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# FROM POET TO ENGINEER. FROM LESS-KNOWN RUSSIAN AVANT-GARDE SERIES

## ABSTRACT

The focus of this study was Aleksei Gastev (Russia, 1882–1939), a unique figure in the avant-garde culture of the 20th century. In the 1910s–1930s, many avant-garde creators in Europe and Russia were inspired by the machines and buildings of the industrial age. The engineer was the hero of the time. Architects, designers, filmmakers and poets were applying principles of efficiency and economy in their own fields. They developed new languages of design, visual communication and everyday material culture that were appropriate for the second machine age. Usually the influence ran in one direction – from the world of machines, the ideals of engineering and the latest scientific research into the arts and design. In the two essays, the authors showed the uniqueness of Gastev, for he was the only one who moved in the opposite direction. Instead of applying the principles and methods of work to the arts or design, he left his art (i.e., poetry) to become the director of an institute that aimed to further rationalize work and workers on a nationwide scale. The authors concluded that it was not merely a shift in one direction, from the

arts to a factory, but rather the ultimate synthesis of the post-revolutionary artistic avant-garde and the ideas and methods of scientific management. The main source for the study was the exhibition *Gastev: How to Work* (2019) at Na Shabolovke Gallery, Moscow, curated by Dr. Alexandra Selivanova.

## KEYWORDS

Russian avant-garde; poetry; Aleksei Gastev; visual communication; Modernism; scientific management.

## ALEKSEI GASTEV AND THE POETRY OF A WORKER'S BLOW

Julian Sunley

As both a leader of one of the first strikes in the 1905 Revolution and a leading avant-garde poet, Aleksei Gastev's life is a perfect example of how politics and aesthetics intertwined in Russia's revolutionary period.

Gastev's life before the October Revolution consisted of a number of exiles, escapes and attempts to make a literary career under various pen names. He was only fully recognized for his literary abilities, however, with the publication of his collection *Poetry of the Worker's Blow* (*Poeziia rabochego udara*).

What's more, *Poetry of the Worker's Blow* was chosen by the artistic organization Proletkult to be their first publication. (Proletkult sought to promote and develop proletarian culture across Russia and claimed to have 80,000 members in 1920). This was an astute choice on the part of Proletkult: Gastev's



Fig. 1.  
Zinovii Tolkachev.  
Portrait of Aleksei Gastev.  
Printed illustration from the Aleksei  
Gastev's book *Vosstanie kul'tury*  
(*The Rebellion of Culture*).  
Kharkov: Molodoi Rabochii, 1923.  
URL: [https://monoskop.org/Aleksei\\_Gastev#/media/File:Aleksei\\_Gastev\\_by\\_Z\\_Tolkachev\\_1923.jpg](https://monoskop.org/Aleksei_Gastev#/media/File:Aleksei_Gastev_by_Z_Tolkachev_1923.jpg)

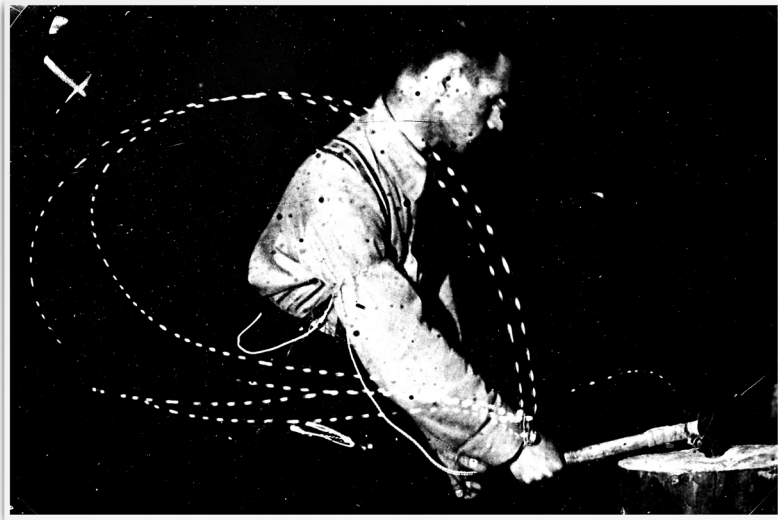


Fig. 2. Chronocyclegraph of Aleksei Gastev with hammer. Exhibition *Gastev: How to Work* at Na Shabolovke Gallery, 2019. Photo: Lev Manovich

poems had 'laid the foundation for a new aesthetics, for a rethinking of labor as a theme (which the older proletarian poets had portrayed as gruelling and slavish)' (Shvetsova, 1993, p. 649). For example, in 'We Grow from Iron' (Rastem iz zheleza) the worker is depicted as a vigorous giant, closing the poem with the declaration 'We shall win!' This combination of Romanticism, collectivism and industrial might proved winning with Proletkult writers (Hellebust, 1997, p. 503) and certain strains of socialist realism alike (Zavedeeva, 2016, p. 263).

