

Special invited paper

Lysenkoism and the Population Control Movement

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The history of the population-control movement in the United States bears many eerie resemblances to the Lysenkoism that destroyed agriculture and the study of genetics in the Soviet Union for a quarter century starting in the 1930s, under the patronage of Stalin. Perhaps we can learn about the present aberration from the earlier one.

The Lysenko tragedy is recounted in *The Rise and Fall of T. D. Lysenko*, by Zhores Medvedev (1969), and in *Lysenko and the Tragedy of Soviet Science*, by Valery N. Soyfer (1994). I rely upon these accounts.

The reader may say: "Whatever the similarities between the Lysenko phenomenon and the population-control phenomenon, I know that Lysenkoism was in error, whereas I am not similarly convinced about population control". But to consider the similarities between the *structures* of the two movements one need not be sure that the scientific assumptions underlying the population-control movement are in error. Indeed, just the opposite is the case: Pathological similarities between the two movements should ring an alarm bell to inquire further into the presuppositions of the population-control movement even for those who never before had reason to consider seriously its validity. Indeed, that is a main purpose of presenting the comparison.

One important similarity is that both movements flowed from theoretical ideas alone, without confrontation with the scientific evidence.

Lysenko and Prezent repudiated the classical theory by assuming that heredity is a general internal property of living matter...They rejected the gene theory on a *a priori* abstract considerations, ignoring the factual material of genetics. (Medvedev, p. 22)

Similarly, population-control advocates begin with the abstract idea that some unit of discourse -- the earth, the solar system, or the universe -- is necessarily "finite", and therefore growth in population and consumption is inevitably "limited". Typical is the point of view of Paul Ehrlich: "[S]imple logic suggests that humanity cannot grow to infinity. There must be a limit, and beyond that limit a disaster of global proportions seems not only possible, but downright likely" (Lasden, 1990). And in an interchange with Garrett Hardin, I said to him: "The facts are fundamental". He replied, "The facts are not fundamental. The theory is fundamental" (Hardin and Simon, 1982).

A disregard of -- even contempt for -- empirical evidence accompanies this reliance on untested abstract propositions. All the relevant data disconfirm the theory that more people imply running out of resources and a lower standard of living in the long run. Perhaps most relevant is that all natural resources have become more available and less scarce (as measured by their prices relative to labor, and even relative to consumer goods) over the long run, even as population has increased greatly -- just the opposite of the Malthusian prediction. And all other types of systematic evidence also fail to support the idea that population growth

and density are associated with poorer economic results.

The population-control advocates pay no attention to such evidence, and pooh-pooh it when it is presented to them, employing the arguments that have been used since time immemorial to rationalize the failure of a theory. If you show them data that the price of food has been falling, and that the world's population is better fed than ever before, they tell you that this improvement is at the cost of ever more eroded farmland. If you counter with data showing that farmland in the United States is less eroded than it was half a century ago, they tell you that the measurement is not being made correctly. If you then give details on how the measurements are made, they reply that erosion is not what really matters, but rather the run-off of pesticides. Or that isn't what they meant in the first place. Or that you are lying or are an imbecile who does not understand science.

If you ask a proponent of the more-people-are-bad theory, "What evidence could conceivably cause you to conclude that your theory is unsound?" you will receive no answer. Indeed, just about every relevant sort of evidence has been examined and disconfirms their theory. Their only answer is "Just wait". But a theory for which one cannot postulate disconfirming evidence is without scientific meaning; it is metaphysical.

The Malthusians avoid confronting the historical experience that disconfirms their theory by saying that they focus on the future rather than the past. But such an intellectual procedure is quite unscientific. Valid science is based on experience; all sound theories derive from experience and must be tested against it. But the Malthusian theory fails every confrontation with the data - as Malthus himself came to recognize when he wrote his second first edition and subsequent editions.

The almost total turnaround in Malthus' thinking between his first and second (and subsequent) editions goes unnoticed by the population-control movement. The first edition is still cited as the gospel. There is a parallel in the Lysenko history. Soyfer (1994, p. 64) writes that early work of the great biologist Michurin using the words "Mendel's notorious laws about peas" continued to be used by

Lysenko despite Michurin coming later to say exactly the opposite.

