

A New Poetics of Science: On the Establishment of “Scientific-Fictional Literature” in the Soviet Union

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In the 1960s, Varlam Shalamov, author of the voluminous *Kolyma Tales* and, together with Alexander Solzhenitsyn, the most well-known literary witness of the Soviet Gulag, repeatedly and insistently postulated the necessity of creating a totally “new prose.” In his view, a new sort of “documentary” literature was required to write about the crucial experiences of the Holocaust and the Gulag.¹ What has been mostly forgotten today is that about thirty years earlier, in one of his few works published in the very short period after his first imprisonment from 1929 to 1931 and before his second arrest in 1937, Shalamov had once identified himself as a passionate supporter of a totally different kind of “new prose”: the so-called *nauchno-khudozhestvennaia literatura*. This term is derived from the Russian term for fiction (*khudozhestvennaia literatura*) and can be translated as “scientific-fictional literature” but also as “scientific-artistic literature.” Hence all of the advocates of the term, including Shalamov, emphatically insisted not only on the “fictionality” (*khudozhestvennost'*), but also on the “skill” or “art” (*iskusstvo*)—the “artistic” qualities—as a fundamental element of the new genre, without which its goals could not be achieved.

In an article entitled “Science and Fiction,” published in the journal *Front nauki i tekhniki* in the immediate aftermath of the First All-Unions Writers Congress in December 1934, Shalamov elaborated in detail on the necessity and urgency of creating such a new, scientifically based literary genre, demanding:

My thanks to the anonymous reviewers for their encouraging comments and to Diana Aurisch and Kurt Schultz for polishing my English.

¹Varlam Shalamov, “O moei proze” (1971), in his *Vse ili nichego: Esse o poezii i proze* (St. Petersburg, 2015), 115–42.

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Imagine yourself a collective of writers and scientists (when each literary man is specialized and “attached” to one specific field of science) working on a huge book about the future of our country, about the future of the world. Each writer and scientist contributes his own fantasy and his own knowledge to the project, builds his part of the common monumental building. What a magnificent architecture! What an extremely intriguing and cultivated work of art. What an advance planning in creating a scientific-fictional work, which is determined to form the scientific worldview of the reader! ... Science and art in our country are no end in itself and not only an instrument of knowledge, but an instrument of change, to transform the world. The task of Soviet fiction is to remake the human, i.e., to remake the reader.²

Not anticipating his future imprisonment, Shalamov obviously saw in this specific literary genre the opportunity to reenter the world of Soviet literature and reconcile both his personal biographical experience and his professional interests with the new social demands of Socialist Realism and Stalinist society, calling—as Stalin had once put it—for writers to be “engineers of the human souls.”³

But what kind of genre was this sort of literature, now mostly forgotten, for which Shalamov had so much hope? To answer this question, I will reconstruct the conditions in the late 1920s and early 1930s that motivated Maxim Gorky and the then famous children’s book author Samuil Marshak, on the eve of the First All-Union Congress of Soviet Writers, to launch this compound adjective, *nauchno-khudozhestvennaia literatura*, and to create a new type of literature located at the intersection of literary fiction and science journalism. In highlighting the main arguments around this literature, I will elaborate how difficult and disputed its constitution was in the course of the gradual establishment of Socialist Realism as the singular aesthetic doctrine for literary production and why it did not succeed in establishing itself as a separate literary genre until the postwar period. In the last section I will analyze the characteristics of one of the most emblematic works written in this literary field before briefly returning to a more generalizing conclusion and taking a look at the modest afterlife of the genre since the Thaw period.

²Varlam Shalamov, “Nauka i khudozhestvennaia literatura,” *Front nauki i tekhniki*, 1934, no. 12:84–91), reprinted in his *Vse i nichego: Esse o poezii i proze* (St. Petersburg 2015), 51–84. Unless otherwise noted, all translations are by the author.

³Unfortunately, hardly any biographical data exists from the 1930s about Varlam Shalamov or about his thoughts and motivations for engaging in scientific-fictional literature. Even the few autobiographical statements he made decades later about the period do not refer to this topic. This is all the more regrettable because this supposedly progressive “new prose” can also be read as a form of concealing and whitewashing the brutal reality of forced labor on the major socialist construction sites and in the Gulag camps. The most prominent example in this regard is the collective volume on the Belomor canal edited by Maxim Gorky in 1934, in which many formerly avant-garde writers participated. Tracing this peculiar relationship between “scientific-fictional literature” and the Gulag would require an article all its own. On Shalamov see Franziska Thun-Hohenstein, “Remembering the Gulag: Varlam Shalamov’s Poetics of Speaking and Being Silent,” in *Filologia, Memoria e Esquecimento*, ed. Fernando Mota Alvas et al. (Braga, Portugal, 2010), 71–95. On Gorky’s collective volume see Cynthia A. Ruder, *Making History for Stalin: The Story of the Belomor Canal* (Gainesville, 2003).

THE INTERWAR PERIOD: AGAINST “ENTERTAINING SCIENCES” AND “SCIENTIFIC FANTASIES”

The first decade after the Revolution has been often characterized as the utopian period of Soviet history, when numerous political activists, artists, and writers established experimental “laboratories of dreams” to develop utopian ideas and scientific conceptions for creating a better world with new humans, diverse avant-garde arts, and scientific innovations.⁴ By contrast, the period of Stalin’s reign in the 1930s is portrayed as an age of aesthetic unification under the rubric of Socialist Realism, mass terror, and the repression of all utopian approaches.⁵ But if we take a closer look at the interrelation of scientific developments and literary imaginations during the interwar period, the situation begins to look a bit more contradictory and complicated.

On the one hand, in the 1920s many publishers, editors, and authors in the broad field of popular science writing continued, with some restrictions, the prerevolutionary era’s “civilizing mission” of creating a healthier, wealthier, and more just society through the dissemination of knowledge and scientific education.⁶ Iakov Perel'man was probably the most prominent author in this field. He began his career as a journalist publishing in such popular scientific journals as *Priroda i liudi* (1890–1918), and was one of the first to report on the rocket pioneer Konstantin Tsiolkovskii. Perel'man’s booklet on Tsiolkovskii, *Interplanetary Journeys*, was first published in 1915 and proved so popular that it underwent ten reprints in subsequent years.⁷ Perel'man founded the first Soviet popular-scientific journal, *V masterskoi prirody*, in 1919, and continued to write “entertaining” educational books on a variety of scientific subjects. After his best-selling *Entertaining Physics* appeared in 1913, ten publications with similar titles, such as *Entertaining Geometry* (1925) or *Entertaining Astronomy* (1929), came out with print runs in the millions.⁸ The series was so popular that it inspired numerous imitators, such as *Entertaining Mineralogy* (1928), written by the geochemist, mineralogist, and renowned academician Aleksandr Fersman and reprinted twenty-four times by 1953.⁹ These and similar booklets, articles, and

⁴See, for example, Richard Stites, *Revolutionary Dreams: Utopian Vision and Experimental Life in the Russian Revolution* (New York 1989); and John E. Bowlt and Olga Matich, eds., *Laboratory of Dreams: The Russian Avant-Garde and Cultural Experiment* (Stanford 1990).

