

ANATOLY VISHNEVSKY AND HIS DEMOGRAPHIC SYSTEM

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The article provides an overview of the scientific achievements and creative legacy of the outstanding Russian demographer A.G. Vishnevsky (1934-2021). Vishnevsky's works have become classics, linking within the framework of an integrated demographic theory a huge number of diverse and seemingly disparate facts of demographic history and modernity. The central provisions of Vishnevsky's Demographic System, consistently developed over half a century, took their complete form only by the mid-2010s. The article emphasizes what was new in A.G. Vishnevsky's theory of demographic transition, as well as his decisive role in the institutionalization of Russian demographic science. The article is based on both the works of A.G. Vishnevsky and on the personal experience of many years of creative cooperation with their author.

Key words: *Vishnesky's demographic system, demographic transition, demographic growth, autonomy of demographic processes.*

It is still quite hard to accept the death of Anatoly Grigorievich Vishnevsky. The tragic event, the result of a sinister virus, is perceived more as an accident than as the inevitable result of an incurable disease. Until nearly the end it seemed all would be well, that the best physicians would be found and...so on. But no. He collapsed at the very last minute, just when it seemed things were improving.

It seems strange and unfair that the crude and primitive intervention of a virus could bring to an end the work of subtle, powerful, insightful and sophisticated intellect, one not only filled with an immense stock of knowledge in various fields but endowed with artistic imagination.

I had the good fortune to work under Anatoly Grigorievich from the end of 1988 until my departure for the Max Planck Institute for Demographic Research (Germany) in April 2000. Anatoly Grigorievich did much to determine my professional fate. In 1987, he was an opponent of my Ph.D. thesis. Then he invited me to the Department of Demography of the Institute of Population Problems of the USSR Academy of Sciences, gave me the opportunity to enter real academic science, and then initiated my participation in a long-term Russian-French project. In recent years, after the formation of the International Laboratory of Population and Health at the HSE, where I work as scientific director, our interaction was renewed.

THE MAN

He was a true intellectual and a man of the world. Delicate and thoughtful, he radiated an aura of confidence and calm. He had a tremendous capacity for work and the ability to motivate others. He always spoke quietly, but in such a way that any audience would instantly grow silent, not because of his great authority, but because they feared missing something interesting.

He always knew how to understand and highlight the main thing at the moment, to offer the best way out of the most difficult and unexpected situations.

A.G. Vishnevsky did not take anything for granted. Everything was subjected to calm analysis. He was a positive person who was a pleasure to talk to. At the same time, we often argued with him. He always stood his ground quite firmly.

Everything that I will now say is based only to a small extent on information received from Anatoly Grigorievich himself. Of himself and how he created his science, he spoke very little, preferring to work alone. I knew only about what we did together and what he did with other colleagues. The rest I took from his books and/or figured out myself.

WORK EVERY DAY

For many decades, A.G. Vishnevsky oversaw all the current and organizational affairs of his research teams, first in the Departments of Demography of various academic institutions, his longest stay being at the Center for Human Demography and Ecology of the Institute of Economic Research of the Russian Academy of Sciences (1993-2006), and then at the Institute of Demography of the Higher School of Economics (2007-2021). Tirelessly and energetically he worked on journal articles, supervised graduate students, communicated science to the general public, engaged in journalistic activities (newspapers, television, radio), lectured to students and undergraduates, edited the popular scientific journal "Demoscope Weekly" and then the open access scientific journal "Demographic Review", published under his editorship every year a collective compilation, the demographic report "Population of Russia", organized the publication of a number of collective monographs, participated in official events, sought funding for science, went on many business trips and much, much more.

But most mysterious and incomprehensible of all, this was still not the most important thing in the scientific and intellectual life of Anatoly Grigorievich. The main thing was his scientific and artistic books. When did he manage to write them, taking into account the colossal workload? A mystery. Perhaps early in the morning and late in the evening. Perhaps at night. On weekends. In addition, he was very efficient in scheduling his time.