The term "Michurinists" had been applied by the newspapers a few years earlier to amateur horticulturists, but Prezent now decided to use "Michurinist biology" as a catchall name for all of Lysenko's theories and proposals. With a careful selection of quotations from Michurin's contradictory writings, Prezent and Lysenko were able to present him as an inveterate opponent of Mendel and other geneticists. At an early stage of his work, Michurin had indeed opposed what he called "Mendel's notorious laws about peas," but later he came to understand the significance of what Mendel had done and wrote diametrically opposite statements about it, which the Lysenkoists of course failed to mention. (Soyfer, 1994, p. 64)

Lysenkoism and population controllism also are similar in using coercive methods to implement their programs. Medvedev speaks of "the coercion of wide masses of peasants and of agricultural and party leaders into putting into practice obviously ridiculous, harmful, or merely useless measures" (p. 247). The same words describe the coercive population-control programs implemented in China and Indonesia with the enthusiastic approval of population activists in the U.S. and of all the U.S. presidents since Johnson (except Reagan) and of the U.S. government agencies whose support for China and other countries' activities the activists have successfully enlisted.

It is noteworthy that biologists have been deeply involved in both issues. The most prominent persons in the population-control movement in the U.S. have been biologists -- Paul Ehrlich, Garrett Hardin, and Peter Raven now, and in earlier years William Vogt, Fairfield Osborn, and Karl Sax. Of course there are many biologists who abhor population-control ideas, and I do not mean to tar that entire wonderful discipline with this brush. But unlike the Lysenko scandal, during which many biologists literally put their lives on the line for the sake of the truth, not a single prominent biologist (except perhaps Bruce Ames and Thomas Jukes) has spoken out to disavow the anti-population-growth movement. (Indeed, it might constitute professional suicide.)

Still another similarity with the Lysenko phenomenon is that the important biologist group in the population-control movement rejects criticism from non-biologists on the

grounds that non-biologists cannot understand the scientific issues.

When Nemchinov rose to speak on the last day of the discussion of Lysenko's report, the session had essentially ended in complete triumph of the Lysenkoists, and the victory of obscurantism over science was assured. The session awaited only speeches by two of the most authoritative Lysenkoists, Stoletov and Present, before hearing Lysenko's concluding remarks and a letter of greetings from the participants to Stalin. Yet at that moment the Lysenkoists heard something they never expected. Before them stood a mountain that, in the words of an old song, they could neither obscure from view nor get around. (Soyfer, 1994, p. 187)

Nemchinov was constantly interrupted by shouting and insults. Yet he refused to retreat. Here is what the transcript of the proceedings shows:

Voice from the audience: Does the chromosome theory belong in the golden treasury?

V. S. Nemchinov: Yes, I repeat, yes, I hold that the chromosome theory of heredity has entered the golden treasury of humankind and I continue to maintain that position.

A voice: *You are no biologist, how can you judge?*

V. S. Nemchinov: I am not a biologist, but I am able to test this theory from the viewpoint of the science in which I conduct research, statistics. (Soyfer, 1994, p. 187, italics added)

In like fashion, here is biologist Garrett Hardin's response to my assertion that the literature on the rate of species extinction does not provide any statistical basis for the cataclysmic claims that are commonly made. "[H]e [Simon] pontificates on biological matters just like the Pope pontificates about sex... the fact of the matter is that he doesn't have a clue about tropical biology or the extinction of species...he doesn't even have a clear concept of what a species is or what endemism is". (Garrett Hardin, transcript of debate with Julian L. Simon, University of Wisconsin Union, 1989.)

Lysenko and Lysenkoism exerted huge influence through the official Soviet academies of science - pre-eminently the USSR Academy of Sciences - and their bureaucrats. And they mobilized political power all the way to Joseph Stalin and Nikita Krushchev. The population-control movement in the United States also obtained official support from the State Department, the Congress, and almost every president from Lyndon Johnson to Bill Clinton. It also has politicized the National Academy of Sciences on this issue. For example, a "revisionist" view that population growth does not have deleterious effects on economic growth became the mainstream

wisdom of population economists in the 1980s, as was first confirmed by a 1986 NAS-NRC book-length report by a set of eminent writers, especially Samuel Preston. And the backup research volume was directed and edited by D. Gale Johnson and Ronald Lee. But the issuance of the report was opposed by politicians organized by the NAS bureaucracy. And the manner in which it was released was rigged, and the press release differed significantly from the conclusions of the report in the direction comfortable to the population-control movement, as follows;