⁵Boris Groys has fundamentally challenged this reading, featuring Stalinism as a fulfilment of all avant-garde dreams. But in doing so he simply reverses common notions without giving a deeper insight into the complex transitions. See Groys, *The Total Art of Stalinism: Avant-Garde, Aesthetic Dictatorship, and Beyond* (London 2011).

⁶Catriona Kelly, “New Boundaries for the Common Good: Science, Philanthropy, and Objectivity in Soviet Russia,” in *Constructing Russian Culture in the Age of Revolution, 1880–1940*, ed. Catriona Kelly et al. (Oxford 1998), 238. See also James T. Andrews, *Science for the Masses: The Bolshevik State, Public Science, and the Popular Imagination in Soviet Russia, 1917–1934* (College Station, 2003).

⁷See Grigorii Mishkevich, *Doktor zanimatel'nykh nauk: Zhizn' i tvorchestvo Iakova Isidorovicha Perel'mana* (Moscow 1986); and Boris Liapunov, “Zavtrak v nevesomoi kuchne”: Posleslovie,” *Iskatel'*, 1962, no. 3:157.

⁸See Boris Liapunov, *V mire fantastiki: Obzor nauchno-fantasticheskoi i fantasticheskoi literatury*, 2nd ed. (Moscow 1975), 49–50; and Andrews: *Science for the Masses*, 86–87.

⁹Matthias Schwartz, *Expeditionen in andere Welten, Expeditionen in andere Welten: Sowjetische Abenteuerliteratur und Science Fiction von der Oktoberrevolution bis zum Ende der Stalinzeit* (Cologne, 2014), 242.

educational works sought to intrigue readers with a “simple and exciting” presentation of the sciences, enriched with historical anecdotes, curious events, paradoxes, riddles, and jokes.¹⁰

Closely related to this broad field of popular scientific discourse, and indeed an essential part of it, were all the tireless experimenters and scientific innovators who, in the aftermath of Einstein’s theory of relativity or Heisenberg’s uncertainty principle, sought to achieve their own revolutionary breakthroughs in their disciplines, longing for worldly immortality, interplanetary spaceflights, or a self-perpetuating vital energy.¹¹ Such scientific enthusiasm was suffused with a strong utopianism that perpetuated the optimistic nineteenth-century belief in progress, a spirit far removed from the everyday problems with which Soviet society was confronted at every level during the years of the New Economic Policy (1922–28).

On the other hand, the genre of adventure fiction, which dealt with the devastating consequences of modernity and industrial-technical progress, and the widespread fears they elicited, was also expanding at this time.¹² This kind of popular literature often appeared in the same magazines and periodicals as popular scientific writings. *Vsemirnyi sledopyt*, *Znanie – sila*, and *Mir prikliuchenii* printed myriad stories and serialized novels about crazy scientists, monstrous inventions, and technical innovations that, instead of leading to progress, caused warlike conflicts, merciless exploitation, or ruthless repression. Today, Aleksandr Beliaev’s novels *The Ruler of the World* (1926), *Battle in the Air* (1928), and *The Air Seller* (1929) are the best-known of this era’s fictional works about the fascinating and frightening aspects of technical-scientific progress, which for the most part were realized in a dystopian way.¹³ Astonishingly enough, in this widespread strand of popular writing, Socialist utopian perspectives appear, if at all, only at the very happy end of the plot, but not as something originally inherent to scientific progress.¹⁴

¹⁰Eleonora A. Lazarevich, *Iskusstvo popularizatsii: Akademiki S. I. Vavilov, V. A. Obruchev, A. E. Fersman – Popularizatory nauki* (Moscow 1960), 62–109.

¹¹See Nikolai Kremetsov, *Revolutionary Experiments: The Quest for Immortality in Bolshevik Science and Fiction* (New York, 2014); James T. Andrews, *Red Cosmos: K. E. Tsiolkovskii, Grandfather of Soviet Rocketry* (College Station, 2009); Michael Hagemester, “Konstantin Tsiolkovskii and the Occult Roots of Soviet Space Travel,” in *The New Age of Russia: Occult and Esoteric Dimensions*, ed. Birgit Menzel et al. (Munich, 2012), 135–50; and Igor J. Polianski, “Das Unbehagen der Natur: Sowjetische Populärwissenschaft als semiotische Lektüre,” in *Laien, Lektüren, Laboratorien: Künste und Wissenschaften in Russland 1860–1960*, ed. Matthias Schwartz et al. (Frankfurt am Main, 2008), 71–113.

¹²Joseph Bristow, *Empire Boys: Adventures in a Man’s World* (London 1991); Martin Green, *The Adventurous Male: Chapters in the History of the White Male Mind* (University Park, PA, 1993); John Rieder, *Colonialism and the Emergence of Science Fiction* (Middletown, 2008).

¹³Mikhail Bulgakov’s, Andrei Platonov’s, or Evgenii Zamiatin’s early satirical and dystopian writings of the 1920s also have to be localized in this common fashion of adventurous science fiction and entertaining science popularization, with which they dealt in a literary way. See Yvonne Howell, “Eugenics, Rejuvenation, and Bulgakov’s Journey into the Heart of Dogness,” *Slavic Review* 65:3 (2006): 544–562; and Matthias Schwartz, “Das Ende von Petersburg: Utopie und Apokalypse in der russischen Literatur des *Fin de Siècle*,” *Zeitschrift für Geschichtswissenschaft* 11 (2015): 982–1000.

¹⁴The most well-known socialist utopia is a prerevolutionary novel written by Aleksandr Bogdanov, *Red Star* (*Krasnaia zvezda*, 1908). It was praised by the Bolsheviks as exemplary and only fell into disgrace and oblivion at the end of the 1920s when the author became *persona non grata* because of his role in the Proletkult organization and his proximity to Nikolai Bukharin. Other partly utopian novels such as Iakov Okunev’s oft-quoted novel *The Coming World* (*Griadushchii mir*, 1923) or Vadim Nikol’skii’s *In a Thousand Years* (*Cherez*

But somewhere in between these two dominant tendencies—of a fairly utopian popular-scientific literature on the one hand, and a rather dystopian fictional-adventurous literature on the other—a modest number of avant-garde artists from the “relatively small milieu of the intelligentsia” proclaimed the latest achievements in scientific research and industrial-technological mechanization as the *non-plus-ultra* of their own creative work.¹⁵ Formalists incorporated ideas from evolutionary theory into their literary works; futurists and constructivists, inspired by scientific formulas, dreamt of a new relationship between humans and things and developed revolutionary ideas about how to completely reinvent the spheres of private life and working life; and advocates of a new “proletarian culture,” organized in 1917 as the Proletkult, proclaimed the assembly line as the benchmark for all human activity.¹⁶ These avant-garde artists and activists hoped to revolutionize art and life, and although they garnered international fame, they did not receive much encouragement from either those working in the factories or those in the field of science.

