shortage should start to restrict immigration into the Baltic states, with a 20-year time lag. However, it is still too early to remove Latvians and Estonians from the endangered species list.

Baltic Population Trends in the World Context

In a world of high population growth, the Baltic states have been a region of

low natural population growth. They are not the only such region. All of western Europe, much of the eastern Europe, and the United States are among other current examples, not to mention historical ones. The response invariably has involved an increase in immigration. The modern ease of transportation has accentuated the share of temporary "guest workers" as compared to permanent immigration. The Baltic states have been no exception. There has been immigration and an inflow and outflow of temporary labor.

Immigration into relatively sparsely inhabited areas has sometimes been successfully controlled by the native leadership so as to reap economic benefits while integrating the immigrants socially and thus preserving cultural continuity. The United States (as an Anglo-Saxon structure) is a major example. Such control can be achieved when the influx is slow, or when a massive influx originates from different countries (as was the case for the US) so that the existing culture becomes the only possible rallying point.

Cultural disruption occurs when massive influx occurs from a single source culture (or relatively close cultures). A foreign occupation rule can induce such an influx of its own nationals as a means to bolster its own safety. However, economic trends can bring the same result irrespective of the rulers' intentions. The Hawaiian rulers of the last century were unable to stem an influx of American-European immigrants who eventually revolted and destroyed Hawaiian independence. There are many other such cases that could be mentioned.

Maybe even more striking, British rule in Fiji resulted in an influx of Indian laborers whose descendants now form the majority of the newly independent nation. In this case the military strength of the British (at the time of immigration) was unquestionable, and there was clearly no conscious policy or unconscious desire to Indianize Fiji. There was only indifference regarding the various subject cultures, imperial economic goals that required labor, and the coincidental fact that Fiji and India happened both to be part of the same empire.

One may wonder whether the Soviet rulers are indifferent to Baltic nationality considerations, like the British in Fiji, or whether they have carried out a conscious or subconscious Russification policy. The question is legitimate. After all, the Nazi *Generalplan Ost*, which planned to have 520,000 German settlers in the Baltic states by 1965, has been widely considered as genocidally purposeful denationalization.⁴ What about Soviet rule which, by 1965, had put 1,100,000 Russians into the same Baltic states?

The contrast between Lithuania and the other two countries may suggest that industrialization was the main Soviet goal and that excessive immigration into Latvia and Estonia was a side effect. In view of its geographical location and strong resistance, Lithuania rather than Latvia could be expected to become the object of purposeful Russification through immigration. This was not the case. It can be presumed that labor flowed into Estonia and Latvia because the local low birth rate created a gap between the local labor supply and the demand set by Soviet industrial goals. The goals were the same in Lithuania,

but a higher birth rate prevented the need for immigration. Like the British in Fiji, the Soviet rulers can be reproached for not adjusting their relentless economic plans to Baltic cultural needs, according to this view, but not for purposeful Russification.

Although not basically incorrect, this simple model needs important correctives. The fact that the Russian labor flowed most massively into areas with the least demographic resistance may not demonstrate the absence of a *general'nyi plan zapad* for Russification, but only its flexibility. It is highly significant that the Russians in the Baltic republics (and in other non-Russian Soviet republics) are supplied with schools in their own language while this courtesy is not extended to immigrants of any other nationality. Several other groups (Ukrainians and Belorussians, in particular) are sufficiently numerous in the major Baltic cities to make schools in their own language possible. If independent Estonia (1918-1940) could afford cultural autonomy for its 5,000 Jews (with state-funded schools in the minority language), then certainly Soviet Estonia should be able to do the same for its 36,000 Ukrainians. The non-Russian immigrants tend to know Russian better than the local national language. They are highly likely to put their children in Russian schools if schools in their own language are not available. An immigration from different language areas, which was earlier noted as conducive to integration and continuity, is thus changed into a culturally disruptive monolingual immigration.