Anatoly Grigorievich Vishnevsky belonged to an extremely rare and vanishing type of real gurus, theorists, thinkers and moral authorities.

CONTRIBUTION TO SCIENCE

Of course, the main contribution is all his books on demography, from "The Demographic Revolution of 1976" (Vishnevsky 1976) to "The Demographic History and Demographic Theory of 2019" (Vishnevsky 2019). It is they that constitute the main ideological and theoretical body of modern Russian demography. These books and fundamental scientific articles by A.G. Vishnevsky became classics of social science. Although his books are strictly scientific, thanks to their figurative language they were and remain inspiring reading.

A.G. Vishnevsky, together with A.G. Volkov, E.M. Andreev, L.E. Darsky and their colleagues in the Department of Demography of the Research Institute of the Central Statistical Bureau of the USSR, is primarily responsible for the revival of Russian Demography in the 1970s and 1980s. This group of professionals of the highest class returned our Demography to the world level reached in the 1920s by S.A. Novoselsky, V.V. Paevsky, M.V. Ptukh and Yu.A. Korchak-Chepurkovsky.

When A.G. Vishnevsky came to Demography, the USSR was dominated by the "Soviet complex science of population", which was heavily influenced by ideology and prone to economic determinism, to a belief in the effectiveness of targeted macro-impact on demographic processes and, moreover, to hushing up real problems, such as an increase in mortality, the archaic nature of intrafamily birth control and others that had become glaringly obvious as early as the 1960s and 1970s. Contrary to the facts, the convergence of demographic processes in the USSR with those of other countries was denied. It cannot be said that A.G. Vishnevsky purposefully "battled" with this. But he did win the battle nonetheless, simply by sticking to his guns of objectivity and evidence, relying on facts, historical experience, the achievements of world demographic science and the use of modern methods of mathematics and statistics. And in the end, it was A.G. Vishnevsky's approach that triumphed in Russian demography, and he himself was rightfully recognized by the professional community as Russia's main demographer.

Largely due to the international authority of Anatoly Grigorievich and his special ties with French demographic science, one of the leading in the world, Russian demographers and their work have had the opportunity through cooperation and joint projects to merge into world demography and take a prominent place there.

Books by A.G. Vishnevsky, his lectures and public speeches influenced the formation of many of his younger colleagues, motivated many to engage in science.

A.G. Vishnevsky influenced the intellectual life of the whole country. Particularly significant in this respect was his book "The Sickle and the Ruble" (Vishnevsky 1998; 2010), which provides the key to understanding the driving forces of Russian history and Russian society. It was also well received abroad, which was facilitated by its translation into French.

THE SCIENTIFIC METHOD AND SCIENTIFIC PREFERENCES

A.G. Vishnevsky built his demography as an integral system in which everything is logical and interconnected. This is a very classic design. In constructing it, he was highly selective, using exclusively reliable, evidentiary and intuitively transparent facts, methodological tools that reveal cause-and-effect relationships, and refusing some less reliable, although (sometimes) fashionable and often cited approaches. For example, he was lukewarm about big science based on microdata from surveys of preferences and intentions, about microsimulation models and, in general, microlevel studies that draw inferences from statistical associations.

It seems to me that he was not much interested in the numerous, useful, but not very meaningful, scientific articles in which, for example, it was shown that Swedish doctors have a higher birth rate than representatives of other types of mental work. A.G. Vishnevsky himself was

the author and co-author of numerous empirical studies, for example, in the analysis of spatial patterns of mortality or fertility, but in their results he always looked not so much for interesting facts as for the manifestation of fundamental mechanisms that set demographic processes in motion.

A.G. Vishnevsky was focused on big tasks. He did not multiply essences unnecessarily, but extracted the maximum from the generalized theory of the demographic transition, bringing more and more empirical facts and statistical connections into its orbit.