But almost as soon as he found literary success, Gastev moved on to new endeavors, essentially abandoning poetry by 1920. With the construction of the Soviet nation at hand, the poet saw more meaning in applying himself to functional work than artistic pursuits.

To this end, Gastev founded The Central Institute of Labour in 1920, which was dedicated to developing methods for the rationalization of work. (The ideas of Frederic Taylor became very popular in Russia after the revolution and inspired the work of the institute). To develop these methods, the institute conducted numerous experiments. It was in these experiments that Gastev found the key obsession of his later life: time-motion studies of labour (Bailes, 1974, p. 375).

For Gastev, the visual language that these studies employed, such as chronocyclegraphs (Fig. 2) and cyclograms, was essential to their success. The poet

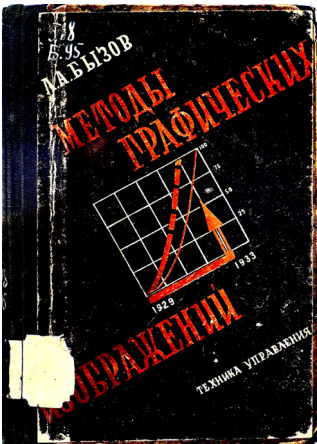


Fig. 3. Cover of Leonty Byzov's book *Metody graficheskikh izobrazhenii* (Methods of Graphic Representation). Exhibition *Gastev: How to Work* at Na Shabolovke Gallery. 2019. Photo: Lev Manovich

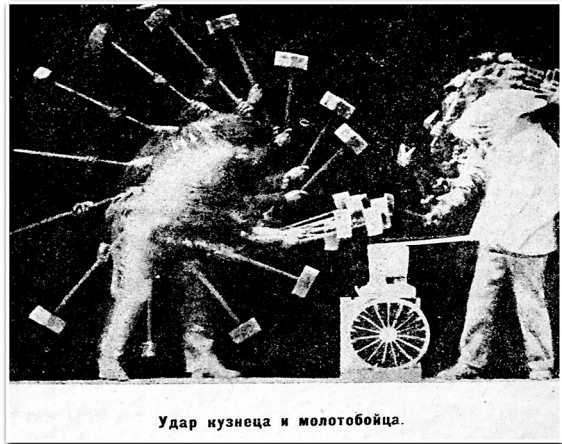


Fig. 4. Copy of a chronophotograph by Etienne-Jules Marey with a caption 'blow of the blacksmith and the striker'. Exhibition *Gastev: How to Work* at Na Shabolovke Gallery. 2019. Photo: Lev Manovich

even said that if you 'want not only to observe, but also to depict what you observe... to decisively master it...[you] will have to accurately sketch it' (Gastev, 1972, p. 98). In other words, mastery of a particular phenomenon (e.g., a movement on a production line) was linked to the ability to visually represent it. Moreover, time-motion studies used visual materials that exemplified Gastev's communicative ideal. To create a more efficient culture, Gastev advises us to draw on communicative methods that 'arise in a constrained environment in terms of time and space' (Gastev, 1972, p. 97), such as shorthand. Although they may not have arisen in a time-pressured environment, cyclograms and chronocyclegraphs exemplified time's compression, depicting a series of movements within one still image: they were demonstrations of efficiency in both form and content.

Gastev was not alone at the institute in his enthusiasm for visual media. He was outdone in this respect by Leonty Byzov, a fellow practitioner of scientific management, who became increasingly preoccupied by graphical media's capacity for representation and its potential use in all scientific disciplines. The generality and immense promise of graphical media according to Byzov are well communicated by

a text in the *Gastev: How to Work exhibition* (Selivanova, 2019), which originally comes from Byzov's 1933 lecture 'On Establishing an Institute of Graphical Language' ('Ob organizatsii instituta graficheskogo iazyka'): 'We are the contemporaries and participants of a new, great revolution in thought. Its roots are the era of the great scientific coup [perevorot] at the beginning of modernity: though initially only through mathematics, a fundamentally new means of expressing thought has been entering scientific practice – this means is graphic, and hence spatial, and since it does not pertain to sounds, it is related to lines.' (Byzov, 2015).

Gastev's interest in graphic representations of worker efficiency and Byzov's remarks on science's turn towards new graphic languages of expression ought to be contextualized. During the 1910s and 1920s, many new schools and styles in the visual arts developed in Russia (Neo-primitivism, Rayism, Cubo-Futurism, Constructivism, Suprematism, Analytical Art), reflecting and accelerating a new sense of possibility with respect to creating new visual languages of representation.