Before one concludes that Soviet policy is designed to goad non-Russian immigrants into Russian schools and, therefore, is purposefully Russifying, one has to consider parallels with Quebec. Along with various other immigrants, the Balts in Quebec have tended to place their children in English rather than French schools. Like the Ukrainians and Belorussians in the Baltic states, the Canadian Balts are preferring the imperial language to the provincial one. The reasons are very understandable and justifiable in both cases from the immigrant viewpoint. It should be just as understandable that the outcome is highly unsatisfactory from the viewpoint of the local nationality. In contrast to the Soviet lieutenants in the Baltic republics, the Quebec leaders have been able to react against immigrant imperialization with their recent controversial school law. In contrast to the prewar independent Baltic practice (especially in Estonia), the leaders of Quebec (like those of the English-speaking Canadian provinces and US states) have overlooked the middle road of offering minorities instruction in their own language and are now requiring that immigrants study in the language of the province.

The present article cannot handle the lengthy issue of roots and effects of linguistic intolerance in the North American school systems. Within the Soviet context, the existence of language-based nationalities has received wide formal recognition in the form of union and autonomous republics. This general framework could allow for educational autonomy for all sizable linguistic groups (the Republic of Estonia solution), or for education in the republic language (the Quebec solution). The actual Soviet policy of schools in the mother tongue for

the Russians, but not for the other immigrants to the Baltic republics, clearly has a Russifying bias which cannot be justified by any industrial goals or labor needs.

The conclusion is that immigration has been and still is threatening the survival of Latvia and Estonia as distinct cultural entities. This threat results from economic and demographic factors which occur worldwide, combined with calculated imperialist assimilation policies. In the context of the world population crisis the Latvian-Estonian near-zero natural growth has represented demographically responsible behavior. Such a macro-level behavior is of course not likely to be based on unselfish individual decisions, but the outcome is a desirable one, nonetheless, from a worldwide viewpoint. From the same viewpoint, it is undesirable that such a behavior be penalized.

The recent Baltic experience is not unique of course. Throughout history and prehistory those who have multiplied have also expanded and filled wider stretches of the earth. The difference now is that a million-year trend is reaching its end. The moral right of the individual family to choose its number of children must be brought into line with the survival requirements of the human species, and so must the collective right of population groups to multiply and then flow out to new *Lebensraum*. Above all, the international community must give some thought to protecting demographically responsible groups against such infiltration. Under various more or less similar conditions the Latvian-Estonian problem of the last thirty years will repeat itself. It would be sad indeed if the only way to protect oneself against inroads by fast breeders were to become a fast breeder oneself, thus worsening the world population crisis.

As for the specific issue of Baltic demographic imbalance, the problem may go away, due to the lower birth rate of the Russian ruling nation. To the extent that the issue also involves purposeful Russification policy, its fading may be complicated by various Soviet countermeasures: getting some Baltic labor to move out so as to make room for continuing Russian influx, or bringing in Central Asians (with children attending Russian-language schools). Such measures are not likely to succeed. In view of the decreased Lithuanian birth rate, any new developments are likely to affect all three republics in the same way.

In the perspective of several decades the aggravation of the world population and raw materials crisis will continue. It may make the whole issue of Baltic survival in face of Russian hegemonism fairly secondary even to the people directly involved. As of now, I am concerned by both issues. I compartmentalize my concerns.

NOTES

- 1 R. Taagepera, "The Super-Cancer of the Biosphere," Peace Science Society (International) Western Section Meeting, Stanford University (1978).
- 2 R. Taagepera, "Crisis Around 2005 A.D.? A Technology-Population Interaction Model," *General Systems*, 21 (1976), 137-138; R. Taagepera, "People, Skills, and Resources: An Interaction Model for World Population Growth," *Technological Forecasting and Social Change*, 13 (1979), 13-30.

3. For more detailed data and discussion, see R. Taagepera, "Baltic Population Changes, 1950-1980," *Journal of Baltic Studies*, 12 (1981), 35-57.
4. For detailed documentation of *Generalplan Ost*, see Seppo Myllyniemi, *Die Neuordnung der baltischen Länder 1941-1944* (Helsinki: Societas Historica Finlandiae, 1973), 157-160.