Anatoly Grigorievich never dealt with so-called agent-based Demography. This is a direction in demography based on the analysis of demographic reality from the point of view of an agent (an individual living in this reality). In Russian demography, an example of such an approach is the book by B.Ts. Uralnis "A History of One Generation" (Uralnis 1968). It is noteworthy that A.G. Vishnevsky wrote on this subject not an academic monograph, but the novel "The Biography of Pyotr Stepanovich K" (Vishnevsky 2013), which even entered the short list of nominees for the Russian Booker award.

VISHNEVSKY'S DEMOGRAPHIC SYSTEM

As is known, the theory of the demographic revolution (or demographic transition) began with the works of Adolf Landry and Warren Thomson, Alexander Kulisher and some other scholars (see (Vishnevsky, Tolts 2015)) who, even before World War II, had formulated ideas about successive regimes of population reproduction. In the second half of the 1940s it was developed by researchers of Princeton University, primarily by Frank Notestein, who focused on the transition in fertility, later explored more deeply in the so-called "Princeton Project" under the direction of Ansley Cole. This theory made it possible to understand the internal mechanisms of the geographical diversity of fertility regimes and family structure observed at that time (Coale, Watkins 1986).

In the 1970s, the demographic transition theory was strengthened with respect to the long-term evolution of mortality (A. Omran's epidemiological transition (Omran 1971)) and to the reproduction regime of the population as a whole (Chenais 1986). Finally, the transition theory's orbit came to include the last component of population change: migration. (Zelensky 1971; Coleman 2006).

In the USSR, until the 1970s the theory of demographic transition remained almost unknown, was the object of superficial criticism as another "erroneous bourgeois theory." In 1973 Vishnevsky's famous article "The Demographic Revolution" (Vishnevsky 1973) was published, and in 1976 an even more famous book under the same title was published (Vishnevsky 1976), then republished in 2005. It had a huge impact on Russian demography and social science. A.G. Vishnevsky cites in it numerous new and eloquent facts and builds new logical links that transform already known ideas about changeable reproduction regimes into a truly coherent theory. The central concept is the line of historical types of population reproduction, developed using a systematic approach to a huge variety of isolated facts and observations. The book's powerful impact on minds was the result not only of its scientific content, but also of the liveliness of the text, of a style both logical and transparent, understandable to non-specialists. In 1982,

another important book by Vishnevsky, "Population Reproduction and Society", was published, in which a more advanced system of concepts and methods was applied to the study of global historical and demographic processes (Vishnevsky 1982), followed a year later by a collective monograph, also receiving much attention, dedicated to demographic dynamics in the USSR and Russia (Vishnevsky, Volkov 1983). Much later, the same theoretical views on the history of the Russian population would be developed in a fundamental collective monograph edited by A.G. Vishnevsky, "Demographic Modernization of Russia, 1900-2000" (Vishnevsky 2006).

A.G. Vishnevsky continued to consistently develop the theory of the demographic transition as a change in the demographic system. In his works of the 2000s-2010s, new important aspects were added. Certain elements that were only outlined in the works of the 1970s-1980s were further developed. The most complete and comprehensive presentation of the theory of the demographic transition, as Anatoly Grigorievich saw it, can be found in his latest book (lecture course), "Demographic History and Demographic Theory", published by the HSE in 2019 based on the course for the master's program "Demography" (Vishnevsky 2019).

The demographic transition is commonly understood as a transition from a regime of high fertility and high mortality to a regime of low fertility and low mortality, caused by the modernization of traditional agrarian societies and their transformation into modern industrial ones. This paradigm not only prevailed in the works of the Princeton demographers but was also evident in the first books by A.G. Vishnevsky. The decline in mortality was seen as an important, necessary, but not sufficient factor in reducing the birth rate. In his later works, Vishnevsky departs from such an understanding by establishing a rigid causal relationship between a decrease in mortality and a decrease in fertility. In particular, he points out that the decline in mortality began before the industrial revolution, and explains how the increase in child survival affected the decline in births within families.