All of these heterogeneous tendencies came under enormous pressure in the aftermath of the Fifteenth Party Congress in December 1927, which saw the effective end of the “United Opposition” and the approval of the First Five-Year Plan (1928–32) designed to effect the vigorous industrialization and collectivization of the Soviet Union. First, the supporters of Proletkult, organized in the Russian Association of Proletarian Writers (RAPP), won a temporary victory over opposing groups, the consequence of which was an extremely polemical and politicized period of harsh criticism, strict censorship, and cultural frictions regarding the prerogative of interpretation and publication. The allegedly unrealistic, bourgeois form of popularizing “entertaining sciences” was harshly attacked for being far removed from the daily work at Socialist construction sites. But adventure fiction was also entirely discarded as “counterrevolutionary contraband.” It was in this context that “scientific fantasy” (*nauchnaia fantastika*), which until then had been mainly used by commercial rather than literary actors, was introduced by some critics and writers as an alternative to adventure literature or to pure fantasy. It served as a useful term for highlighting the genre’s tendency, in the sense of scientific probability, to “realistically” deal with the future outcomes of scientific-technical innovation and Socialist progress. Although it was extremely contested, the term thus was established as the genre description for the Soviet form of “science fiction.”¹⁷

However, as the first catastrophic consequences of the forceful reconstruction of the economic and agricultural sector became obvious, and as it also became evident that the

tysiachi let, 1927) were never published in the big scientific-popular journals and had almost no public impact. On the ambivalence of Bogdanov’s novel see Phillip Wegner, *Imaginary Communities: Utopia, the Nation, and the Spatial Histories of Modernity* (Berkeley 2002); Schwartz, *Expeditionen in andere Welten*, 182–85; and Stites, *Revolutionary Dreams*, 167–89.

¹⁵Polianski: “Das Unbehagen der Natur,” 79.

¹⁶See Margarete Vöhringer, *Avantgarde und Psychotechnik: Wissenschaft, Kunst und Technik der Wahrnehmungsexperimente in der frühen Sowjetunion* (Gottingen 2007); Boris Gasparov, “Development or Rebuilding: Views of Academician T. D. Lysenko in the Context of the Late Avant-Garde,” *Laboratory of Dreams*, 133–50; Barbara Wurm, “Factory,” in *Revoliutsiia! Demonstratsiia! Soviet Art Put to the Test*, ed. Matthew S. Witkovsky and Devin Fore (Chicago 2017), 218–25; and Stites, *Revolutionary Dreams*, 145–64.

¹⁷Schwartz: “How ‘Nauchnaya fantastika’ Was Made: The Debates About the Genre of Science Fiction from NEP to High Stalinism,” *Slavic Review* 72:2 (2013): 224–46.

RAPP's efforts were discouraging workers and farmers rather than motivating them to endure the enormous burdens of the Five-Year Plan, in the early 1930s the party again executed a change of cultural policy. It disbanded the RAPP and many other organizations, private publishing houses, and journals, in order to create a unified, state-controlled field of literary and journalistic production. The new policy culminated in the autumn of 1934 in the legendary First All-Union Congress of Soviet Writers.

Without retelling in full detail the divergent, partly devastating consequences of this renewed restructuring of literary policy, one of the results of the vivid debates in the run-up to the congress was that Gorky, together with Marshak, introduced the term “scientific-fictional literature” (*nauchno-khudozhestvennaia literatura*). The two men heralded the term as a description for a new kind of literature, one that could merge the entertaining elements of low-brow science fiction, the educational merits of science popularization, and the artistic and ideological tasks of building up a new “scientific” worldview for society.¹⁸ In numerous articles published in *Izvestiia* and *Pravda*, Gorky and Marshak developed ideas about a new literature for the masses—one aimed particularly at children, but also of interest to adults.¹⁹ Marshak presented the results of these public debates in his keynote speech on children's literature at the Writers' Congress, defining the approach as a “new perception” of reality:

Instead of presenting nature, human beings, and morality as unchanging, they strive to show readers the changing connections between phenomena and to provide a description of the world that is so passionate and unequivocal that people feel the need to fight and to restructure life and nature.²⁰

In terms of the writing itself, authors were to refrain from abstract, “entertaining” mind games or “unrealistic” adventure plots and get back on “track to real life,” where they could then, as participating observers, make discoveries in the laboratory of life.²¹ Marshak praised none other than Il'ia Marshak (pseud. M. Il'in), his younger brother and Gorky's personal favorite, as the most talented and successful propagandist of this new genre. Nowadays his name has mostly been forgotten, even among experts of Soviet literature and popular-science prose.²² But during his lifetime Il'in was one of the most widely distributed Soviet authors, with 269 books published in Russian and in translation. His first biographer,

¹⁸Accordingly, Gorky in his seminal article “About Themes” demanded a new way of “figurative scientific-fictional thinking” already in October 1933. See Vsevolod A. Revich, “Nauchno-khudozhestvennaia literatura,” *Bol'shaia sovetskaia entsiklopediia*, vol. 17 (Moscow 1974), 203–4. At first, Gorky and Marshak still used the attributes “scientific-fictional” or “fictional-scientific” randomly (Schwartz, *Expeditionen*, 292–303).

¹⁹Marshak and Gorky thus renewed in a way very similar arguments that had been raised years earlier against conventional children's literature, and especially against the genre of the fairy tale, which was blamed for unworldliness and for detracting its young readers from reality. Now the two authors repeated such allegations against the invented worlds found in science popularization and the fantastic escapism of science fiction (*nauchnaia fantastika*). On the debates around children's literature in the 1920s see Marina Balina and Larissa Rudova, “Introduction (Special Forum Issue. Russian Children's Literature. Changing Paradigms),” *Slavic and East European Journal* 49:2 (2005): 186–98.

²⁰Samuil Marshak, “Sodoklad S. Ia. Marshaka o detskoj literature,” *Pervyi vsesoiuznyi s'ezd sovetskikh pisatelei 1934: Stenograficheskie otchet* (Moscow, 1934), 31.

²¹For more detail see Schwartz, *Expeditionen*, 292–303.

²²Marshak, “Sodoklad S. Ia. Marshaka o detskoj literature,” 20–38.

Boris Liapunov, noted that his work reached a total circulation of nearly half a billion copies in about forty languages.²³ He earned his reputation with his 1930 publication *The Story of the Great Plan*, which had multiple print runs in its first year. The book recounts the reputed and intended successes of the First Five-Year Plan and prominently describes its glorious prospects.²⁴ Even the title was programmatic in the sense of a “scientific-fictional” literature: The narrative was not called reportage, documentary, essay, or collection of sketches, but *rasskaz*, which means fictional “story” or “tale,” something that does not even claim to report “actual” realities.²⁵

At the Writers’ Congress Marshak thus proposed a concept for a genre that would serve as an alternative to the “entertaining” science literature of former times, and to adventure writing and science fiction (scientific fantasy). The frightening and negative consequences of scientific-technical progress were exclusively attributed to the capitalist present, whereas the future was portrayed as a socialist utopia in which scientists and artists, professionals and laymen, humans and machines, work and leisure, city and countryside, center and periphery, formed a harmonious and highly productive collective.