Non-scientific considerations certainly affected the shape of the report by way of the choice of the constitution of the committee. The news release stated that "The committee's study was requested by AID in 1983 following reports by some analysts that rapid population growth was an important long-term stimulus to economic development". In light of that fact, notice must be taken that no person who can be identified as one of those "analysts" was involved in the preparation of the report in any way. This squares with the fact that the participants were explicitly chosen as people "who were not known to have a strongly fixed position...not at one or another end of the continuum" in order "to avoid the group becoming a battleground" (conversation with Robert Lapham, May 21, 1986).

Additionally, the NAS staff's press release makes population growth seem more important than the Working Group saw it to be. The statement of the conclusion in the headline of the NAS press release was "Slower Population Growth Generally Benefits Developing Nations' Economies: Is One of Key Factors Cited." Though this was technically correct, the headline did not express the spirit of the report, which played down the role of population growth and stated that no quantitative evidence of a negative effect was found. Specifically, the word "key" was placed in the headline by the staff together with the Office of Public Affairs, without consultation with Preston, Johnson, or Lee, though Preston characterizes that term as "not a fair adjective" (in conversation), and Johnson was surprised to find that "key" was in the head line (Simon, 1986 contains references and details). This wording may have been wholly a response to

the natural desire to make the matter newsworthy rather than too dull to be of interest to newspaper people. But such a change in wording also might seem responsive to such elements of the situation as Congressman Sander Levin (a principal person in the population movement) at the rehearsal the night before the NAS presentation to the press, saying that the presentation was "not dramatic enough". And the press officer for the NAS suggested rehearsing Preston's presentation with him, to instruct him about how to deal with politically-difficult topics such as abortion.

The NAS bureaucracy never gave up. For example, in 1994, the Executive Officer of the NRC, William Colglazier, dismissed the 1986 report by saying that "A more complete representation of the 1986 Research Council report...is contained in the proceedings of the Population Summit of the World's Scientific Academies, a precedent-setting meeting held in New Delhi last October...".

The document that Colglazier referred to had the following history: 1) According to the NAS press release of December 27, 1993, "The population summit grew out of two earlier meetings, one of the U. S. National Academy of Sciences and the Royal Academy of London...". 2) The joint statement that came from the U. S.-British meeting was produced by "the officers" of the two groups, according to the February 24, 1992 NRC press release. The membership of the National Academy was not consulted. No input from population economists, who study this subject, was cited. That is, the staffers decided to issue a political statement, and went ahead on their own authority, without any more special knowledge of the subject than the ordinary layperson. It is no wonder that the proclamation contained the conventional popular beliefs that have now been discredited. 3) The U. S.- British statement contains no scientific data or analysis, and refers to no scientific literature. Amazingly, it does not even refer to the 1986 NAS-NRC report and the research volume that underlies it, the result of two years of NAS-NRC research. 4) The New Delhi statement simply expands the U. S.-British statement, and again does not refer to the 1986 report; the only literature it does refer to is general

statements and proclamations, especially the 1992 U. S.-British statement. It is the standard environmental manifesto. 5) The "60 scientific academies" Mr. Colglazier refers to include such organizations as the Academy of Sciences of Albania, The Cuban Academy of Sciences, and the Mongolian Academy of Sciences. Marshalling all 60 of these countries' signatures (56 in the press release, 58 on the "statement") on a document is simply an act of political rhetoric. 6) Where the summary of the statement gets specific, it is in outright glaring error. It said that "In the last decade, food production from both land and sea declined relative to world population growth". This statement of what the drafters of the statement see as the "Problem" is indisputably wrong and misleading. The UN Food and Agricultural Organization's index numbers for world food production per capita for 1950, 1960, 1970, 1980 and 1990 are 100, 115, 123, 130, and 138, and all grain prices have been trending downwards as far back as data exist, indicating declining scarcity. All this material countering the NAS-NRS's own research was prepared by bureaucrats.