(Note by LM: 'Graphic means' may also refer to new techniques for capturing and representing movement that were developed by Étienne-Jules Marey in the 1870s–1880s (e.g., Fig. 4), as well as data visualization methods that were already popular by the 1920s – see the cover of Byzov's book *Methods of Graphic Representation* (Fig. 3).)

Unsurprisingly, Gastev's approach to labour management was not without its poetic qualities. Just as some Constructivists fused art with more utilitarian goals, Gastev described his institute in labour management as his main artistic creation. At times his vision of work management starts to strongly resemble those earlier poetic writings: 'We start from the most primitive, the most elementary movements and produce *the machinization of man himself*... The perfect mastery of a given movement implies *the maximum degree of automaticity*. If this maximum increases...nervous energy would be freed for new initiating stimuli, and the power of an individual would grow indefinitely' (translation by Gerovitch; cited in Smirnov, 2013, p. 99).

The fusing of the worker with the machine and his sudden unstoppable growth and energy are images straight out of the aforementioned 'We Grow from Iron': 'I have grown still higher. / I myself grow steel shoulders and arms immeasurably strong. I have merged with the building's iron' (Hellebust, 1997, p. 505). However, Gastev was not just building castles in the air at the CIL. By his arrest in 1938, the CIL had 'produced over 500,000 qualified workers in 200 professions and 20,000 industrial trainers in 1,700 educational centres' (Smirnov, 2013, p. 99).

## FROM POET TO ENGINEER

### Lev Manovich

I see Gastev as a unique figure in the avant-garde culture of the 20th century. In the 1910s–1930s, many avant-garde creators in Europe and Russia were inspired by the machines and buildings of the industrial age – airplanes, factory machines, grain elevators, bridges, etc. The engineer was the hero of the time. Architects, designers, filmmakers and poets were applying principles of efficiency and economy in their own fields. They developed new languages of design, visual communication and everyday material culture that were appropriate for the second machine age. Many of them taught at Bauhaus in Germany and Vkhutemas in Russia. (The latter was much larger than Bauhaus, with 100 faculty members and 2500 students.)

Usually the influence ran in one direction – from the world of machines, the ideals of engineering and the latest scientific research into the arts and design.

For example, architects got rid of the non-functional ornament and brought factory-like, large windows to family houses. Le Corbusier stated: ‘A house is a machine for living in.’ Austrian architect Margarete Schütte-Lihotzky conducted time-motion studies to understand the movements of a housewife in a kitchen and used the results to design a new optimized kitchen (1926). Sergei Eisenstein was trying to use all the leading psychological theories of his time to predict the effects of his films on the viewer and would edit them accordingly.

However, as far as I know, only Gastev moved in the opposite direction. Instead of applying the principles and methods of work to the arts or design, he left his art (i.e., poetry) to become the director of an institute that aimed to further rationalize work and workers on a nation-wide scale.

As Julian points out, Gastev’s vision of movement efficiency had a strong poetic side to it. Gastev dreams of a new world where all citizens always move in the most efficient ways with the precision of professional dancers in a ballet performance. He wanted to rationalize not only workers’ movements but also all everyday movements.

Such a vision was certainly beyond anything imagined by Frederic Taylor (inventor of time studies method) and Frank and Lillian Gilbreth (inventors of the time and motion method). In its scale, Gastev’s vision fits with other artistic avant-garde projects of post-revolutionary Russia – such as the decoration of the city of Vitebsk by Kazimir Malevich’s students in 1919 or Dziga Vertov dreaming of thousands of cameras capturing life from every possible point of view. Thus, it may be more cor-

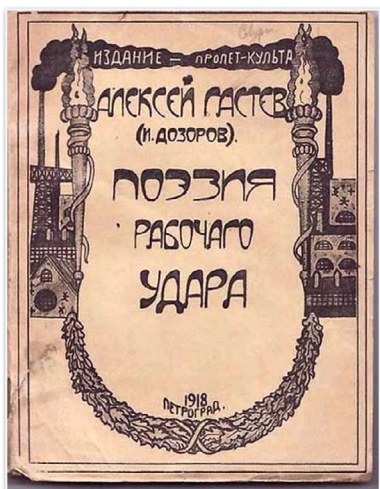


Fig. 5. Cover of Aleksei Gastev's book *Poeziya rabocheho udara* (*Poetry of the Worker's Blow*). 1st edn. Petrograd: Proletkult, 1918.  
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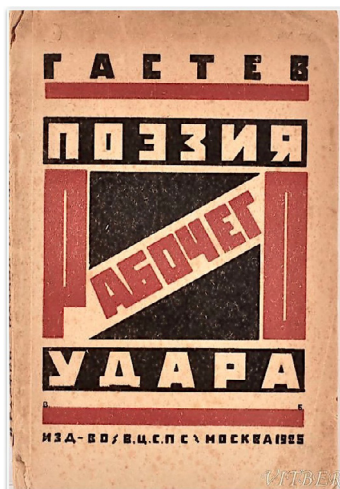