At the same time, the genre was to a certain degree also an invitation to the avant-garde and former Proletkult authors to transfer some of their central devices and artistic claims to the new aesthetics of Socialist Realism. The typical plots in this genre did not revolve around outstanding scientists or ingenious inventors, but rather around competing ideas and experimental settings designed to achieve scientific breakthroughs. When avant-garde authors like Sergei Tret'iakov demanded a “biography of things,” scientific-fictional writers responded with works such as *Adventures of Inventions*, as one of the most paradigmatic books for the genre was called. Written by Aleksandr Ivich (the pseudonym of Ignatii Bernshtein), published in 1930, and reissued twice more in revised editions by 1939, its opening chapter, “Utopia and Truth,” begins with an abbreviated version of Edgar Allan Poe’s *The Thousand-and-Second Tale of Scheherazade* (1845). In this tale Scheherazade tells of an additional extraordinary journey by Sinbad the Sailor, in which he first comes across a steamship, then a hot-air balloon, a railway engine, a telephone, a telegraph, and a typewriter. But the further Scheherazade goes with her story, the less the caliph believes her, and after tiring of her “ridiculous,” “absurd,” and “preposterous” “nonsense” he sentences her to death the next morning.²⁶ Ivich explains how a tale replete with inventions from the nineteenth century would appear implausible to an ancient audience,

²³Boris Liapunov, *M. Il'in: Kritiko-biograficheskii ocherk* (Moscow, 1955), 74.

²⁴The Malik-Verlag published a version of the book designed by John Heartfield in 1932 with the title *Fünf Jahre, die die Welt verändern* [*Five Years that Shook the World*], clearly a play on John Reed’s best-seller about the October Revolution, *Ten Days that Shook the World* (1919). See M. Iljin [Il'in], *Fünf Jahre, die die Welt verändern: Erzählung vom großen Plan* (Berlin, 1932). The English translation was published as *New Russia’s Primer: The Story of the Five-Year Plan* (Boston, 1931).

²⁵Accordingly, also some of his main following books had similar titles: *Mountains and People: Stories of Restructuring Nature* (*Gory i liudi: Rasskazy o perestroike prirody*, 1935); *Stories of Things* (*Rasskazy o veshchakh*, 1936), a revised collection of earlier booklets; *Stories of Machines* (*Rasskazy o mashinakh*, 1949); *Stories of What Is Around You* (*Rasskazy o tom, chto tebia okruzaet*, 1953); and *The People as Builders: Stories of the Fifth Five-Year Plan* (*Narod-stroitel': Rasskazy o piatom piatiletii*, 1955, posthumous). On Il'in’s literary career in more detail see Matthias Schwartz, “Factory of the Future: On M. Il'in’s ‘Scientific-Fictional Literature,’” *Russian Literature* 103–5 (January–April 2019): 259–81.

²⁶Aleksandr Ivich, *Priklucheniia izobretenii*, 2nd rev. ed. (Leningrad, 1935), 111–16.

since people can imagine only the things they know from their own present. They then take the things they are able to imagine from their own time, enlarge them quantitatively, and project them as “poor previsions” (*plokhye predvideniia*) into the future: according to Ivich, they are incapable of envisaging anything fundamentally, qualitatively different. Ivich goes on to argue that, in the same way as the caliph, even the “great Utopian” H. G. Wells was mistaken when in 1922 he called Lenin a “dreamer in the Kremlin,” because in his bourgeois worldview he considered a socialist change of the world to be unthinkable. Finally, Ivich points out that even the “most exceptional fantastic writer, Edgar Poe,” despite his abundant capacity for fantasy, had been thoroughly wrong, because instead of looking a thousand years ahead he often lagged behind his own time.²⁷

According to the advocates of the scientific-fictional genre, such a formerly unthinkable qualitative leap into the future was already occurring with the construction of Socialism, and it was the task of literature to give these great utopias an imaginary shape not as frightening “scientific fantasies” but as convincing, truthful “scientific fictions.” In this sense, they hoped that the great construction sites across the country would transform the deserts of Central Asia into flourishing oases, and the Siberian wilderness into an inexhaustible source of raw materials and agricultural products. But just as characteristic of these utopian “adventures of inventions” were visions of easily transportable, extremely durable, and immensely powerful batteries charged by the sun, or dreams of long-distance telepathic communication.²⁸

Within the ideological politics of an aesthetically centralized and homogenized literature, literary and cultural activists in 1934 and 1935 seized upon this genre and deemed it canonical. They even considered it the only Socialist Realist literature that both the young and the old would actually read, and they pushed it upon publishers of books and magazines.²⁹ Numerous prominent scientists, academicians and writers expressed their support for this new genre before, during, and after the Writer’s Congress. It was supposed to inspire “love for science and technology,” as the prominent electronics specialist Mikhail Iakovlevich Lapirovo-Skoblo hoped.³⁰ Accordingly, not only Varlam Shalamov, but also writers such as Aleksei N. Tolstoi, Valentin Kataev, and Fedor Gladkov advocated this new type of fiction in special issues of magazines.³¹

The new genre had only one real shortcoming—it failed to attract readers. On the contrary, people interested in science and technology, including schoolchildren, preferred to continue reading entertaining popular-science books or—even worse—old-fashioned suspenseful science fiction. Moreover, there were almost no authors willing to write in this genre.³² Among the few who did were Konstantin Paustovskii, Viktor Shklovskii, and the

²⁷Ibid., 117–26.

²⁸Schwartz, *Expeditionen in andere Welten*, 402–16.

²⁹Marshak, “Sodoklad S. Ia. Marshaka o detskoi literature,” 34.

³⁰Mikhail Ia. Lapirovo-Skoblo, “Rech' prof. M. Ia. Lapirovo-Skoblo,” *Pervyi vsesoiuznyi s'ezd sovetskikh pisatelei 1934*, 435.

³¹See Aleksei Tolstoi, Fedor Gladkov, Valentin Kataev, Nikolai Aseev, Ianka Kupala, Ivan Evdokimov, Panteleimon Romanov, Vladimir Bill'-Belotserkovskii, Mykola Bazhan, and M. Il'in, “Otvetnoe slovo pisatelei nashei strany (anketa ‘bor'by za tekhniku’),” *Bor'ba za tekhniku* 17–18 (1934): 9–15.

³²The reasons for this disinterest were manifold. Although the term “scientific-fictional literature” should have raised the formerly low-brow, second-rate genre of science popularization to the height of true high-brow

aforementioned M. Il'in, who tirelessly tried to establish the new genre throughout the 1930s.³³ Nevertheless, constant complaints, not only from teachers, librarians, and publishers but also from scientists and academicians, who wanted something less boring to read, led to the decision, soon after Gorky's death in 1936, to revoke the proclaimed central role of "scientific-fictional literature" within the canon of Socialist Realism.³⁴

THE POSTWAR PERIOD: PHANTASMS OF BELLETRISTIC PROSE

In the autumn of 1939 the well-known editor and writer of scientific-educational publications, Lev Gumilevskii, frustrated about his critics, summarized the ongoing polemics against traditional popular-scientific works as a fight for an "indestructible phantasm":

Especially popular-scientific literature, like all other forms of literature, has its own specific phantasms. ... Among these, one indestructible phantasm stands out, namely the one that claims that an educational book must be molded into a belletristic form to ensure its emotional appeal. Even a special term emerged—"belletrization."³⁵

This "phantasm of belletrization" was closely linked to the claim made by the adherents of the new "scientific-fictional literature" about how to write the popular-scientific works that Gorky had promoted at the beginning of the decade.³⁶ Although pushed into the background after Gorky's death, the genre never truly perished: "belletrization" had been intertwined with the hope that trivial science popularization could be transformed into a sophisticated literary fiction of first choice, and indeed, the genre enjoyed an astonishing comeback in the postwar period. By as early as March 1945 this hope was fulfilled when the Soviet Writers' Union decided to found its own "section for scientific-fictional literature," which incorporated authors of both popular science and science fiction. Prominent academicians including Vladimir Obruchev, Aleksandr Oparin, and the geographer and Stalin Award-winner Nikolai N. Mikhailov supported it actively, and Il'in became a founding member. Writers and movie directors like Sergei Eizenshtein, Aleksandr Kazantsev, Shklovskii, Paustovskii, and Leonid Trauberg actively took part in public and internal discussions organized by the section.