A.G. Vishnevsky criticizes the theory of the "second demographic transition", popular in the 1990s, for trying to explain changes in fertility and family patterns by non-demographic determinants taken from family economics, mass psychology, and cultural norms. In his opinion, there is no need to involve additional external factors in the explanation.

A.G. Vishnevsky critically rethinks the current stages of the epidemiological transition. In particular, he disputes the now widespread concept of the "cardiovascular revolution", viewing the latest stage in the evolution of mortality as a continuation of a longer and more fundamental upward trend in the expected age of death within each of the main classes of causes of death (Vishnevsky 2020).

A.G. Vishnevsky substantiates the significant autonomy and internal conditioning of demographic processes, which are not secondary to socio-economic changes. Thus, demography appears in his view as an independent variable. Other subsystems of society are considered external to it. The demographic transition is not seen as a consequence of socio-economic changes, but rather as their cause. The demographic transition is a much more fundamental phenomenon than any socio-economic change, as it changes the reproduction of *Homo sapiens*.

The autonomy of the demographic system A.G. Vishnevsky links with its capacity for self-regulation. In response to the impacts of the natural environment or other subsystems of society

and its institutions, the demographic system adapts and thus maintains equilibrium. Even the shock effects of wars, epidemics and economic crises lead only to temporary deviations of the equilibrium parameters.

The ability of the demographic system to remain stable and to respond to external influences is related to an appropriate feedback mechanism. This is referred to as the concept of demographic homeostasis. At the present stage, homeostasis is provided by the mechanisms of goal-setting and free choice at the level of individuals and families. This micro-level regulation is much more flexible than the old mechanism related to religious and cultural restrictions. The sum of the variety of individual decisions results in rational population-level patterns.

CONCLUSION

There is nothing more practical than a good theory.

It is the theory of demographic transition that makes it possible to understand why, for example, the total fertility rate in our country cannot be raised today to the level of 3 or even 2.5 children per woman. The maternity capital and other measures of economic stimulation of births do not lead to the declared pro-natalist goal, though they can still be useful, since they provide support to families with children.

The same theory also shapes the correct understanding of the long-term increase in mortality in Russia, which lasted a whole 40 years, from 1965 to 2005. High mortality is the heaviest burden for the Russian population. The particularly high mortality rate in the 1990s and the early 2000s led some to think that our country was somehow doomed to losses from premature mortality and lagging behind other countries, and even motivated some authors to speculate about a “reverse” epidemiological transition in Russia. On the contrary, the theory of demographic transition interprets the Russian mortality reversal as a very long, but still temporary deviation from the expected global trend. In the 1970s-2000s, the absence of mortality decline was due to reasons that are well-studied today. In the mid-2000s, Russia embarked on the path of reducing mortality as soon as it abandoned the old Soviet/post-Soviet system of “residual” health care financing and undertook its modernization, and also adopted measures, well-known and well-tested in other countries, to regulate the production and sale of alcohol, restrict smoking and educate citizens on a healthy lifestyle.

Today our country and all mankind are facing serious challenges. The rapid growth of the world population continues and results in numerous crises. Increasing migration from the poor countries of the global South to the rich countries of the North is generating social tension and change in the composition of the populations in receiving countries. Although world food production has been growing faster than the population, there is no guarantee that this will continue in the future. Some regions face a shortage of critical resources, especially fresh water. So far, no fundamental solution has been found to environmental problems, for example, the accumulation of plastic and other hazardous waste in nature. Global warming continues and the frequency of weather anomalies is increasing. How will Vishnevsky's demographic system react to all these in the future?

Unfortunately, Anatoly Grigorievich himself will not be able to see, analyze and reflect on the dimensions of his views of the world and the world population. But in general, knowing his constructive and optimistic character, one can try to predict his reaction. Probably he would say that the demographic system will react, as always, rationally, and that humankind, as before, will manage to find a way out of a challenging situation. He would say simply: "We will handle it!".

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