

# Why not to ignore Russian work (or the phenotype)<sup>1</sup>

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Phenetics. By A.V. Yablokov. 1986. (Translated by M.J. Hall.) New York: Columbia University Press. 171 pp. \$20.00.

That Russian evolutionary thought has not had much influence elsewhere is not entirely the fault of the Russians. Take Schmalhausen (Shmal'gauzen), for instance. He should be in the top rank of the founders of the synthetic theory of evolution (neo-Darwinism), but his work has been nearly ignored in the West. His best-known book, *Factors of Evolution*, appeared in 1946 (not 1947, as stated in the translation.) Dobzhansky edited an English translation (1949), which oddly omitted much important material of the original as well as redundancies. Nevertheless the book still deserves to be read, and not just as a historical document. (A revised edition appeared posthumously in 1968 but unfortunately has not been translated.)

Schmalhausen's focus was on variation, development, and morphology, a cluster of subjects which have been peripheral in Western theory since the rediscovery of Mendel's work. He unified them by a sophisticated theory of stabilizing selection. I have no idea why his work has been largely disregarded except, perhaps, a prejudice that Russian research is parochial and derivative. The synthesis is not yet complete horizontally as well as in depth, and more attention to work like Schmalhausen's can help us. As has happened to Darwin too (and to Lyell), parts of Schmalhausen's work have been (perhaps independently) rediscovered and brought in under other people's names. For instance, he gave a short but clear discussion, even in the translation, where part is omitted, of what we now call r- and K-selection.

The general approach Schmalhausen used was itself already developed in Russia. His major predecessor was Severtsov (Sewertzoff), whose 1931 book auf Deutsch has parts which still make interesting reading, as well as the first calculation I know of a morphological evolutionary rate. Schwartz (Shvarts, another Russian with an originally German name which suffers in the double transliteration to and from Cyrillic), an ecologist, incorporated the Severtsov-Schmalhausen approach into his work also. In doing so he and others developed a developmental-morphological-functional ecology. Although one of his books has been translated (1977), one with more of a genetical flavor than most of his work, the recent beginning of interest in this area in the West has largely ignored his contributions and similar ones of others. They can still help.

Evolutionary genetics, of course, has fared less well, and there have not even been any recent outstanding contributions in animal paleontology, to my knowledge, except for work in the basal Cambrian and on insects. (I do not know much of Russian systematics on modern organisms, and so must omit this broad area.) Paleontology and paleobotany have for years been stronger in Russia than elsewhere, although the ratio of imaginative to pedestrian work even here seems discouragingly low. But in genetics there was an excellent start, with work by Chetverikov (Tschetwerikoff, etc.), Dobzhansky (an early exile), Vavilov, Serebrovskii, Dubinin, Timofeev-Resovskii (Timofeeff-Ressovsky), Karpechenko, and others. About 1930 Russia had a large proportion of the world's evolutionary geneticists. With the triumph of Lysenko Vavilov died of malnutrition in a prison, Karpechenko died in prison in unknown circumstances, Timofeev-Resovskii was

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<sup>1</sup>Contribution 62, Lothlorien Laboratory of Evolutionary Biology  
Evolutionary Theory 8: 61-64 (October, 1986)

evolution it may, with luck and careful reformulation, have some merit, but I wonder about its foundations and exactly how to measure its results, and exactly on what.

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