But the initial euphoria inspired by the establishment at last of a truly Socialist new poetics of science soon vanished, and instead the section gained the dubious reputation of being "a party of mutual rapture and of concealment of failures and mistakes."³⁷ This was

fiction, most writers still perceived it as not worth the effort. On top of that, many were discouraged by the highly polemical discussions about its task and form, and memories of the disputes surrounding science fiction and science popularization during the First Five-Year-Plan.

³³Lev Gumilevskii, "Spiski knig vmesto izdatel'skikh planov," and M. Il'in, "Zamechaniia k planu Detizdata," both in *Detskaia literatura* 2 (1939): 53–59 and 51–53, respectively; Aleksandr Ivich, "Viktor Shklovskii v detskoi literature," *Detskaia literatura* 3 (1939): 54–58.

³⁴For more detail see Schwartz, *Expeditionen in andere Welten*, 331–40.

³⁵Lev Gumilevskii, "Neumiraiushchaia fantazma," *Detskaia literatura* 8 (1939): 22.

³⁶Ibid.

³⁷This is how the writer Georgii Tushkan characterized the section at an internal debate in March 1951 (Schwartz, *Expeditionen in andere Welten*, 567).

due to the section's enormous problems establishing its authority not only among its members, but especially within the field of science popularization, thanks not only to the scientists themselves, but also to an older generation of writers and critics who favored a more "entertaining" notion of science popularization. Since their youth these older writers had loved authors like Jules Verne or H. G. Wells, and therefore they also supported the publication of adventurous science fiction prose. No less disastrous for the section's development was the fact that every scientific discipline in the immediate postwar years lacked any established methodical and ideological profiles. Until the end of 1940s, Soviet science underwent what some scholars have called the "science wars," or "games in Stalinist democracy," when each discipline conducted long, drawn-out internal and public debates in order to negotiate a politically opportune and scientifically promising research profile that could be promulgated as the party line.³⁸ Typical for these controversies, which played out against the backdrop of the rapidly developing Cold War between the Soviet Union and its former Western allies, was the ideologization of scientific research. "Subservience" to suspect Western authorities, uncritical acceptance of reputedly "objective" laws of nature, or an undialectical "idealist" or voluntarist conception of research, were the worst accusations with which a scientist could be confronted. The banning of genetics or cybernetics as pseudo-science, as well as the establishment of Trofim Lysenko's infamous Lamarckism, were results of this process.

These external conflicts about how to conceptualize science, together with the internal differences regarding aesthetic form, led to permanent conflicts and misunderstandings. The situation was so extreme that when Minister of Culture Andrei Zhdanov cracked down on the writers Anna Akhmatova and Mikhail Zovchenko and the journals *Leningrad* and *Zvezda* in August 1946 (thus launching the "Zhdanovshchina," a period of extreme political pressure in the field of culture), this did not change the basic problem, but only increased the "failures and mistakes" confronting the "phantasm of belletrization." As a result, novels or stories that had been praised half a year before as ground-breaking and nominated for the Stalin Prize often were suddenly criticized for being "submissive" to bourgeois notions of science and "objectively counterrevolutionary."³⁹

Gradually, however, the ongoing internal disputes led to the rise of a small group of younger writers and journalists who, with the support of some prominent scientists and literary politicians, gained ever more influence. These *vydvizhentsy*—the "achievers" among the Stalinist technical intelligence—had started their professional careers in the 1930s and often had work experience in scientific-research laboratories and institutions. After the war they not only joined the Writers' Union but also began incrementally to staff such influential newspapers as *Literaturnaia gazeta* or *Komsomol'skaia gazeta*, popular illustrated journals like *Ogonek*, as well as the thin popular-scientific journals like *Vokrug sveta* or *Znanie – sila*. Nikolai Toman, Vadim Okhotnikov, Viktor Saparin, Vladimir Orlov, Viktor Sytin, Oleg Pizarzhevski, and Aleksandr Kazantsev were among these authors, all born between 1905 and 1916.

³⁸See Alexei Kojevnikov, "Games of Stalinist Democracy: Ideological Discussions in Soviet Sciences, 1947–52," in *Stalinism: New Directions*, ed. Sheila Fitzpatrick (London, 2000), 142–75; and Ethan Pollock, *Stalin and the Soviet Science Wars* (Princeton, 2007).

³⁹Schwartz, *Expeditionen in andere Welten*, 518–28.

At the end of 1947, with the help of the secretariat of the Writer's Union, this group passed a new statute for the section which aimed at subordinating all kinds of popular scientific works, as well as of science fiction, under the "poetic" concept of "scientific-fictional literature." The new statute proclaimed that the section's primary goal would be to "fight for raising the ideational content, the educational value, and the artistic level of works in different literary genres."⁴⁰ Consequently, in light of this educational goal, traditional science popularization, as well as Soviet science fiction (*nauchnaia fantastika*), came under attack because, by ignoring the political and social contexts of science, they contributed to its "vulgarization."⁴¹ As the genre's critics noted, whereas entertaining and suspenseful devices often served as a "dangerous deviation" designed to conceal ideological ignorance and an "unscientific approach," writers had to consider seriously "in whose name" they wrote.⁴² In accordance with such an educational goal, readers were perceived as passive customers who uncritically identified with the written word and potentially might imitate everything they were offered. It stood to reason, then, that if offered "first class" belletristic literature, "every Soviet human, whether an intellectual, a worker, a kolkhoznik, a youngster, an adult, or an elderly person," would read it.⁴³

The ideational content of the new statute was of central importance for achieving this "educational goal," as it took aim against all kinds of "bourgeois pseudo-sciences" and the representation of science as a creation of ingenious "cranks" or mad scientists.⁴⁴ This new line of thinking opened up such biographical monographs as Aleksandr Popovskii's *Inspired Seekers* (1945) and *In the Name of Man* (1948), Lev Gumilevskii's *Russian Engineers* (1947) and *Masters of Technique* (1949), and Aleksandr Dovzhenko's "stupid" film *Michurin: The Earth in Bloom* (1948) to harsh criticism.⁴⁵ In the context of the beginning of the Cold War, the "battle of ideas" was intensified by the claim of "Russian priority" (*russkoe pervenstvo*) in science. This patriotic-national discourse was dominant in all disciplines and represented the main difference between postwar publications and similar publications of the prewar period of the 1930s. While this type of discourse had generally been absent prior to the war, now even new book series such as "Russian Travelers," about prerevolutionary explorers, or collective volumes like *The Soul of Russian Science* (1948) and *Tales of Russian Priority* (1950), were established.⁴⁶ This discourse aimed to invent an exclusive Russian scientific tradition and went hand in hand with a permanent "belletrization" of Russian achievements that concurrently downgraded all natural or possible scientific

⁴⁰Rossiiskii gosudarstvennyi arkhiv literatury i isskustva (RGALI), f. 631, op. 15, ed. khr. 816, l. 86.