Fig. 6. Cover of Aleksei Gastev's book *Poeziya rabocheho udara* (*Poetry of the Worker's Blow*). 6th edn. Moscow: VTsSPS, 1925.  
URL: <https://www.vitber.com/lot/24895>

First edition of Gastev's **Poetry of the Worker's Blow**, published in Petrograd in 1918, and sixth edition of the same collection, published in Moscow in 1925. Under the author's name on the first edition, we can see one of his pen names in brackets: I. Dozorov. The evident shift in the publications' art styles – from Art Nouveau to Constructivism – exemplifies the revolution in graphic design that occurred in the 1920s in Russia and a number of European countries.

It is interesting to see Gastev's project as the ultimate synthesis of the post-revolutionary artistic avant-garde and the ideas and methods of scientific management – rather than only a shift in one direction, from the arts to a factory.

As the curators at the *Gastev: How to Work* exhibition (Selivanova, 2019) pointed out, Gastev called The Central Institute of Labour 'his main artistic creation.' In 1920 Gastev came up with the term 'movement culture' which he defined as 'the sum of the masses' movement habits and skill' (Sirotkina, 2018, p. 13).

Among numerous studies analyzing movements in different kinds of work and activities, conducted at the laboratory headed by neurophysiologist Nikolai

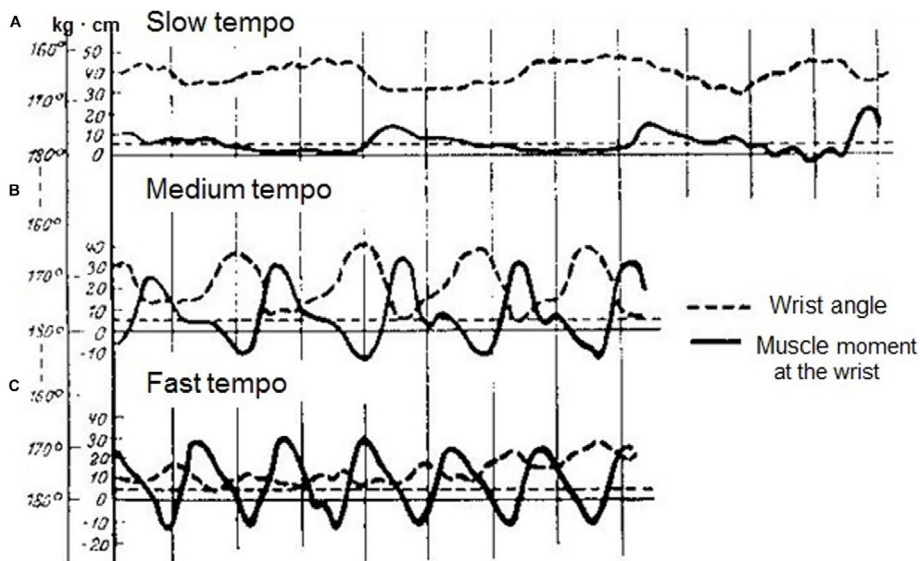


Fig. 7. Muscle moment and wrist angle while playing the piano at different tempos.

Originally published in Bernstein, N. A. and Popova, T. S. (1930)

*Issledovaniia po biodinamike fortepiannogo udara (Studies on the Biodynamics of the Piano Strike)*; republished in Kay, B. A., Turvey, M. T. and Meijer, O. G. (2003)

'An Early Oscillator Model: Studies on the Biodynamics of the Piano Strike'

(translation of the 1930 article into English), *Motor Control*, 7, p. 1–45;

and Biryukova, E. and Sirotkina, I. (2020) 'Forward to Bernstein: Movement Complexity as a New Frontier', *Frontiers in Neuroscience*, 14, p. 553

Bernstein (who coined the term biomechanics in 1922), we find diagrams of the movements of a piano player next to diagrams of the movements of a blacksmith and hammerer.

More fascinating connections between the activities of workers and artists can be seen in the program of 10 lectures delivered at the Institute under the general title *Education in Work (Elementary Theory of Creative Process)*. The description of lecture VIII, titled 'Integrating universal creative labour', contains this sentence: 'Line moving upward: a slave, worker, craftsperson, master, artist, creator.'

In the early 1930s the famous Russian writer Maxim Gorky visited the Institute. At the end of the visit, he told Gastev: 'Now I understand why you gave up writing poetry. This institute is your best poem.'



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