Because the Lysenkoists had the endorsement of Stalin and Krushchev and hence the support of the entire government apparatus, positions and research money were available for those espousing the "correct" point of view. Similarly, because the population-control movement has had the support of the entire U.S. government funding apparatus, hundreds of millions of dollars have gone to population research "centers" and to researchers whose work on the determinants of fertility might show how birth-reduction programs could be made effective. Researchers who might find that the consequences of population growth are not deleterious have been shut out of the funding process. (Elsewhere I provide data and other documentation on this; Simon, 1990).

The funding agencies have even been frank in their messages to potential researchers. The National Institute of Health's Center for Population Research -- the main source of public funds for population research -- once headed a call for research proposals on the consequences of population growth this way: "[A] reduction in the rate of population growth is both inevitable and useful." Such an

introduction is not likely to lead to unbiased research, and must surely discourage application for, and approval of, studies that would show positive consequences. Potential researchers were being told in advance what their conclusions ought to be.

Private foundations act even worse. Here is an excerpt from a letter, signed by J. Kellum Smith, Jr. Vice President and Secretary of the Mellon foundation, to the American Association for the Advancement of Science concerning a proposal AAAS made to study the consequences of population growth:

Because the links among population, resources, and environment are so obvious and strong...I hope [your proposal title] does not indicate diffidence, in your group, on the matter of facing up to the malign consequences of rapid population increase. Should such diffidence exist, I would suppose that it might cripple the program and that therefore the exercise might as well be halted forthwith...

I am disconcerted by the suggestion that there is a problem in handling "the widely divergent views of the Cornucopians and Malthusians". If by "the Cornucopians" is meant Julian Simon and his few allies, I should think a footnote would be sufficient to dispose of them...

If there is nervousness on the point, it had better be faced up to forthwith. The issue of population increase is central to the proposed program...the crucial element in any responsible approach to the overall problem will be restraint of population increase. Although it may be unscientific to make the statement that boldly, I do so because I think that outcome so highly probable that if your group finds it unpalatable perhaps the exercise should be abandoned.

The prestigious AAAS did what was necessary to receive the Mellon funds, and hence the "exercise" was not "abandoned" by the foundation.

The biologists and Malthusians often claim to be *real* scientists, in contrast to economists, statisticians, and others, whom they deride. But like the Lysenkoists, their argumentation is quite the opposite of standard scientific procedure. For example, both movements use unscientific language such as derision for their opponents. For example,

When Prezent spoke, he dropped all inhibitions and jeered at his opponents, stooping even to punning on their names. "There now remain only a few open and declared Morganists in our country; perhaps one must really be a blockhead [*dubina* - clearly a reference to Dubinin] to remain one" (Soyfer, p. 189).

Two population-control writers use the same device on a book of mine and at this writer. (Please forgive my adducing so many

remarks about me personally, but I have better records about myself than about other people.)

In sum, all the talk about knowledge and the mind as an ultimate resource [the title of a book of mine] that will offset limits imposed by finitude, entropy, and ecological dependence seems to us to reflect incompetent use of the very organ alleged to have such unlimited powers (Daly and Cobb, 1989, p. 199).

The charge of dishonesty has arisen in both situations. For example, in a 1983 commencement address at Knox College, a distinguished botanist took the time to say about my work "His ignorance of the biological realities would simply be laughable if it did not have such dangerous potential consequences. It seems almost unbelievable in the face of known facts ..." he writes that I use an "intellectually dishonest strategy," that it is "immoral to pretend that everything is fine when the facts so clearly tell us otherwise," and that I do this for "short-term political gains" (Raven, 1983, p. 7). And here's the dishonesty charge made by Robert May, a distinguished zoologist and the Chief Scientific Adviser to the British Government as of 1995:

Sadly, I conclude that what we are dealing with here is not an honest pursuit of intellectual understanding, but rather with some other agenda (or possibly with stark stupidity, or even both).