⁴¹Vasilii Zacharchenko, "Za vysokoe kachestvo knig po istorii nauki i tekhniki," *Pravda*, July 11, 1951, 2.

⁴²Ibid. See also Oleg Pizarzhevskii in an internal report for the direction of the section for scientific-fictional literature, RGALI, f. 631, op. 15, ed. khr. 787, l. 5.

⁴³According to Vadim Safonov in his conceptualization of "Soviet scientific-fictional literature," RGALI, f. 631, op. 22, ed. khr. 23, l. 26.

⁴⁴Viktor Sytin in an internal discussion in May 1949, RGALI, f. 631, op. 22, ed. khr. 23, l. 61.

⁴⁵See Zakharchenko, "Za vysokoe kachestvo," 2; RGALI, f. 631, op. 22, ed. khr. 18, ll. 5–6; Ibid., f. 631, op. 22, ed. khr. 43, ll. 1–108.

⁴⁶The series was established in 1947 by the publisher for geographic literature, Geografizdat, and contained biographies of scientific travelers and globetrotters such as *N. N. Mikliul'kho-Maklai* (1948) and the Russian anthropologist I. I. Babkov's *Po Afrike* (1949). See also I. V. Kuznetsov, ed., *Liudi russkoi nauki: Ocherki o vydaishchikhsia deiateliakh estestvoznaniia i tekhniki*, 2 vols. (Moscow, 1948); and V. Bolkhovitinov et al., eds., *Rasskazy o russkom pervenstve* (Moscow, 1950).

barriers. Scientists were portrayed as having fought, with enthusiastic support from like-minded friends, for scientific progress in the face of a reactionary Tsarist empire. But they were powerless against the empire's bureaucracy-bound academic representatives. Their struggle was officially recognized only after 1917, and the legacy of their struggle was finally being fulfilled in the Stalinist present.

The most unclear aspect of the new statute was its call for raising the artistic level of works in the field. At first, some critics proposed the inclusion into the genre of novels about scientific-industrial themes, such as Vasilii Azhaev's *Far Away from Moscow* (1946–48). But gradually it was agreed that a work's "artistic mastership" (*khodzhestvennoe masterstvo*) should consist in the integration of fictional and scientific-popular elements.⁴⁷ Whereas science popularization traditionally aimed to show how scientific progress changed our understanding of nature and humans, scientific-fictional literature, by contrast, would reveal the unchanged "soul" of Russian science, thus demystifying and changing natural laws dramatically. From this perspective, nature no longer contained any unresolved secrets or extraordinary discoveries, but was merely an object to be colonized by human omnipotence. Ivich's 1930s definition of scientific-fictional literature as "adventures of inventions" was thus reinterpreted as a typical Russian ability of scientific "prediction" (*predvidenie*).⁴⁸

In a more general sense one could summarize this transformation as follows: Whereas the denounced "vulgarization" of the old "entertaining" science popularization consisted primarily in a rhetorical simplification of complex matters, scientific-fictional literature broadly negated all of the complexity and experimentality of scientific research and instead emphasized its visionary elements and ideological "truthfulness." In doing so, the genre fundamentally altered the relationship of the scientific and the fictional (or artistic): the previous emphasis on popularizing the authority of science was discarded in favor of stressing the art of fiction, which, with the help of the "belletrization" of scientific activities, would convey the simple greatness and understandable truth of scientific efforts.⁴⁹

Toward the end of the 1940s, in light of the demands of the new statute of the section of scientific-fictional literature and with the end of late Stalinism's "science wars," the genre could at last proclaim its first successes. This was facilitated by the proclamation in autumn 1948 of Stalin's "plan for the reconstruction of nature," which increased the political demand for a literature written according to the section's statutes. Thus, from 1948 onward, non-fiction books began to win the country's highest award in fiction (*khudozhestvennaia literatura*), the Stalin Prize, a feat made possible by classifying works of this kind as "scientific-fictional" prose. At one point, three "scientific-fictional" prose works won in a row: Nikolai Mikhailov's *Over the Map of the Homeland* (1948), Vadim Safonov's *The Earth in Bloom* (1949), and Marietta Shaginian's *Travels around Soviet Armenia* (1950).

⁴⁷See the internal discussion about the further development of the genre in April 1951, RGALI, f. 631, op. 22, ed. khr. 42, ll. 92–98.

⁴⁸In his postwar articles, Ivich still maintained an interest in the art of "invention," but now reinterpreted it as the ability of the mind to predict possible solutions. See Aleksandr Ivich, "Predvidenie," *Znanie – sila* 7 (1948): 1–4.

⁴⁹For more detail on these complex and partly contradictory transformations see Polianski, "Das Unbehagen der Natur," 92.

From then on, scientific-fictional literature was officially recognized as serious, first-class literature, and even “thick” literary journals such as *Novyi mir* or *Zvezda* started to print literary works of this kind.⁵⁰ However, the more successful these authors were in establishing scientific-fictional texts as the exclusive way of writing about science and society, future technological developments, and Russian masters of science, the more the initial avant-garde, revolutionary impulse to create a substantially new “fictional” poetics of science faded away.

PHANTASMS OF FEASIBILITY: LATE STALINIST SCIENTIFIC-FICTIONAL NOVELS

Due to the tense atmosphere of the late-Stalinist period, instead of “exciting” new tales imagining qualitative leaps into humanity’s future scientific and social development written by scientifically educated participant-observers, works in the genre of scientific-fictional literature stubbornly persisted in dogmatically whitewashing the disastrous problems facing a devastated country trying to rebuild after World War II. Rather than formulating a “new perception” of reality, the genre turned into an escapist dream factory of the (Stalinist) present. Numerous novels, stories, and literary sketches provided vivid descriptions of the “fields of communism,” of a disfigured “new planet” earth beyond recognition, and of scientific collectives using newly invented research apparatuses to open new “ways into the deep” and reveal the last secrets of nature.⁵¹ As the heroine in the short novel *One Day of Zoia Vinogradova* (1948) by Viktor Saparin enthusiastically states:

Here they are, the representatives of Soviet technology, a new generation of engineers! For them nothing is unfeasible. Everything is a question of technology. If necessary, they automatize the control system of dozens of waterworks, force automobiles to listen to the voice of humans—everything if it is only purposeful and will free humans from mechanical strain, free them for creative work.⁵²

This enthusiasm for the unlimited possibilities of technical and scientific progress lies at the heart of this new scientific-fictional poetics of Russian priority and of ideologically truthful scientific activities in the service of Communist society. And it also explains why any sort of explicit “realistic” references to the famines of the postwar period, to the devastated industrial and agricultural infrastructure, or to the people traumatized by the war and the Gulag, were extinguished.

