On the whole, *Flora's Fieldworkers* is an important new contribution to the history of women in science and offers a model for future interdisciplinary scholarship in the archive.

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Yvonne Howell; Nikolai Krementsov (Editors). *The Art and Science of Making the New Man in Early Twentieth-Century Russia*. x + 296 pp., illus., notes, bibl., index. London: Bloomsbury, 2021. £28.99 (paper); ISBN 9781350232839. Cloth and e-book available.

Growing out of a 2019 international interdisciplinary conference, this volume sets an ambitious dual goal of demonstrating the immense diversity of "new man" visions across different cultures, epochs, and continents while at the same time attempting to bring some classificatory and genealogical order to this creative chaos. Focusing on twentieth-century Russia, the book challenges the traditional view of the "new Soviet man" as a rigid ideological construct imposed from above, interpreting it instead as the intersection of a multitude of cultural trends that did not form a coherent whole. Unlike other studies that analyzed the notion of the "new man" from purely political or cultural perspectives, this volume discovers, under the plethora of idealized (or demonized) visions of a "man of the future," some deep connections between the scientific and artistic ideas that informed such visions.

Nikolai Krementsov's sweeping introduction offers a broad historical survey of the rise and fall of different versions of the emergence of the "new man": theological (through faith), nurturist (through upbringing and education), supernatural (through "spiritual" development), naturalistic (through scientific experimentation), and Marxist (through class struggle). While before the Bolshevik Revolution, Krementsov argues, those visions had occupied separate institutional niches, after the revolution Marxist, nurturist, and naturalistic versions began to combine and overlap, with bio-psycho-medical experimentation often taking the lead and influencing nurturist pedagogical approaches. The Stalinist "revolution from above," however, greatly reduced the role of scientists in setting the agenda for reshaping human nature, in favor of instruments of state propaganda and ideological education.

The search for a uniquely "Soviet" element in the "new Soviet Man" formula leads the authors to discover multiple exchanges of philosophical, pedagogical, and artistic ideas between Soviet visionaries of the future and their Western counterparts. News of scientific developments seemed to travel most easily, and they inspired, and were inspired by, very similar literary and artistic ideas. Lyubov Bugaeva finds remarkable similarities between American "progressive education" and early Soviet children's labor-education communes; Irina Golovacheva examines the impact of contemporary ideas about the "criminal brain" on both Mikhail Bulgakov's novella *Dog's Heart* and James Whale's movie *Frankenstein*; and Krementsov explores how the dreams of "visionary biology" to improve human nature influenced both Fedor Il'in's novel *Valley of New Life* and Aldous Huxley's *Brave New World*. While the Bolsheviks aspired to build an ideologically distinct version of the "new Soviet man," it strongly resonated with scientific ideas and cultural patterns widely circulating elsewhere.

Essays by Michael Coates and Olga Ilyukha examine the links between educational and child-rearing practices and the Bolsheviks' efforts to nurture the "new Soviet man." Coates explores the attempts by Bolshevik science enthusiasts, such as Alexander Bogdanov, to equip the "new man" with novel cognitive abilities through the creation of an innovative proletarian encyclopedia with a class-based viewpoint. Such radical projects were eventually stalled, as the Soviet regime came to rely on the expertise of the intelligentsia,

and a distinct "proletarian science" never materialized. Ilyukha shows how the imagery of the "new man" was reflected in Soviet designs of mass-produced dolls, which duly followed the shifting priorities of Soviet ideology.

In the 1930s, as the bio-psycho-medical approach to reforming the human being came under ideological attack for the alleged "biologization" of human nature, Soviet attempts to create the "new man" increasingly drew on the classical Marxist view of human nature as a social product. The leading role in these efforts now shifted from the scientists to the writers, whom Stalin famously called the "engineers of human souls." As Matthias Schwartz shows, however, the diverse scientific visions of the "new man" quickly found a new home in various Soviet popular-scientific literary genres, from the entertaining "scientific curiosities" to the inspirational science fiction to the futuristic horrors of "science fantasy."

Constructing the imagery of the "new man" for the public posed a problem for Soviet museum and exhibition workers: they had to present real-life examples and at the same time display an inspiring ideal and a model for imitation. Olga Elina shows how the 1923 All-Russian Agricultural Exhibition served as a "school of learning new things" and a tool for transforming visitors into "new men" right on the spot. Pat Simpson's close examination of a 1926 pair of monumental relief sculptures depicting the sociability and life cycles of humans and orangutans at the Moscow Darwin Museum reveals multiple layers of underlying discourses—from the Marxist concept of human superiority over nature to the ideas of Soviet eugenics to the Foucauldian notion of "docile bodies." In the 1930s, Stanislav Petriashin shows, Soviet ethnographic museums faced a fundamental problem of fitting the imagery of exemplary Stakhanovites (shock workers), who represented the "new man" (and "new woman") transcending the old national and ethnic identities, into their traditional ethnographic displays. This reflected, he argues, the structural contradiction between the Soviet nationalities policy of historical continuity and the economic policy of a radical break with the past.

In the post-Soviet era, theological and supernatural visions of the "new man" were revived and curiously combined with post- and transhumanist ideas borrowed in part from the West. In her insightful conclusion, Yvonne Howell explores the gap in which the "new man" visions reside—the gap between a bright imagined future and a disappointing reality. Often exploited in Soviet times to justify today's sacrifices in the expectation of future triumphs, this gap continued inspiring the futuristic megaprojects of the post-Soviet Russian government, as well as the popular rhetoric of international corporations. Today's visions of the "new man" include radical computer-enabled extensions of mind and body but still call for sacrificing real human lives.

The Art and Science of Making the New Man in Early Twentieth-Century Russia offers a mosaic of interpretations of the concept of the "new man" that forms a dazzling and diverse, yet instructive, picture of the ever-expanding limits to which human imagination and political expediency can push a specific idea. Perhaps the more central a particular concept is to the cultural mainstream, the more uncertain and incoherent it becomes over time, as multiple actors borrow and reinterpret it for their own needs. In this sense, Krementsov's framing of the discussions of the "new man" as a "cultural resource" for scientists and artists is helpful. On the other hand, the "new man" concept was more than merely a rhetorical tool used by scientists to obtain funding or by writers to explore their artistic visions. For Bolshevik visionaries like Bogdanov, the "new man" dream truly inspired their scholarly agenda. But the Soviet regime clearly favored smart pretenders over naive believers.

This book is an engaging and informative read for all those interested in the interplay between Bolshevik ideology, cross-national futuristic visions, and early twentieth-century experimental biology.

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Slava Gerovitch is a historian of Soviet science and technology who teaches at the Massachusetts Institute of Technology. His books include From Newspeak to Cyberspeak: A History of Soviet Cybernetics (MIT, 2002), Voices of the Soviet Space Program (MIT, 2004), and Soviet Space Mythologies (Pittsburgh, 2015). His current research project is on the social history of Soviet mathematics.