Ridicule appears in both instances. Prezent said about a distinguished opponent of Lysenko, "Professor Polyakov... you should be wiser than Darwin, if only because the bird perched on the sage's head sees farther than the sage" (Soyfer, p. 189). And Paul and Anne Ehrlich confer on me the leadership of a "space-age cargo cult".¹

Another device is attributing some combination of stupidity and scientific ignorance to those who oppose the movement. That device appeared in the "blockhead" quotes above by Prezent and May. Paul Ehrlich of the population-control movement specializes in this device. For example, he alludes to the title of my *The Ultimate Resource*, saying "The ultimate resource - the one thing we'll never run out of is imbeciles", which got a good laugh from the crowd.²; he frequently uses words like "ignorant", "crazy", "imbecile"³, and "moronic".⁴ And

Getting economists to understand ecology is like trying to explain a tax form to a cranberry. It's as if Julian Simon were saying that we have a geocentric universe at the same time NASA's saying the earth rotates around the sun. There's no reconciling these views. When you launch a space shuttle you don't trot out the flat-earthers to be commentators. They're outside the bounds of what ought to be discourse in the media. In the field of ecology, Simon is the absolute equivalent of the flat-earthers.

And "The views of...Simon are taken seriously by a segment of the public, even though to a scientist they are in the same class as the idea that Jack Frost is responsible for ice-crystal patterns on a cold window"⁵ "Simon apparently doesn't know the difference between an old-growth virgin forest (with its critical biodiversity intact) and a tree farm."⁶ And when asked "his opinion of Simon, he said, 'that's like asking a nuclear physicist about horoscopes.'"⁷

In the magnificently free United States, one is not shipped to a Gulag for doing research on banned topics. In the Soviet Union the author of the document in your hand might have lost his job or gone to jail, but the document would have been passed hand to hand in typewritten form. In contrast, nothing ill happens to this writer; indeed, the document does not even get published; it was first drafted in 1985, and has not been in print yet. But a sufficiently chilly climate can keep most scholars from entering the field. In this respect, Medvedev is wrong when he writes that "False doctrines, being an extreme product of the normal background of science, and having been created by extremist, fanatical representatives of the world of science, can achieve a monopolistic position only in state systems that are extremist in nature" (p. 246).

We in the "free world" cluck our tongues in awe and sympathy when we read that in the Soviet Union from the late 1930s to the early 1960s, "Twenty-five successive classes of physicians have been graduated from medical school without the slightest notion of the laws of heredity" (p. 194). Medvedev laments the "immeasurable damage...caused by the inadequate preparation of cadres in schools, in agricultural, biological, and medical institutions of higher learning" (p. 193). Americans believe that such a phenomenon could not occur in the United States. But the high school and even elementary school textbooks used in courses that relate to the

environment speak with one voice that population growth reduces resources and befouls the air and water, and is even a social evil. And many anti-scientific departments of environmental studies are as firmly entrenched in our universities as Lysenkoized departments of agronomy were in the Soviet Union. The body of ideas about population growth presented to our students at all levels from the 1960s to the mid-1980s was almost as uniformly contrary to available scientific information as was the situation in the Soviet Union during the Lysenko affair.

On the surface, the false ideas of Lysenko were rolled back quickly, once the process started in the Soviet Union. But in the U. S. there has not been any dramatic and public renunciation of the false scientific basis of population control; the public and the educational system have so far received only a glimmer of the body of ideas that the "official" scientific establishment (in the form of the National Academy of Sciences) formally recognized as valid in 1986. Indeed, Soyfer argues that the

common belief in 'the downfall of Lysenkoism' in the USSR must be reconsidered (p. 5)... Lysenkoism remains deeply entrenched in Russian science, despite perestroika and glasnost and the end of the USSR. Many of those who were raised in the Lysenko tradition still occupy key positions in Russia's science administration. Lysenkoism left a baneful legacy in the form of these followers of Lysenko who continue to teach and work in many universities and institutes" (p. xxiv).

And so it likely will be with respect to population control for a long time in the United States.

SUMMARY

The case of Lysenkoism in the Soviet Union helps us understand how people's wrong beliefs can be influenced by what the information they receive from outside, especially when there is a large volume of media coverage and there is no contrary information to be heard. The population control movement in contemporary United States has many parallels to the Lysenko episode.

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FOOTNOTES

¹ This comment and several others to follow that are not endnoted is in Tierney, 1990.

² Tierney, p. 81.

³ *St. Louis Post-Dispatch*, December 13, 1993, D1, 4.

⁴ Ehrlich, 1981, cited in Simon, 1990, p. 374.

⁵ Ehrlich and Ehrlich, 1991, p. 229.

⁶ A. and P. Ehrlich, 1994, p. 27.

⁷ *The Red and Black* (University of Georgia), April 9, 1991).