A most typical and extremely influential representative of this Stalinist poetics of science, which in the Thaw period was characterized as a “varnishing” of reality, was

⁵⁰RGALI, f. 631, op. 22, ed. khr. 23, ll. 19–23, 35–36.

⁵¹See Aleksandr Kazantsev, “Na poliakh Kommunizma,” in his *Mashiny polei Kommunizma: Rasskazy o mashinakh, ikh sozdateliakh i komandirakh* (Moscow, 1953), 192–208; Viktor Saparin, “Novaia planeta” (1949), in his *Novaia planeta: Nauchno-fantasticheskie rasskazy i ocherki* (Moscow, 1950), 3–17; Vadim Okhotnikov, *Dorogi v glub'* (Moscow, 1950); and idem, *V mire iskanii: Nauchno-fantasticheskie povesti i rasskazy* (Moscow/Leningrad, 1952).

⁵²Saparin, “Den' Zoi Vinogradovoi,” in *Novaia planeta*, 18–70, esp. 69.

Vladimir Nemtsov. A professional engineer for wireless and radio technology, Nemtsov became a Proletkult poet in the 1920s and then an enthusiastic follower of Vladimir Mayakovsky, before starting to collaborate in Alexei Gastev's famous Central Institute for Labor.⁵³ In the 1930s and during the war, he registered about twenty patents for wireless technology before entering the Union of Writers in 1946. During the late Stalin period he published at least two books a year with an extremely large circulation. But after Stalin's death, in the Thaw period, Nemtsov's voluminous scientific-fictional novels were regarded as so badly written and boring that rumors circulated that only one single person had actually read all of them to the end; namely, the person famous for having read everything in the field of science fiction—Genrikh Al'tshuller, who published fiction under the pen-name Genrikh Al'tov. In this way Nemtsov gained fame during the Thaw period as a characteristic example of what was then called “fantasy of immediate objectives” (*fantastika blizhnego pritsela*), which meant science fiction that exclusively describes the imminent socialist future without any exciting fantastic perspectives.

But if we take a closer look at these novels we will see that, although they are indeed wearisome to read—as in general all late-Stalinist novels are—Nemtsov is varnishing the fictional-scientific reality in a very specific way. Note, for example, his short novel *Apparatus “SL-1,”* which was published in four editions between 1947 and 1951.⁵⁴ Set in the Ural Mountains, the novel deals with young engineers who were constructing a “smell intensifier” that could “smell” rare metals across great distances.⁵⁵ Although they fail to discover any sought-after metals underneath the mountains, they do come across, in the forest, solitary scientist called Omegin, who experiments with plastic materials and has built himself an entire house out of plastic.⁵⁶ Omegin calls himself an “enthusiast” of the “Age of Plastic” (*vek plastmassy*), which he believes will follow the current “Age of Steel.”⁵⁷ He praises plastic materials because they can be formed, refined, rigidified, and made elastic at discretion. He shows the amazed young engineers his plastic house, which has no sharp edges and is stable, stainless, and completely transparent. But its walls can be colored at discretion, just as the temperature of the plastic material can be regulated in any direction.⁵⁸ At the same time, the scientist is experimenting with ultrasonic waves that would allow him to modify the molecular structure of stainless steel, or to alter the substance and color of the walls of his house, so that they would no longer bleach and age. In this way he transforms the local House of Culture into a veritable chamber of wonders.⁵⁹

This brief plot summary already hints at the specific “scientific-fictional” characteristics of Nemtsov's prose. First of all, the surname of the solitary scientist, Omegin, is meaningful in Russian, as it immediately recalls the protagonist of Aleksandr Pushkin's novel-in-verse,

⁵³For biographical details on Nemtsov see Genadii Prashkevich, *Krasnyi sfinks: Istoriia russkoi fantastiki ot V. F. Odoevskogo do Boris Shterna* (Novosibirsk, 2007), 391–407. See also RGALI, f. 631, op. 22, ed. khr. 5, l. 50.

⁵⁴Schwartz, *Expeditionen in andere Welten*, 593–608.

⁵⁵Vladimir Nemtsov, “Apparat ‘SL-1’” (1947), in his *Nauchno-fantasticheskie povesti* (Moscow, 1951), 427–565.

⁵⁶Ibid., 446–65.

⁵⁷Ibid., 465.

⁵⁸Ibid., 465–79.

⁵⁹Ibid., 541–53.

Evgenii Onegin, a literary hero who, according to Gorky, represented the archetypal phenomenon of nineteenth-century Russian literature—the “superfluous man.” This was a tragic person “to whom life seemed cramped, who felt superfluous in society, sought therein a comfortable place for himself, failed to find it, and suffered, died, or reconciled himself to a society that was hostile to him, or sank to drunkenness or suicide.”⁶⁰ At the same time, the family name “Omegin” alludes to the final letter of the Greek alphabet, “Omega.” Thus, if the short novel also deals in a figurative sense with the Alpha and Omega of the Stalinist regime, then Omegin’s name somehow indicates a certain dead end for, or at least a considerable estrangement from, the Stalinist “scientific-fictional” poetics of a better future.

Moreover, it is not the enthusiastic collective of young engineers that invents all of the marvels of the coming Plastic Age, but the isolated scientist, who in turn inspires the youth. Furthermore, the novel’s setting in a forested area of the Siberian Urals might also hint at the sites of the Gulag system, as does the figure of the exiled scientist, who leads a withdrawn life, does not like to speak about the past, and has lost his youthful optimism:

The householder didn’t want to remember the past, I felt that from the tone of his voice, but he mentioned to me the name of one of the biggest research institutes, where a complex research of new building and lining materials is done, which one needs for our economy.

“Alas, our youth!” Omegin said sighing. “I could envy its curiosity, its optimism. And life is beautiful, and science is light and unclouded, and everything you see is evident. As the saying goes, ‘You haven’t been pecked by a fried rooster.’” He winced, as if he doesn’t want to remember some inconveniences, but he would like to express himself, so he continued, cumbrously sitting down in a slim chair.⁶¹

Omegin’s main scientific passion—the beginning of a new Age of Plastic, which will replace the present Age of Steel—can be also interpreted as a direct allusion to the “Age of Stalin” to be overcome, whereas at the same time his transparent plastic house can be read as an ambivalent metaphor of Stalinist science itself, a concept that during the “science wars” had been formed, refined, rigidified, made elastic, and colored as required.⁶²

⁶⁰Maksim Gorky, “Soviet Literature,” in *Problems of Soviet Literature* (by Andrei Zhdanov and others at the Soviet Writers’ Congress 1934), (Leningrad, 1935), 25–69, available at <https://www.marxists.org/archive/gorky-maxim/1934/soviet-literature.htm>.

⁶¹Nemtsov, “Apparat ‘SL-1,’” 471. The phrase “*ne kleval vas zharenyi petuch*” means in a literal sense “you haven’t had any inconveniences so far”.

⁶²Elana Gomel has analyzed similar literary strategies for the science fiction of Arkadii and Boris Strugatskii in the 1960s and 1970s as a certain “poetics of censorship,” where allegorical and literal readings are intertwined in a partly problematic way. Without a doubt, some of its characteristics were already present in works of the late Stalin period, for instance, in Nemtsov’s prose. See Gomel, “The Poetics of Censorship: Allegory as Form and Ideology in the Novels of Arkady and Boris Strugatsky,” *Science Fiction Studies* 22 (1995): 87–105. Certainly, the transparent plastic house also contains an allusion to the Crystal Palace, as it appears in Vera Pavlovna’s Fourth Dream in Nikolai Chernyshevskii’s novel *What is to be Done?* On this symbol in Russian intellectual history see also Natalia V. Kovtun, “On the Ruins of the ‘Crystal Palace’ or the Fate of Russian Utopia in the Classical Era (N. G. Chernyshevsky, F. M. Dostoevsky, M. E. Saltykov-Shchedrin),” *Journal of Siberian Federal University. Humanities & Social Sciences* 7:4 (2011), 1045–57, available at journal.sfu-kras.ru/en/number/2433.

But plastic is not only an extremely malleable material, as shown in the shape of the transparent house which can be colored and tempered at will. The Age of Plastic also alludes to the attempt to totally observe, control, and monitor each individual in late Stalinism. In this sense, the protagonist Omegin himself, in his personal frustration but professional enthusiasm, is reminiscent of all the scientists banished to the Siberian Gulag. And in alluding to Pushkin's *Onegin*, he hints at all the formerly enthusiastic writers and supporters of the Socialist project who were murdered during the Great Terror, or exiled to the Siberian labor camps, often despite the fact that they had tried to adapt or "shape" themselves according to the current political line. Writers, for instance, such as Varlam Shalamov.

It is exactly this ambivalent metaphoric undercurrent, which can be read in Nemtsov's short novel, that ran through even the most conformist writings. In other words, their emphasis on transparency, feasibility, and collectivity in the end also signalled, in a sense, the fundamental failure of the concept of scientific-fictional literature.

CONCLUSION

The term *nauchno-khudozhestvennaia literatura* was taken up at the beginning of the 1930s in the wake of the dismantling of the RAPP and all the other literary and artistic movements of the 1920s. On the eve of the First All-Union Congress of Soviet Writers in 1934, influential literary activists such as Gorky and Marshak popularized the concept of "scientific-fictional literature" as the most comprehensive way to reconcile the modernist, avant-garde dreams of a scientific revolution with the Stalinist vision of a "dream factory" for socialist development.⁶³ The term promised to appropriate not only the content of avant-garde movements but also several of their artistic forms and literary devices. But neither readers nor writers really accepted the genre, so it failed to develop into an established and effective way to popularize either science or science fiction, and it ultimately lasted for only an extremely short period, from the end of 1934 to the beginning of 1936.

But in the postwar period the term enjoyed an astonishing revival, in what were completely different political and cultural circumstances. Especially between 1948 and 1953, an attempt was made to use the idiom to form a new self-reliant literary genre that, on the surface at least, laid out a perfect vision of the late Stalinist dreams of a Communist society free of conflicts and based on Russian science and engineering technology. But as Nemtsov's *Apparatus "SL-1"* shows, despite the largely unified official scientific discourse finally achieved in this period, even this genre revealed a deeply ambivalent uneasiness within late Stalinist scientific culture. The figuration of the main character and his scientific inventions in particular hinted at the violent and repressive reality lurking beneath the polished scientific-fictional surface.

All of the discussions about a new poetics of science, all of the conceptions of it, and all of the writings ascribed to it, were quickly forgotten in the post-Stalin area, when the so-called Thaw ushered in a new kind of scientific enthusiasm based on cybernetics, cosmonautics, and system theories. The new era was a time when allegedly the "physicians

⁶³In this sense Il'in would serve as a perfect example of Boris Groys's theses about the "total art of Stalinism" (Groys, *The Total Art of Stalinism: Avant-Garde, Aesthetic Dictatorship, and Beyond* [London, 2011]).

are honoured,” whereas the “lyrists are neglected,” and when the genre of science fiction experienced a phenomenal renaissance. Or perhaps they were simply dropped, since many former supporters of that “new poetics of science” still actively took part in popular-scientific and fictional publishing.⁶⁴ But while C. P. Snow was proclaiming the existence of a seemingly insurmountable gap between *The Two Cultures* (1959) of the West—between the humanities and the natural sciences—in the Soviet Union cross-disciplinary efforts were underway to revitalize the genre of “scientific-fictional literature” as a “drama of ideas,” a “scientific pursuit of knowledge, a kind of no-man’s land lacking history or personalities.”⁶⁵ Daniil Danin was the most prominent advocate of this short-lived rebirth. In 1960 he published his programmatic best-seller about modern physics, *The Inevitability of the Strange World*, and in the same year initiated the almanac *Paths to the Unknown: Writers Talk about Science* (1960–90).⁶⁶ Despite its ability to last for four decades, the periodical’s twenty-four volumes never managed to establish an influential discursive forum either between different academic disciplines or beyond the circle of scientific enthusiasts. Instead, it often merely replicated many of the “phantasms of belletrization” of its Stalinist predecessors.⁶⁷

⁶⁴Boris Slutskii, “Fiziki i liriki,” *Literaturnaia gazeta*, October 13, 1959. See also Loren R. Graham, *Moscow Stories* (Bloomington 2006); Matthias Schwartz, “A Dream Come True: Close Encounters with Outer Space in Soviet Popular Scientific Journals of the 1950s and 1960s,” in *Soviet Space Culture: Cosmic Enthusiasm in Socialist Societies*, ed. Carmen Scheide et al. (New York, 2011), 232–50; and Slava Gerovitch, *From Newspeak to Cyberspeak: A History of Soviet Cybernetics* (Cambridge, MA, 2002).

⁶⁵“Drama of ideas” is a characterization made by Albert Einstein, and quoted by Daniil Danin as a defining statement. See Mark Kuchment, “Bridging the Two Cultures: The Emergence of Scientific Prose,” in *Science and Soviet Social Order*, ed. Loren R. Graham (Cambridge, MA, 1990), 327. The idea of a science prose without personalities and histories (narratives) directly refers to avant-garde notions of a prose without plot and the call for a biography of things (Schwartz, “Factory of the Future”).

⁶⁶Many of the long-standing supporters of scientific-fictional literature actively participated in the almanac. Besides Danin, the editorial board of the publication listed the notoriously dreaded Stalinist activist Viktor Sytin and Stalin Prize-winner Nikolai Mikhailov, but also Oleg Pizarzhevskii and the paleontologist and best-selling science fiction author Ivan Efremov. For more on the emergence and establishment of the periodical see Kuchment, “Bridging the Two Cultures,” 329–34.

⁶⁷Thus, Kuchment mentions three striking features of the genre: first, the “imprint of the hierarchical structure of Soviet society”; second, its concern “with presenting sciences in a favorable light” rather “than critically assessing scientific phenomena”; and, finally, its “being part of the Soviet cultural establishment,” not encountering any “serious public criticism.” All of these features were already characteristic of the late Stalin period (*ibid.*, 339–40).